

## Division of Apprenticeship Standards (DAS)

### Apprenticeship Program Summary Sheet

**To:** Adele Burnes, Chief  
**From:** Cindy Cherise Murphy  
**CC:** Program Planning and Review  
**Date:** August 18, 2025

**Program Name:** Creating Coding Careers Apprenticeship Program  
**Industry:** Technology  
**DAS File No.:** 100437  
**Grant Awardee:**  No  Yes

#### Actions:

- Proposed new apprentice program
- Existing apprenticeship program adding new occupations
- Existing apprenticeship program expanding area of operations
- Existing apprenticeship program changing work processes on approved occupations

#### Request for Approval under Labor Code 3075:

Creating Coding Careers Apprenticeship Program is not intended to train in the building and construction trades and is not eligible to dispatch apprentices to projects with public works, prevailing wage or skilled and trained workforce requirements within the meaning of Labor Code sections 1720 and 3075 and will not train or dispatch apprentices in the building and construction trades or firefighters occupations.

#### Comments:

Creating Coding Careers, in partnership with leading technology companies, enterprise organizations, and academic institutions, is addressing critical workforce gaps across multiple high-demand occupations by offering registered apprenticeship programs in fields such as software development, quality assurance, cybersecurity, AI, data engineering, cloud computing, technical sales, digital marketing, and enterprise platform implementation.

Each apprenticeship offers robust paid training, academic education, and hands-on work experience to ensure employer access to certified professionals with the technical expertise, practical project exposure, and strategic knowledge necessary to thrive in today's rapidly evolving digital economy. These programs are designed in collaboration with industry partners and built on established standards, including industry-recognized certifications, programming languages, testing methodologies, cloud platforms, AI interaction protocols, marketing analytics, and sales frameworks.

Through Creating Coding Careers' accredited academic partnerships, apprentices can earn college credit toward a degree while completing their training, creating a powerful combination of formal education and on-the-job learning that enhances long-term career mobility. Participants gain real-world skills and academic credentials while contributing directly to their employers' digital transformation, quality assurance, cybersecurity defense, AI optimization, data infrastructure, service platform deployment, sales performance, and marketing strategy execution.

With projected employment growth ranging from 10% to over 35% across occupations through 2032, these apprenticeships provide direct entry points into stable, well-compensated careers while supporting businesses in healthcare, finance, government, e-commerce, SaaS, and more. These programs will strengthen America's workforce by expanding access to cutting-edge technical careers, accelerating innovation, and ensuring organizations have the skilled professionals needed to remain competitive in a global, digital-first marketplace.

Creating Coding Careers Apprenticeship Program will oversee the apprenticeship program herein and seeks approval from the Department of Industrial Relations, Division of Apprenticeship Standards for the following:

**Proposed Occupation, Wage Rate & O\*Net Code:**

- |                              |                             |                   |
|------------------------------|-----------------------------|-------------------|
| • Software Developer         |                             | O*Net: 15-1252.00 |
| Professional Worker Wage:    | \$35.00 per hour + benefits |                   |
| Proposed Apprentice Wage:    | \$25.00 per hour            |                   |
| Proposed No. of Apprentices: | 15                          |                   |
  
- |                                       |                             |                   |
|---------------------------------------|-----------------------------|-------------------|
| • Quality Assurance Software Engineer |                             | O*Net: 15-1232.00 |
| Professional Worker Wage:             | \$35.00 per hour + benefits |                   |
| Proposed Apprentice Wage:             | \$25.00 per hour            |                   |
| Proposed No. of Apprentices:          | 10                          |                   |
  
- |                              |                             |                   |
|------------------------------|-----------------------------|-------------------|
| • Data Engineer              |                             | O*Net: 15-1243.00 |
| Professional Worker Wage:    | \$30.00 per hour + benefits |                   |
| Proposed Apprentice Wage:    | \$25.00 per hour            |                   |
| Proposed No. of Apprentices: | 10                          |                   |
  
- |                              |                             |                   |
|------------------------------|-----------------------------|-------------------|
| • Prompt Engineer            |                             | O*Net: 15-1251.00 |
| Professional Worker Wage:    | \$30.00 per hour + benefits |                   |
| Proposed Apprentice Wage:    | \$25.00 per hour            |                   |
| Proposed No. of Apprentices: | 20                          |                   |
  
- |                              |                             |                   |
|------------------------------|-----------------------------|-------------------|
| • Cloud Support Engineer     |                             | O*Net: 15-1231.00 |
| Professional Worker Wage:    | \$35.00 per hour + benefits |                   |
| Proposed Apprentice Wage:    | \$25.00 per hour            |                   |
| Proposed No. of Apprentices: | 10                          |                   |

- Cybersecurity Support Technician O\*Net: 15-1212.00  
 Professional Worker Wage: \$35.00 per hour + benefits  
 Proposed Apprentice Wage: \$25.00 per hour  
 Proposed No. of Apprentices: 10
  
- ServiceNow Implementation Specialist O\*Net: 15-1252.00  
 Professional Worker Wage: \$35.00 per hour + benefits  
 Proposed Apprentice Wage: \$25.00 per hour  
 Proposed No. of Apprentices: 10
  
- Technical Sales Representative O\*Net: 41-4011.00  
 Professional Worker Wage: \$30.00 per hour + benefits  
 Proposed Apprentice Wage: \$20.00 per hour  
 Proposed No. of Apprentices: 25
  
- Digital Marketer O\*Net: 13-1161.00  
 Professional Worker Wage: \$30.00 per hour + benefits  
 Proposed Apprentice Wage: \$25.00 per hour  
 Proposed No. of Apprentices: 25

**Proposed Employers:**

- Creating Coding Careers - 6785 Imperial Ave., San Diego CA 92114
  - Occupation(s): Software Developer, Quality Assurance Software Engineer, Data Engineer, Prompt Engineer, Cloud Support Engineer, Cybersecurity Support Technician, ServiceNow Implementation Specialist, Technical Sales Representative, Digital Marketer
  
- GETME.BIZ - 6785 Imperial Ave., San Diego CA 92114
  - Occupation(s): Software Developer, Prompt Engineer, Technical Sales Representative, Digital Marketer

# Creating Coding Careers Apprenticeship Program Standards

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**Article I Purpose and Policy**

The parties hereto declare it to be their purpose and policy to establish an organized, planned system of apprenticeship, conducted as an education sponsored, employer-based undertaking.

These standards have, therefore, been adopted and agreed upon under the Shelley-Maloney Apprentice Labor Standards Act of 1939, as amended, to govern the employment and training of apprentices in the trade, craft or occupation defined herein, to become effective upon their approval.

**Article II Craft, Trade or Occupation, Related and Supplemental Instruction, Term of Apprenticeship, Ratio, Wage Schedule and Work Training**

<b>Occupation</b>	<b>O*Net Code</b>	<b>Attachment</b>
Software Developer	15-1252.00	B-1
Quality Assurance Software Engineer	15-1232.00	B-2
Data Engineer	15-1243.00	B-3
Prompt Engineer	15-1251.00	B-4
Cloud Support Engineer	15-1231.00	B-5
Cybersecurity Support Technician	15-1212.00	B-6
ServiceNow Implementation Specialist	15-1252.00	B-7
Technical Sales Representative	41-4011.00	B-8
Digital Marketer	13-1161.00	B-9

**Article III Organization**

There is hereby established the above-named master apprenticeship committee. The committee shall consist of three (3) or more members, who shall be selected by and represent the employer organization(s) signatory hereto. In addition, thereto, there shall be one (1) apprenticeship consultant representing the Division of Apprenticeship Standards and one (1) advisor from the Local Education Agency and such other advisors as the committee shall determine. Such advisors and the apprenticeship consultant shall act without vote.

**Article IV Jurisdiction**

These standards shall apply to the employer and employee organizations signatory hereto; their members, to other employers who subscribe hereto or who are party to a collective bargaining agreement with an employee organization(s) signatory hereto, and to all apprentice agreements hereunder.

Area Covered by Standards: All CA Counties

**Article V Functions**

The functions of the apprenticeship committee shall be to:

- 1) develop an efficient program of apprenticeship through systematic on-the-job training with related and supplemental instruction and periodic evaluation of each apprentice;
- 2) serve in an advisory capacity with employers and employees in matters pertaining to these standards;
- 3) ensure the program's ability, including financial ability, and commitment to meet and carry out its responsibilities under federal and state law and regulations applicable to the apprenticeable occupation and for the welfare of the apprentice;
- 4) aid in the adjustment of apprenticeship disputes;
- 5) develop fair and impartial selection procedures and an affirmative action plan in accordance with existing laws and regulations and apply them uniformly in the selection of applicants for apprenticeship.

**Article VI Responsibilities**

The responsibilities of the apprenticeship committee shall be to:

- 1) supervise the administration and enforcement of these standards;
- 2) adopt such rules and regulations as are necessary to govern the program provided that the rules and regulations do not conflict with these standards;
- 3) conduct orientations, workshops or other educational sessions for employers to explain the apprenticeship program's standards and the operation of the apprenticeship program;
- 4) pass upon the qualification of employers and, when appropriate, to suspend or withdraw approval;
- 5) conduct on-going evaluation of the interest and capacity of employers to participate in the apprenticeship program and to train apprentices on the job;
- 6) make periodic evaluations of each apprentices on-the-job training and related and supplemental instruction;
- 7) ensure safe work site facilities, skilled workers as trainers at the work site, and safe equipment sufficient to train apprentices;
- 8) determine the qualifications of apprentice applicants and ensure fair and impartial treatment of applicants for apprenticeship selected through uniform selection procedures;
- 9) file a signed copy, written or electronic, of each apprentice agreement with the Division of Apprenticeship Standards, within 30 days of execution, with copies to all parties to the agreement;
- 10) establish and utilize a procedure to record and maintain all records of the apprentice's worksite job progress and progress in related and supplemental instruction;

- 11) establish and utilize a system for the periodic review and evaluation of the apprentice's progress in job performance and related instruction;
- 12) discipline apprentices, up to and including termination, for failure to fulfill their obligations on-the-job or in related instruction, including provisions for fair hearings;
- 13) annually prepare and submit a Self-Assessment Review as well as a Program Improvement Plan to the Chief of the Division of Apprenticeship Standards;
- 14) ensure training and supervision, both on the job and in related instruction, in first aid, safe working practices and the recognition of occupational health and safety hazards;
- 15) ensure training in the recognition of illegal discrimination and sexual harassment;
- 16) establish an adequate mechanism to be used for the rotation of the apprentice from work process to work process to assure the apprentice of complete training in the apprenticeable occupation including mobility between employers when essential to provide exposure and training in various work processes in the apprenticeable occupation;
- 17) establish an adequate mechanism that will be used to provide apprentices with reasonably continuous employment in the event of a lay-off or the inability of one employer to provide training in all work processes as outlined in the standards;
- 18) comply with meaningful representation requirements for the interests of apprentices in the management of the program where apprentices are at least equally represented on an advisory panel established by the apprenticeship committee responsible for the operation of the program;
- 19) adopt changes to these standards, as necessary, subject to the approval of the parties hereto and the Chief of the Division of Apprenticeship Standards.

#### **Article VII Definition of an Apprentice**

An apprentice is a person at least sixteen (16) years of age, who has met the requirements for selection under the selection procedures of participating employer, who is engaged in learning a designated craft or trade and who has entered into a written apprentice agreement under the provisions of these standards.

#### **Article VIII Duties of an Apprentice**

Each apprentice shall satisfactorily perform all work and learning assignments both on the job and in related instruction and shall comply with the rules, regulations and decisions of the apprenticeship committee.

**Article IX Apprenticeship Agreement**

- 1) Each apprenticeship agreement shall conform to the State law governing apprenticeship agreements, and shall be signed by the employer, by the program sponsor, and by the apprentice and must be approved by the apprenticeship committee.
- 2) Each apprentice shall be furnished a copy of or be given an opportunity to study these standards before registration. These standards shall be considered a part of the apprenticeship agreement as though expressly written therein.
- 3) If the apprentice is under 18 years of age, the agreement must be signed by the apprentice's parent or guardian. When the period of training extends beyond 18, the apprenticeship agreement shall likewise be binding to such a period as may be covered.

**Article X Termination and Transfer of Agreements**

- 1) During the probationary period, an apprenticeship agreement shall be terminated by the apprenticeship committee at the request in writing of either party. After such probationary period, an apprenticeship agreement may be terminated by the Administrator by mutual agreement of all the parties thereto or cancelled by the Administrator for good and sufficient reason.
- 2) If an employer is unable to fulfill his/her obligations to train under any apprenticeship agreement or in the event of a layoff, the apprenticeship committee may, with the approval of the Administrator, transfer such agreement to any other employer if the apprentice consents, and such other employer agrees to assume the obligation of said apprenticeship agreement.

**Article XI Lay-off**

- 1) If for any reason a lay-off of an apprentice occurs, the apprenticeship agreement shall remain in effect unless cancelled by the Administrator. However, credit for related instruction shall be given when the apprentice continues such instruction during the lay-off.
- 2) There shall be no liability on the part of the employer, the program, or the committee for an injury sustained by an apprentice engaged in schoolwork at a time when the apprentice is unemployed.

**Article XII Controversies**

All controversies or differences concerning apprenticeship agreements that cannot be adjusted locally by the apprenticeship committee or otherwise shall be submitted to the Administrator for determination.

### **Article XIII Certificate of Completion**

- 1) In addition to previous on-the-job training and related school instruction, which is of an approved nature, the Apprentice shall have completed not less than an additional six (6) months as an apprentice under the laws of the State of California and demonstrated mastery of the skills and knowledge of the prescribed program.
- 2) In recognition of unusual ability and progress, the apprenticeship committee may decrease the term of apprenticeship for an individual apprentice not more than twelve and one-half percent (12½%).
- 3) Upon evidence of satisfactory completion of apprenticeship, and upon the recommendation of the apprenticeship committee, each apprentice will be issued a Certificate of Completion by the authority of the Chief of the Division of Apprenticeship Standards and the Interagency Advisory Committee on Apprenticeship.

### **Article XIV Equal Opportunity in Apprenticeship**

The recruitment, selection, employment and training of apprentices during their apprenticeship shall be without discrimination because of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age, sexual orientation or veteran or military status.

Creating Coding Careers Apprenticeship Program will create selection procedures that meet objective standards and maintain a fair and equitable selection process for all applicants.

### **Article XV Written Applications**

Applications for apprenticeship will be accepted:

To apply: online via website <https://cccareers.org/faq>

**Article XVI Records**

All records will be maintained, in written or electronic form, for five years and kept at:

Creating Coding Careers Apprenticeship Program  
6785 Imperial Ave.  
San Diego, CA 92114  
(619) 320-8378

**Article XVII Annual Compliance**

Creating Coding Careers Apprenticeship Program will submit an annual compliance report to the Division of Apprenticeship Standards as requested by the Division.

Creating Coding Careers Apprenticeship Program agrees to accept electronic signatures for these Division of Apprenticeship Standards and all related Division of Apprenticeship Standards documents.

The foregoing standards are hereby agreed to and adopted by Creating Coding Careers Apprenticeship Program on August 15, 2025 (Committee approval date).

**Employer Organization**

Creating Coding Careers Apprenticeship Program  
6785 Imperial Ave., San Diego, CA 92114

\_\_\_\_\_  
Mike Roberts, President

\_\_\_\_\_  
Date

The foregoing apprenticeship standards, being in conformity with the applicable California Labor Code, California Code of Regulations and Federal Regulations, are hereby approved

\_\_\_\_\_  
(DAS approval date)

\_\_\_\_\_  
Adele Burnes, Chief  
Division of Apprenticeship Standards

\_\_\_\_\_  
Date

# **Attachment B-1**

## **Training Schedule and Working Conditions**

Creating Coding Careers Apprenticeship Program

### **Occupation**

**Occupation:** Software Developer

**O\*Net Code:** 15-1252.00

### **Article I Term of Apprenticeship and Probation**

The standard term of apprenticeship shall be competency based, with approximately 2000 on-the-job training (OJT) hours, 326 related and supplemental instruction (RSI) hours, and completed within approximately twelve (12) months.

The period of probation shall be reasonable in relation to the full apprenticeship term, with full credit given for such period toward completion of the apprenticeship, and in no event shall exceed the shorter of 25 percent of the length of the program or one year. The period of probation shall be three (3) months.

### **Article II Wage Schedule**

#### **Professional Worker Wage:**

\$35.00 per hour + benefits effective 8/15/2025.

#### **Professional Worker Benefits:**

Health & Welfare \$ 0.75 per hour

Pension \$ 0.75 per hour

#### **Apprentice Wage and Advancement Schedule:**

In no case shall an Apprentice receive a starting wage that is less than the applicable federal, state or local entity (city or county) minimum wage, whichever is higher for the county or city where the apprentice is working. The applicable minimum wage law shall establish the effective date of the minimum wage.

To advance from one period to the next, the apprentice shall have met the following requirements:

1st period	0% of demonstrated competencies	\$ 25.00 /hour + benefits
2nd period	50% of demonstrated competencies	\$ 26.50 /hour + benefits
3rd period	85% of demonstrated competencies	\$ 28.00 /hour + benefits
4th period	100% of demonstrated competencies	\$ 35.00 /hour + benefits

**Hours of Work and Working Conditions and Overtime Provision:**

Eight hours of labor constitutes a day's work. Employment beyond eight hours in any workday or more than six days in any workweek requires the employee to be compensated for the overtime at not less than one and one-half times the employee's regular rate of pay for all hours worked in excess of eight hours, up to and including 12 hours in any workday, and for the first eight hours worked on the seventh consecutive day of work in a workweek; and double the employee's regular rate of pay for all hours worked in excess of 12 hours in any workday and for all hours worked in excess of eight on the seventh consecutive day of work in a workweek. If employers utilize an alternative workweek schedule in accordance with the California Industrial Welfare Commission Orders, the overtime will be determined and paid in accordance with the applicable alternative workweek provisions.

The workday and workweek and all other conditions of employment for apprentices shall conform to all applicable laws and regulations and shall not be greater than for those of a professional worker.

Overtime shall not be allowed if it will interfere with or impair the training or be detrimental to the health and safety of the apprentice.

**ARTICLE III Work-Training**

- 1) The employer shall see that all apprentices are under the supervision of a qualified professional worker or instructor and shall provide the necessary diversified experience and training in order to develop the apprentice into a proficiently skilled worker, as outlined herein.
- 2) Each apprentice shall be trained in the use of new equipment, materials and processes as they come into use in the occupation.
- 3) The major categories in which apprentices will be trained (although not necessarily in the order listed) are as follows:

**Competency Check List**

**Demonstrates Fundamentals:** Apprentice can perform the task with some coaching.

**Proficient in Task:** Apprentice performs task properly and consistently.

**Completion Date:** Date apprentice completes final demonstration of competency.

Detailed Work Activities Initial and date each task when Competency Check List has been completed.

**SOFTWARE DEVELOPER (15-1252.00)  
Work Processes (Professional Competencies) and Performance Areas**

On-the-Job Learning Outline

1. Workplace Readiness and Professional Communication
  - a. Adhere to the organization's rules, responsibilities, policies, and basic workplace ethics
  - b. Demonstrate basic principles of interpersonal communication and knowledge of the organization's basic structure and functions
  - c. Identify and demonstrate knowledge of the appropriate common office tools used to produce documents, spreadsheets, and presentations
  - d. Prepare and deliver oral presentations that effectively convey information, concepts, and ideas
  - e. Communicate with team members effectively and work collaboratively
2. Software Development Fundamentals
  - a. Supports application of prototyping methods, if applicable
  - b. Participates in the implementation of development life cycles and specifications, including supporting mapping out work plans, under supervision
  - c. Supports the creation of tools and languages needed per output in the work plan, under supervision
  - d. Participates in building the program using the appropriate languages and/or applicable development methods
  - e. Participates in the identification and development of the best prototype suited for the project
3. Requirements, Planning, and Team Collaboration
  - a. Ensures proper use of Software Requirement Specification (SRS), and documents product requirements, under supervision
  - b. Participates in curating implementation preparation documents and plans

- c. Supports project team members with team consultations that determine end product's feasibility in economic, operational, and technical areas
  - d. Coordinates with the Project Manager to communicate desired requirements and objectives clearly to other team members such as the UX team, QA testers, etc.
4. Quality Assurance and Issue Tracking
- a. Supports the team/QA testers in preliminary quality assurance requirements assessments and risk assessments, under supervision
  - b. After issue is reported, tracks and works with team to fix and re-test until quality standards are met
  - c. Makes detailed notes when changes are made or when functions must remain unchanged
  - d. Supports integration and test phase; notes progress relevant to project success
  - e. Supports close monitoring to identify issues and reports them clearly to senior team members
5. Software Architecture and Design Support
- a. Applies best practices to the company-specific source code management processes
  - b. Supports the UX team or other team members with software design and system structure including implementation, data models, interfaces, and algorithms, under supervision
  - c. Continues to support identifying program and project changes or new needs and applies changes under direction from senior team members
  - d. Participates in implementing accessible and responsive web designs and applications
6. DevOps, Deployment, and Maintenance
- a. Participates in ongoing monitoring of platforms, software, or applications for accessibility and compliance
  - b. Supports with maintenance, troubleshooting, and problem-solving under supervision
  - c. Participates in recognizing concepts to determine CI/CD configuration and supports CI/CD integrations

**ARTICLE IV Related Instruction**

Apprentices shall satisfactorily complete prescribed courses of related and supplemental instruction, which will not be less than 326 hours per year. Related and supplemental instruction will be provided by Creating Coding Careers Apprenticeship Program and overseen by San Diego County Office of Education.

Time spent in related and supplemental instruction may not be compensated.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
WEB 102	JavaScript Projects	30 hours

**Course Description:**

This is a competency-based course designed for the indentured website developer apprentice. This course will cover programming projects using JavaScript. These projects will build the knowledgebase in the fundamentals of programming and web page construction as well as apply techniques to manage the DOM and events, interactively.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
NODE 101	Introduction to Express JS	40 hours

**Course Description:**

This is a competency-based course designed for the indentured website developer apprentice. This course will cover back end technologies with Node and Express. This includes building a server and prepare to spin up a website that will be publicly accessible on the web.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
REACT 100	Beginner React JS	100 hours

**Course Description:**

This is a competency-based course designed for the indentured website developer apprentice. This course provides project-based assignments on the use of the front end library React JS to build advanced websites.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
OPS 200	Building & Deploying Apps	16 hours

**Course Description:**

This is a competency-based course designed for the indentured website developer apprentice. This course will cover building artifacts and assets for websites, the use

of task runners and deployment workflows to deploy a website to the public using 12-factor application development patterns.

<u>Course Number</u>	<u>Course Title</u>	<u>RSI Hours</u>
DB 100	Relational Databases	20 hours

**Course Description:**

This is a competency-based course designed for the indentured website developer apprentice. This course will cover a strong foundation in relational database systems including elementary foundations and the common query language SQL.

Apprentices will use a sample database to practice queries including learning to get, join, and insert data.

<u>Course Number</u>	<u>Course Title</u>	<u>RSI Hours</u>
DB 200	No-SQL Databases	20 hours

**Course Description:**

This is a competency-based course designed for the indentured website developer apprentice. This course will cover various popular NoSQL systems and their feature sets, as well as an understanding of CAP theorem. Apprentices will practice database development skills using projects with NoSQL databases including MongoDB and Redis.

<u>Course Number</u>	<u>Course Title</u>	<u>RSI Hours</u>
NODE 200	Intermediate Express JS	50 hours

**Course Description:**

This is a competency-based course designed for the indentured website developer apprentice. This course will cover basic application flow with conditional operators, looping methods, variable declarations, functions and objects. This course includes basic language syntax and break larger problems into small units and simpler problems to solve.

<u>Course Number</u>	<u>Course Title</u>	<u>RSI Hours</u>
REACT 200	Intermediate ReactJS	50 hours

**Course Description:**

This is a competency-based course designed for the indentured website developer apprentice. This course will continue familiarization with ReactJS by implementing routing and state management using Redux and React-Router. Apprentices through project-based assignments will begin building more complex single page applications.

**Total RSI Hours:****326****ARTICLE V Ratio**

The ratio of apprentices to professional workers shall be:

- 1) Ratio #1: Each professional worker may supervise five (5) apprentice(s)

## **Attachment B-2**

### **Training Schedule and Working Conditions**

Creating Coding Careers Apprenticeship Program

#### **Occupation**

**Occupation:** Quality Assurance Software Engineer

**O\*Net Code:** 15-1232.00

#### **Article I Term of Apprenticeship and Probation**

The standard term of apprenticeship shall be competency based, with approximately 2000 on-the-job training (OJT) hours, 310 related and supplemental instruction (RSI) hours, and completed within approximately twelve (12) months.

The period of probation shall be reasonable in relation to the full apprenticeship term, with full credit given for such period toward completion of the apprenticeship, and in no event shall exceed the shorter of 25 percent of the length of the program or one year. The period of probation shall be three (3) months.

#### **Article II Wage Schedule**

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\$ 35.00 per hour + benefits effective 8/15/2025.

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Health & Welfare	\$ 0.75 per hour
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Pension	\$ 0.75 per hour
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4th period	100% of demonstrated competencies	\$ 35.00 /hour + benefits

**Hours of Work and Working Conditions and Overtime Provision:**

Eight hours of labor constitutes a day's work. Employment beyond eight hours in any workday or more than six days in any workweek requires the employee to be compensated for the overtime at not less than one and one-half times the employee's regular rate of pay for all hours worked in excess of eight hours, up to and including 12 hours in any workday, and for the first eight hours worked on the seventh consecutive day of work in a workweek; and double the employee's regular rate of pay for all hours worked in excess of 12 hours in any workday and for all hours worked in excess of eight on the seventh consecutive day of work in a workweek. If employers utilize an alternative workweek schedule in accordance with the California Industrial Welfare Commission Orders, the overtime will be determined and paid in accordance with the applicable alternative workweek provisions.

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**QUALITY ASSURANCE SOFTWARE ENGINEER (15-1232.00)  
Work Processes (Professional Competencies) and Performance Areas**

## On-the-Job Learning Outline

1. Workplace Readiness and Professional Communication
  - a. Adhere to the organization's rules, responsibilities, policies, and basic workplace ethics
  - b. Demonstrate basic principles of interpersonal communication and knowledge of the organization's basic structure and functions
  - c. Identify and demonstrate knowledge of the appropriate common office tools used to produce documents, spreadsheets, and presentations
  - d. Prepare and deliver oral presentations that effectively convey information, concepts, and ideas
  - e. Communicate with team members effectively and work collaboratively
2. Bug Tracking and Issue Resolution
  - a. Uses a bug tracking system to document and report defects
  - b. Provide feedback and recommendations to developers on software usability and functionality
  - c. Collaborate with field staff or customers to evaluate or diagnose problems and recommend possible solutions.
  - d. Monitors bug resolution efforts and track successes
  - e. Supports close monitoring to identify issues and reports them in a clear and concise way to senior team members
3. Testing and QA Automation
  - a. Installs and configures recreations of software production environments to allow testing of software performance, under supervision
  - b. Performs initial debugging procedures by reviewing configuration files, logs, or code pieces to determine breakdown source
  - c. Installs, maintains, or uses software testing programs
  - d. Continues to support automated test scripts to ensure currency
  - e. Participates in maintaining databases of known test defects

- f. Designs or develops automated testing tools
4. Code Quality and Documentation
    - a. Applies best practices to the company-specific source code management processes
    - b. Reviews software documentation to ensure technical accuracy, compliance, or completeness, or to mitigate risks
    - c. Tests system modifications to prepare for implementation
    - d. Plans test schedules or strategies in accordance with project scope or delivery dates
  5. Development and Design Collaboration
    - a. Participates in implementing accessible and responsive web site designs and applications
    - b. Participates in building the program using the appropriate languages and/or applicable development methods
    - c. Participates in product design reviews to provide input on functional requirements, product designs, schedules, or potential problems
    - d. Collaborates with cross-functional teams during the design and implementation process

**ARTICLE IV Related Instruction**

Apprentices shall satisfactorily complete prescribed courses of related and supplemental instruction, which will not be less than 310 hours per year. Related and supplemental instruction will be provided by Creating Coding Careers Apprenticeship Program and overseen by San Diego County Office of Education.

Time spent in related and supplemental instruction may not be compensated.

<u>Course Number</u>	<u>Course Title</u>	<u>RSI Hours</u>
NODE 100	Intro to Programming with Node JS	18 hours

**Course Description:**

This is a competency-based course designed for the indentured website developer apprentice. This course will cover basic application flow with conditional operators, looping methods, variable declarations, functions and objects. This course will also cover basic language syntax and breaking larger problems into small units and simpler problems to solve.

<u>Course Number</u>	<u>Course Title</u>	<u>RSI Hours</u>
WEB 100	HTML / CSS Basics	15 hours

**Course Description:**

This is a competency-based course designed for the indentured website developer apprentice. This course will cover the syntax to create Symantec html websites and begin familiarize with common page elements used to design modern websites. This course also covers the rules that define how the content will be displayed on webpages and practice creating the structure of pages & styling them.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
WEB 101	JavaScript in the DOM	27 hours

**Course Description:**

This is a competency-based course designed for the indentured website developer apprentice. This course will cover interactivity to websites, basics of JavaScript and the function of Document Object Model (DOM) allowing access to change a document's contents inside the browser. Apprentices will practice enabling dynamic updates to be made to the page based on user interactions and data from servers triggered by events.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
ALG 100	Intro to Data Structures and Algorithms	20 hours

**Course Description:**

This is a competency-based course designed for the indentured website developer apprentice. This course will cover the use of HTML, CSS, and JavaScript to learn data structures and algorithms. The course will examine closely on data sorting, computational thinking, graph transversals, binary search trees, linked lists, stack, queues and hash tables in node.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
OPS 100	Git / Chrome Devtools	30 hours

**Course Description:**

This is a competency-based course designed for the indentured website developer apprentice. This course will cover the tool set required to develop websites and modern software projects. Apprentices will practice with collaboration tools and deploy a website to the public.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
AGILE 100	Introduction to Agile Projects	50 hours

**Course Description:**

This is a competency-based course designed for the indentured website developer apprentice. In this course, the apprentices will organize, participate, and work in a one (1) week “sprint” as a small team on a legacy (existing) code base. Apprentices will learn and practice an Agile workflow, apply more advance git techniques, and utilize all existing skills to deliver value to customers.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
AGILE 200	Agile Project Implementation	150 hours

**Course Description:**

This is a competency-based course designed for the indentured website developer apprentice. This course will cover a team or an individual capstone project. The apprentice(s) will select a project using Agile Methodologies, project management software. The project is a sprint for three (3) weeks to deliver a software product that adds real value for a customer and their end users.

**Total RSI Hours:** 310

**ARTICLE V Ratio**

The ratio of apprentices to professional workers shall be:

- 1) Ratio #1: Each professional worker may supervise five (5) apprentice(s)

# **Attachment B-3**

## **Training Schedule and Working Conditions**

Creating Coding Careers Apprenticeship Program

### **Occupation**

**Occupation:** Data Engineer

**O\*Net Code:** 15-1243.00

### **Article I Term of Apprenticeship and Probation**

The standard term of apprenticeship shall be competency based, with approximately 2000 on-the-job training (OJT) hours, 295 related and supplemental instruction (RSI) hours, and completed within approximately twelve (12) months.

The period of probation shall be reasonable in relation to the full apprenticeship term, with full credit given for such period toward completion of the apprenticeship, and in no event shall exceed the shorter of 25 percent of the length of the program or one year. The period of probation shall be three (3) months.

### **Article II Wage Schedule**

#### **Professional Worker Wage:**

\$ 30.00 per hour + benefits effective 8/15/2025.

#### **Professional Worker Benefits:**

Health & Welfare                      \$ 0.75 per hour

Pension                                      \$ 0.75 per hour

#### **Apprentice Wage and Advancement Schedule:**

In no case shall an Apprentice receive a starting wage that is less than the applicable federal, state or local entity (city or county) minimum wage, whichever is higher for the county or city where the apprentice is working. The applicable minimum wage law shall establish the effective date of the minimum wage.

To advance from one period to the next, the apprentice shall have met the following requirements:

1st period	0% of demonstrated competencies	\$ 25.00 /hour + benefits
2nd period	50% of demonstrated competencies	\$ 26.50 /hour + benefits
3rd period	85% of demonstrated competencies	\$ 28.00 /hour + benefits
4th period	100% of demonstrated competencies	\$ 30.00 /hour + benefits

**Hours of Work and Working Conditions and Overtime Provision:**

Eight hours of labor constitutes a day's work. Employment beyond eight hours in any workday or more than six days in any workweek requires the employee to be compensated for the overtime at not less than one and one-half times the employee's regular rate of pay for all hours worked in excess of eight hours, up to and including 12 hours in any workday, and for the first eight hours worked on the seventh consecutive day of work in a workweek; and double the employee's regular rate of pay for all hours worked in excess of 12 hours in any workday and for all hours worked in excess of eight on the seventh consecutive day of work in a workweek. If employers utilize an alternative workweek schedule in accordance with the California Industrial Welfare Commission Orders, the overtime will be determined and paid in accordance with the applicable alternative workweek provisions.

The workday and workweek and all other conditions of employment for apprentices shall conform to all applicable laws and regulations and shall not be greater than for those of a professional worker.

Overtime shall not be allowed if it will interfere with or impair the training or be detrimental to the health and safety of the apprentice.

**ARTICLE III Work-Training**

- 1) The employer shall see that all apprentices are under the supervision of a qualified professional worker or instructor and shall provide the necessary diversified experience and training in order to develop the apprentice into a proficiently skilled worker, as outlined herein.
- 2) Each apprentice shall be trained in the use of new equipment, materials and processes as they come into use in the occupation.
- 3) The major categories in which apprentices will be trained (although not necessarily in the order listed) are as follows:

## **Competency Check List**

**Demonstrates Fundamentals:** Apprentice can perform the task with some coaching.

**Proficient in Task:** Apprentice performs task properly and consistently.

**Completion Date:** Date apprentice completes final demonstration of competency.

Detailed Work Activities Initial and date each task when Competency Check List has been completed.

## **DATA ENGINEER (15-1243.00) Work Processes (Professional Competencies) and Performance Areas**

### On-the-Job Learning Outline

1. Design and Develop Data Pipelines
  - a. Build efficient and scalable ETL (Extract, Transform, Load) processes.
  - b. Automate data ingestion from multiple sources.
  - c. Optimize data workflows for performance and reliability.
2. Data Cleaning and Wrangling
  - a. Process and clean raw data to ensure quality and consistency.
  - b. Perform data transformation and feature engineering for analytics.
  - c. Implement data validation techniques to identify and resolve anomalies.
3. Database Management
  - a. Manage SQL and NoSQL databases for structured and unstructured data.
  - b. Write complex queries for data retrieval and processing.
  - c. Optimize indexing, partitioning, and query execution plans.
4. Big Data Framework Implementation
  - a. Utilize frameworks such as Apache Spark, Hadoop, or Kafka for big data processing.
  - b. Implement distributed computing and parallel processing techniques.
  - c. Develop scalable solutions for handling large volumes of data.
5. Data Integration
  - a. Implement encryption and access control policies.
  - b. Monitor and enforce data privacy and compliance standards (GDPR, CCPA).
  - c. Manage data lineage and auditing for traceability.
  - d. Performance Optimization
  - e. Analyze and improve query performance in relational and NoSQL databases.
  - f. Optimize data storage formats and compression techniques.

- g. Automate performance monitoring and scaling.
- 6. Cloud Data Engineering
  - a. Deploy and manage cloud-based data solutions (AWS, GCP, Azure).
  - b. Implement serverless and containerized data workflows.
  - c. Utilize cloud-native services like BigQuery, Redshift, or Snowflake.
  - d. Develop streaming data pipelines for real-time analytics.
  - e. Use tools like Apache Flink, Kafka Streams, or Spark Streaming.
  - f. Implement event-driven architectures for data processing.
  - g. Collaboration and Documentation
  - h. Work closely with data analysts, scientists, and software engineers.
  - i. Document data models, pipelines, and system architecture.
  - j. Present findings and improvements to stakeholders.

**ARTICLE IV Related Instruction**

Apprentices shall satisfactorily complete prescribed courses of related and supplemental instruction, which will not be less than 295 hours per year. Related and supplemental instruction will be provided by Creating Coding Careers Apprenticeship Program and overseen by San Diego County Office of Education.

Time spent in related and supplemental instruction may not be compensated.

<u>Course Number</u>	<u>Course Title</u>	<u>RSI Hours</u>
DE101	Data Engineering Fundamentals	30 hours

**Course Description:**

This is a competency-based course designed for the indentured Data Engineer apprentice. Introduction to data engineering concepts, including data pipelines, ETL processes, and database management. Covers fundamental tools like SQL, NoSQL, and data modeling best practices.

<u>Course Number</u>	<u>Course Title</u>	<u>RSI Hours</u>
DE102	SQL & NoSQL Databases	40 hours

**Course Description:**

This is a competency-based course designed for the indentured Data Engineer apprentice. Hands-on training on relational databases (PostgreSQL, MySQL) and NoSQL databases (MongoDB, Cassandra). Covers data storage, indexing, and query optimization techniques.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
DE201	Big Data Processing with Spark & Hadoop	40 hours

**Course Description:**

This is a competency-based course designed for the indentured Data Engineer apprentice. Practical experience in big data frameworks such as Apache Spark and Hadoop. Covers distributed computing, data partitioning, and performance optimization strategies.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
DE210	Data Pipeline Automation & ETL Best Practices	40 hours

**Course Description:**

This is a competency-based course designed for the indentured Data Engineer apprentice. Focuses on building automated ETL workflows using Apache Airflow, dbt, and cloud-native tools. Covers scheduling, monitoring, and debugging ETL pipelines.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
DB305	Data Handling, APIs & Cloud Infrastructure	40 hours

**Course Description:**

This is a competency-based course designed for the indentured Data Engineer apprentice. Explores data integration, API connectivity, and cloud data services (AWS Redshift, Google BigQuery, Azure Data Factory). Covers real-time data streaming and infrastructure scalability.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
DS320	Data Governance & Security	25 hours

**Course Description:**

This is a competency-based course designed for the indentured Data Engineer apprentice. Covers data privacy regulations (GDPR, CCPA), encryption, and access control strategies. Includes best practices for securing enterprise data assets.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
AGILE210	Agile & DevOps for Data Engineers	40 hours

**Course Description:**

This is a competency-based course designed for the indentured Data Engineer apprentice. Introduction to Agile methodologies and DevOps principles in data engineering. Covers CI/CD pipelines, version control (Git), and infrastructure automation.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
AGILE310	Data Engineering Capstone Project	40 hours

**Course Description:**

This is a competency-based course designed for the indentured Data Engineer apprentice. A final project where learners apply data engineering principles to build an end-to-end data pipeline, integrating data ingestion, processing, and storage in a cloud environment.

**Total RSI Hours:** 295

**ARTICLE V Ratio**

The ratio of apprentices to professional workers shall be:

- 1) Ratio #1: Each professional worker may supervise five (5) apprentice(s)

# **Attachment B-4**

## **Training Schedule and Working Conditions**

Creating Coding Careers Apprenticeship Program

### **Occupation**

**Occupation:** Prompt Engineer

**O\*Net Code:** 15-1251.00

### **Article I Term of Apprenticeship and Probation**

The standard term of apprenticeship shall be competency based, with approximately 2000 on-the-job training (OJT) hours, 290 related and supplemental instruction (RSI) hours, and completed within approximately twelve (12) months.

The period of probation shall be reasonable in relation to the full apprenticeship term, with full credit given for such period toward completion of the apprenticeship, and in no event shall exceed the shorter of 25 percent of the length of the program or one year. The period of probation shall be three (3) months.

### **Article II Wage Schedule**

#### **Professional Worker Wage:**

\$ 30.00 per hour + benefits effective 8/15/2025.

#### **Professional Worker Benefits:**

Health & Welfare \$ 0.75 per hour

Pension \$ 0.75 per hour

#### **Apprentice Wage and Advancement Schedule:**

In no case shall an Apprentice receive a starting wage that is less than the applicable federal, state or local entity (city or county) minimum wage, whichever is higher for the county or city where the apprentice is working. The applicable minimum wage law shall establish the effective date of the minimum wage.

To advance from one period to the next, the apprentice shall have met the following requirements:

1st period	0% of demonstrated competencies	\$ 25.00 /hour + benefits
2nd period	50% of demonstrated competencies	\$ 26.50 /hour + benefits
3rd period	85% of demonstrated competencies	\$ 28.00 /hour + benefits
4th period	100% of demonstrated competencies	\$ 30.00 /hour + benefits

**Hours of Work and Working Conditions and Overtime Provision:**

Eight hours of labor constitutes a day's work. Employment beyond eight hours in any workday or more than six days in any workweek requires the employee to be compensated for the overtime at not less than one and one-half times the employee's regular rate of pay for all hours worked in excess of eight hours, up to and including 12 hours in any workday, and for the first eight hours worked on the seventh consecutive day of work in a workweek; and double the employee's regular rate of pay for all hours worked in excess of 12 hours in any workday and for all hours worked in excess of eight on the seventh consecutive day of work in a workweek. If employers utilize an alternative workweek schedule in accordance with the California Industrial Welfare Commission Orders, the overtime will be determined and paid in accordance with the applicable alternative workweek provisions.

The workday and workweek and all other conditions of employment for apprentices shall conform to all applicable laws and regulations and shall not be greater than for those of a professional worker.

Overtime shall not be allowed if it will interfere with or impair the training or be detrimental to the health and safety of the apprentice.

**ARTICLE III Work-Training**

- 1) The employer shall see that all apprentices are under the supervision of a qualified professional worker or instructor and shall provide the necessary diversified experience and training in order to develop the apprentice into a proficiently skilled worker, as outlined herein.
- 2) Each apprentice shall be trained in the use of new equipment, materials and processes as they come into use in the occupation.
- 3) The major categories in which apprentices will be trained (although not necessarily in the order listed) are as follows:

**Competency Check List**

**Demonstrates Fundamentals:** Apprentice can perform the task with some coaching.

**Proficient in Task:** Apprentice performs task properly and consistently.

**Completion Date:** Date apprentice completes final demonstration of competency.

Detailed Work Activities Initial and date each task when Competency Check List has been completed.

**PROMPT ENGINEER (15-1251.00)**  
**Work Processes (Professional Competencies) and Performance Areas**

On-the-Job Learning Outline

1. Fundamentals of AI & Prompt Engineering
  - a. Understands the capabilities and limitations of Generative AI models (ChatGPT, Claude, Gemini, etc.)
  - b. Crafts effective prompts for different AI tasks (text generation, summarization, image creation)
  - c. Develops advanced prompt chaining and few-shot learning techniques
  - d. Evaluates AI responses for accuracy, relevance, and bias mitigation
  - e. Utilizes AI APIs and fine-tunes models using OpenAI API, Claude, and similar platforms
2. No-Code and Low Code AI Integration
  - a. Builds applications using Airtable, Make.com, n8n, Zapier, or Softr
  - b. Designs and automates workflows using AI and logic-based automation
  - c. Configures API integrations and webhooks to connect different tools
  - d. Deploys AI-powered chatbot solutions for businesses
3. AI-Powered Automation & Business Workflows
  - a. Builds AI-driven business workflows for data processing, reporting, and decision-making
  - b. Implements document automation using AI (e.g., contract generation, summarization)
  - c. Designs intelligent email and customer service automation systems
  - d. Optimizes business processes by integrating AI into existing company operations
  - e. Troubleshoots automation failures and refines workflows for improved performance

4. Human-Centered AI Design & Prototyping
  - a. Works with clients to identify AI automation needs and requirements
  - b. Conducts rapid prototyping and iteration using AI tools
  - c. Implements UI/UX best practices for AI-powered solutions
  - d. Collects user feedback to refine and improve AI-powered prototypes
  - e. Collaborates with stakeholders to ensure AI solutions align with business goals
5. Data Handling, APIs & AI Infrastructure
  - a. Works with structured and unstructured data sources for AI-powered automation
  - b. Develops AI workflows that interact with databases (SQL, NoSQL, Airtable)
  - c. Implements data validation, transformation, and storage best practices
  - d. Configures and deploys AI models using cloud services (AWS, Azure, GCP)
  - e. Monitors AI performance and optimizes models for accuracy and efficiency
6. AI Security, Compliance & Ethical Considerations
  - a. Ensures AI automation follows ethical AI principles and avoids bias
  - b. Implements data security best practices in AI workflows
  - c. Understands and applies GDPR, CCPA, and other data privacy laws
  - d. Develops responsible AI policies for automation and decision-making
  - e. Monitors AI-generated content to avoid misinformation and compliance risks
7. AI-Powered Business Solution
  - a. Collaborates with a real-world client to develop an end-to-end AI automation solution
  - b. Builds and deploys a working AI-powered workflow or application
  - c. Documents and presents the project, detailing architecture, implementation, and impact
  - d. Conducts final testing and deployment with real-world business use cases

#### **ARTICLE IV Related Instruction**

Apprentices shall satisfactorily complete prescribed courses of related and supplemental instruction, which will not be less than 290 hours per year. Related and supplemental instruction will be provided by Creating Coding Careers Apprenticeship Program and overseen by San Diego County Office of Education.

Time spent in related and supplemental instruction may not be compensated.

<u>Course Number</u>	<u>Course Title</u>	<u>RSI Hours</u>
AI101	Fundamentals of AI & Prompt Engineering	30 hours

**Course Description:**

This is a competency-based course designed for the indentured Prompt Engineer apprentice. Introduction to core AI concepts and prompt engineering strategies. Covers understanding how generative AI models interpret prompts, best practices for refining prompts, and an overview of various AI use cases.

<u>Course Number</u>	<u>Course Title</u>	<u>RSI Hours</u>
AI102	No-Code & Low-Code AI Integration	80 hours

**Course Description:**

This is a competency-based course designed for the indentured Prompt Engineer apprentice. Explores platforms like Zapier, Make, and other low-code tools to integrate AI capabilities. Focuses on building automated workflows and connecting AI services without extensive coding.

<u>Course Number</u>	<u>Course Title</u>	<u>RSI Hours</u>
AI201	AI-Powered Automation & Workflows	60 hours

**Course Description:**

This is a competency-based course designed for the indentured Prompt Engineer apprentice. Practical hands-on training for creating end-to-end AI-driven workflows. Includes combining APIs, triggers, and AI services to automate repetitive tasks and streamline business processes.

<u>Course Number</u>	<u>Course Title</u>	<u>RSI Hours</u>
AI210	Human-Centered AI Design	25 hours

**Course Description:**

This is a competency-based course designed for the indentured Prompt Engineer apprentice. Practical hands-on training for creating end-to-end AI-driven workflows. Includes combining APIs, triggers, and AI services to automate repetitive tasks and streamline business processes.

<u>Course Number</u>	<u>Course Title</u>	<u>RSI Hours</u>
DB305	Data Handling, APIs & AI Infrastructure	30 hours

**Course Description:**

This is a competency-based course designed for the indentured Prompt Engineer apprentice. Delves into managing data pipelines, connecting to APIs, and setting up AI infrastructure. Explores how to handle large datasets, maintain data quality, and optimize AI performance in production environments.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
AI350	AI Security & Compliance	25 hours

**Course Description:**

This is a competency-based course designed for the indentured Prompt Engineer apprentice. Focuses on protecting AI models and data from threats. Discusses regulatory compliance, data privacy, and best practices for securing AI-driven applications against emerging cyber risks.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
AGILE210	Capstone Project	40 hours

**Course Description:**

This is a competency-based course designed for the indentured Prompt Engineer apprentice. A final, project-based experience where learners apply prompt engineering, no-code tools, and AI design principles to build a fully functional AI solution, demonstrating all skills acquired throughout the program.

**Total RSI Hours:** 290

**ARTICLE V Ratio**

The ratio of apprentices to professional workers shall be:

- 1) Ratio #1: Each professional worker may supervise five (5) apprentice(s)

# **Attachment B-5**

## **Training Schedule and Working Conditions**

Creating Coding Careers Apprenticeship Program

### **Occupation**

**Occupation:** Cloud Support Engineer

**O\*Net Code:** 15-1231.00

### **Article I Term of Apprenticeship and Probation**

The standard term of apprenticeship shall be competency based, with approximately 2000 on-the-job training (OJT) hours, 260 related and supplemental instruction (RSI) hours, and completed within approximately twelve (12) months.

The period of probation shall be reasonable in relation to the full apprenticeship term, with full credit given for such period toward completion of the apprenticeship, and in no event shall exceed the shorter of 25 percent of the length of the program or one year. The period of probation shall be three (3) months.

### **Article II Wage Schedule**

#### **Professional Worker Wage:**

\$ 35.00 per hour + benefits effective 8/15/2025.

#### **Professional Worker Benefits:**

Health & Welfare \$ 0.75 per hour

Pension \$ 0.75 per hour

#### **Apprentice Wage and Advancement Schedule:**

In no case shall an Apprentice receive a starting wage that is less than the applicable federal, state or local entity (city or county) minimum wage, whichever is higher for the county or city where the apprentice is working. The applicable minimum wage law shall establish the effective date of the minimum wage.

To advance from one period to the next, the apprentice shall have met the following requirements:

1st period	0% of demonstrated competencies	\$ 25.00 /hour + benefits
2nd period	50% of demonstrated competencies	\$ 26.50 /hour + benefits
3rd period	85% of demonstrated competencies	\$ 28.00 /hour + benefits
4th period	100% of demonstrated competencies	\$ 35.00 /hour + benefits

**Hours of Work and Working Conditions and Overtime Provision:**

Eight hours of labor constitutes a day's work. Employment beyond eight hours in any workday or more than six days in any workweek requires the employee to be compensated for the overtime at not less than one and one-half times the employee's regular rate of pay for all hours worked in excess of eight hours, up to and including 12 hours in any workday, and for the first eight hours worked on the seventh consecutive day of work in a workweek; and double the employee's regular rate of pay for all hours worked in excess of 12 hours in any workday and for all hours worked in excess of eight on the seventh consecutive day of work in a workweek. If employers utilize an alternative workweek schedule in accordance with the California Industrial Welfare Commission Orders, the overtime will be determined and paid in accordance with the applicable alternative workweek provisions.

The workday and workweek and all other conditions of employment for apprentices shall conform to all applicable laws and regulations and shall not be greater than for those of a professional worker.

Overtime shall not be allowed if it will interfere with or impair the training or be detrimental to the health and safety of the apprentice.

**ARTICLE III Work-Training**

- 1) The employer shall see that all apprentices are under the supervision of a qualified professional worker or instructor and shall provide the necessary diversified experience and training in order to develop the apprentice into a proficiently skilled worker, as outlined herein.
- 2) Each apprentice shall be trained in the use of new equipment, materials and processes as they come into use in the occupation.
- 3) The major categories in which apprentices will be trained (although not necessarily in the order listed) are as follows:

**Competency Check List**

**Demonstrates Fundamentals:** Apprentice can perform the task with some coaching.

**Proficient in Task:** Apprentice performs task properly and consistently.

**Completion Date:** Date apprentice completes final demonstration of competency.

Detailed Work Activities Initial and date each task when Competency Check List has been completed.

**CLOUD SUPPORT ENGINEER (15-1231.00)  
Work Processes (Professional Competencies) and Performance Areas**

On-the-Job Learning Outline

1. Technical Support and Troubleshooting
  - a. Diagnose and resolve cloud service issues related to network, storage, and compute resources.
  - b. Assist customers in deploying applications in a cloud environment.
  - c. Analyze system logs and monitoring tools to identify performance bottlenecks.
  - d. Support incident management processes and document troubleshooting steps.
2. Cloud Platform and Infrastructure
  - a. Demonstrate proficiency in using cloud platforms (AWS, Azure, Google Cloud).
  - b. Configure and manage virtual machines, containers, and serverless functions.
  - c. Understand cloud storage solutions and data lifecycle management.
  - d. Implement identity and access management (IAM) best practices.
3. Networking and Security
  - a. Configure virtual private cloud (VPC), subnets, and security groups.
  - b. Implement cloud firewall and access control policies.
  - c. Monitor and analyze network traffic using cloud-native tools.
  - d. Apply encryption and compliance policies for data protection.
4. Automation and Scripting
  - a. Develop scripts using Python, Bash, or PowerShell for cloud automation.
  - b. Implement Infrastructure as Code (IaC) using Terraform, CloudFormation, or Bicep.
  - c. Automate deployment pipelines using CI/CD tools (Jenkins, GitHub Actions, Azure DevOps).

- d. Optimize resource provisioning using autoscaling and serverless functions.
- 5. Customer Support and Communication
  - a. Communicate effectively with customers and internal teams.
  - b. Document and escalate unresolved issues to appropriate teams.
  - c. Conduct technical training sessions for customers or internal stakeholders.
  - d. Write detailed knowledge base articles and technical documentation.
- 6. Incident Response and Monitoring
  - a. Set up cloud monitoring solutions such as CloudWatch, Azure Monitor, or Stackdriver.
  - b. Respond to service outages and escalate critical issues.
  - c. Create dashboards to track cloud performance and service health.
  - d. Implement alerting mechanisms to notify teams of potential incidents.
- 7. Compliance and Best Practices
  - a. Ensure adherence to cloud security frameworks and compliance standards (SOC 2, HIPAA, GDPR).
  - b. Conduct periodic security audits and implement remediation actions.
  - c. Follow cloud provider best practices for high availability and disaster recovery.
  - d. Implement backup and restoration procedures.

**ARTICLE IV Related Instruction**

Apprentices shall satisfactorily complete prescribed courses of related and supplemental instruction, which will not be less than 260 hours per year. Related and supplemental instruction will be provided by Creating Coding Careers Apprenticeship Program and overseen by San Diego County Office of Education.

Time spent in related and supplemental instruction may not be compensated.

<u>Course Number</u>	<u>Course Title</u>	<u>RSI Hours</u>
CSE101	Introduction to Cloud Computing	40 hours

**Course Description:**

This is a competency-based course designed for the indentured Cloud Support Engineer apprentice. Covers fundamental cloud concepts, including computing models (IaaS, PaaS, SaaS), virtualization, and key cloud benefits. Discusses different cloud providers without a platform bias.

<u>Course Number</u>	<u>Course Title</u>	<u>RSI Hours</u>
NET260	Cloud Security & Secure Systems Deployment	60 hours

**Course Description:**

This is a competency-based course designed for the indentured Cloud Support Engineer apprentice. Focuses on securing cloud platforms (AWS, Azure, Google Cloud), cloud security best practices, and deployment of secure applications.

<u>Course Number</u>	<u>Course Title</u>	<u>RSI Hours</u>
NET110	Network Security Fundamentals	40 hours

**Course Description:**

This is a competency-based course designed for the indentured Cloud Support Engineer apprentice. Introduces network protocols, firewalls, VPNs, intrusion detection/prevention systems (IDS/IPS), and secure network architecture.

<u>Course Number</u>	<u>Course Title</u>	<u>RSI Hours</u>
CSE203	Cloud Infrastructure Deployment & Management	25 hours

**Course Description:**

This is a competency-based course designed for the indentured Cloud Support Engineer apprentice. Covers cloud-based virtual machines, storage, and databases. Teaches Infrastructure as Code (IaC) principles and automation using vendor-neutral tools such as Terraform.

<u>Course Number</u>	<u>Course Title</u>	<u>RSI Hours</u>
CSE220	Monitoring, Troubleshooting, & Incident Response	30 hours

**Course Description:**

This is a competency-based course designed for the indentured Cloud Support Engineer apprentice. Explains best practices for monitoring cloud environments, diagnosing performance issues, and implementing alerting solutions using generic logging and monitoring strategies.

<u>Course Number</u>	<u>Course Title</u>	<u>RSI Hours</u>
CSE270	Scripting & Automation for Cloud Operations	25 hours

**Course Description:**

This is a competency-based course designed for the indentured Cloud Support

Engineer apprentice. Focuses on scripting languages such as Python and Bash to automate common cloud tasks, implement CI/CD workflows, and manage cloud resources.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
CSE280	Cloud Compliance/Governance	40 hours

**Course Description:**

This is a competency-based course designed for the indentured Cloud Support Engineer apprentice. Covers regulatory compliance, risk management, and security frameworks applicable across cloud environments (e.g., SOC 2, HIPAA, GDPR, NIST).

**Total RSI Hours:** 260

**ARTICLE V Ratio**

The ratio of apprentices to professional workers shall be:

- 1) Ratio #1: Each professional worker may supervise five (5) apprentice(s)

# **Attachment B-6**

## **Training Schedule and Working Conditions**

Creating Coding Careers Apprenticeship Program

### **Occupation**

**Occupation:** Cybersecurity Support Technician

**O\*Net Code:** 15-1212.00

### **Article I Term of Apprenticeship and Probation**

The standard term of apprenticeship shall be competency based, with approximately 2000 on-the-job training (OJT) hours, 300 related and supplemental instruction (RSI) hours, and completed within approximately twelve (12) months.

The period of probation shall be reasonable in relation to the full apprenticeship term, with full credit given for such period toward completion of the apprenticeship, and in no event shall exceed the shorter of 25 percent of the length of the program or one year. The period of probation shall be three (3) months.

### **Article II Wage Schedule**

#### **Professional Worker Wage:**

\$ 35.00 per hour + benefits effective 8/15/2025.

#### **Professional Worker Benefits:**

Health & Welfare                      \$ 0.75 per hour

Pension                                      \$ 0.75 per hour

#### **Apprentice Wage and Advancement Schedule:**

In no case shall an Apprentice receive a starting wage that is less than the applicable federal, state or local entity (city or county) minimum wage, whichever is higher for the county or city where the apprentice is working. The applicable minimum wage law shall establish the effective date of the minimum wage.

To advance from one period to the next, the apprentice shall have met the following requirements:

1st period	0% of demonstrated competencies	\$ 25.00 /hour + benefits
2nd period	50% of demonstrated competencies	\$ 26.50 /hour + benefits
3rd period	85% of demonstrated competencies	\$ 28.00 /hour + benefits
4th period	100% of demonstrated competencies	\$ 35.00 /hour + benefits

**Hours of Work and Working Conditions and Overtime Provision:**

Eight hours of labor constitutes a day's work. Employment beyond eight hours in any workday or more than six days in any workweek requires the employee to be compensated for the overtime at not less than one and one-half times the employee's regular rate of pay for all hours worked in excess of eight hours, up to and including 12 hours in any workday, and for the first eight hours worked on the seventh consecutive day of work in a workweek; and double the employee's regular rate of pay for all hours worked in excess of 12 hours in any workday and for all hours worked in excess of eight on the seventh consecutive day of work in a workweek. If employers utilize an alternative workweek schedule in accordance with the California Industrial Welfare Commission Orders, the overtime will be determined and paid in accordance with the applicable alternative workweek provisions.

The workday and workweek and all other conditions of employment for apprentices shall conform to all applicable laws and regulations and shall not be greater than for those of a professional worker.

Overtime shall not be allowed if it will interfere with or impair the training or be detrimental to the health and safety of the apprentice.

**ARTICLE III Work-Training**

- 1) The employer shall see that all apprentices are under the supervision of a qualified professional worker or instructor and shall provide the necessary diversified experience and training in order to develop the apprentice into a proficiently skilled worker, as outlined herein.
- 2) Each apprentice shall be trained in the use of new equipment, materials and processes as they come into use in the occupation.
- 3) The major categories in which apprentices will be trained (although not necessarily in the order listed) are as follows:

**Competency Check List**

**Demonstrates Fundamentals:** Apprentice can perform the task with some coaching.

**Proficient in Task:** Apprentice performs task properly and consistently.

**Completion Date:** Date apprentice completes final demonstration of competency.

Detailed Work Activities Initial and date each task when Competency Check List has been completed.

**CYBERSECURITY SUPPORT TECHNICIAN (15-1212.00)  
Work Processes (Professional Competencies) and Performance Areas**

On-the-Job Learning Outline

1. Fundamentals of Cybersecurity & Threat Mitigation
  - a. Identifies security threats and vulnerabilities in computer networks and information systems.
  - b. Develops incident response plans and risk mitigation strategies to protect sensitive data.
  - c. Evaluates security controls for effectiveness, compliance, and potential weaknesses.
  - d. Utilizes security tools and frameworks to monitor, detect, and respond to cyber threats.
  - e. Assists in configuring firewalls, intrusion detection/prevention systems, and security policies.
  
2. Network Security & Access Control
  - a. Implements and maintains secure network configurations, including VPNs and network segmentation.
  - b. Monitors network traffic for suspicious activity and potential security breach.
  - c. Conducts access control audits to ensure proper user authentication and role-based permissions.
  - d. Implements multi-factor authentication (MFA) and other access security mechanisms.
  - e. Supports encryption techniques to safeguard sensitive communications and data storage.
  
3. Incident Response & Threat Analysis
  - a. Assists in identifying, documenting, and mitigating security incidents and breaches.

- b. Supports forensic investigations by collecting, preserving, and analyzing digital evidence.
- c. Performs malware analysis to detect, isolate, and mitigate cyber threats.
- d. Assists in conducting penetration testing and vulnerability assessments under supervision.
- e. Works with security teams to remediate security incidents and restore system integrity.

#### 4. Security Compliance & Risk Management

- a. Ensures compliance with cybersecurity regulations and frameworks (e.g., NIST, ISO 27001, HIPAA).
- b. Conducts risk assessments to identify and evaluate security risks in IT environments.
- c. Develops and maintains security policies, procedures, and best practices.
- d. Assists in preparing reports on security posture and risk management efforts.
- e. Collaborates with compliance teams to ensure adherence to industry security standards.

#### 5. Endpoint Security & Malware Defense

- a. Implements endpoint protection measures, such as antivirus and endpoint detection & response (EDR) solutions.
- b. Analyzes and mitigates phishing attempts, ransomware, and social engineering attacks.
- c. Supports operating system and software patch management to prevent vulnerabilities.
- d. Configures and maintains email security solutions to block spam, malware, and phishing threats.
- e. Educates employees on security awareness and best practices to prevent cyber incidents.

#### 6. Cloud & Application Security

- a. Assists in securing cloud-based applications and infrastructure in platforms such as AWS, Azure, and Google Cloud.
- b. Monitors cloud security logs for unauthorized access and potential threats.
- c. Conducts security assessments for new and existing applications to identify vulnerabilities.

- d. Supports DevSecOps practices by integrating security into the software development lifecycle.

**ARTICLE IV Related Instruction**

Apprentices shall satisfactorily complete prescribed courses of related and supplemental instruction, which will not be less than 300 hours per year. Related and supplemental instruction will be provided by Creating Coding Careers Apprenticeship Program and overseen by San Diego County Office of Education.

Time spent in related and supplemental instruction may not be compensated.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
CYB100	Introduction to Cybersecurity	20 hours

**Course Description:**

This is a competency-based course designed for the indentured Cybersecurity Support Technician apprentice. Covers the fundamentals of cybersecurity, including security principles, risk management, and basic attack methodologies.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
NET110	Network Security Fundamentals	40 hours

**Course Description:**

This is a competency-based course designed for the indentured Cybersecurity Support Technician apprentice. Introduces network protocols, firewalls, VPNs, intrusion detection/prevention systems (IDS/IPS), and secure network architecture.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
CYB120	Threat Analysis & Incident Response	50 hours

**Course Description:**

This is a competency-based course designed for the indentured Cybersecurity Support Technician apprentice. Focuses on identifying, analyzing, and responding to cyber threats, malware, and security breaches. Includes forensic analysis and reporting.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
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CYB130                      Access Control & Identity  
    Management                      20 hours

**Course Description:**

This is a competency-based course designed for the indentured Cybersecurity Support Technician apprentice. Covers authentication methods, multi-factor authentication (MFA), role-based access control (RBAC), and identity and access management (IAM).

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
CYB140	Ethical Hacking & Penetration Testing	30 hours

**Course Description:**

This is a competency-based course designed for the indentured Cybersecurity Support Technician apprentice. Explores ethical hacking methodologies, vulnerability scanning, and penetration testing tools like Kali Linux and Metasploit.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
CYB150	Security Compliance & Risk Management	30 hours

**Course Description:**

This is a competency-based course designed for the indentured Cybersecurity Support Technician apprentice. Covers compliance frameworks such as NIST, ISO 27001, HIPAA, and SOC 2. Includes security policy development and regulatory requirements.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
NET260	Cloud Security & Secure Systems Deployment	60 hours

**Course Description:**

Focuses on securing cloud platforms (AWS, Azure, Google Cloud), cloud security best practices, and deployment of secure applications.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
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CYB210	Endpoint Security & Malware Defense	30 hours
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**Course Description:**

This is a competency-based course designed for the indentured Cybersecurity Support Technician apprentice. Covers endpoint protection strategies, antivirus solutions, malware analysis, and incident containment techniques.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
CYB250	Security Awareness & Social Engineering Defense	20 hours

**Course Description:**

This is a competency-based course designed for the indentured Cybersecurity Support Technician apprentice. Educates on phishing attacks, social engineering tactics, and best practices for end-user security awareness.

**Total RSI Hours:** 300

**ARTICLE V Ratio**

The ratio of apprentices to professional workers shall be:

- 1) Ratio #1: Each professional worker may supervise five (5) apprentice(s)

# Attachment B-7

## Training Schedule and Working Conditions

Creating Coding Careers Apprenticeship Program

### Occupation

**Occupation:** ServiceNow Implementation Specialist

**O\*Net Code:** 15-1252.00

### Article I Term of Apprenticeship and Probation

The standard term of apprenticeship shall be competency based, with approximately 2000 on-the-job training (OJT) hours, 272 related and supplemental instruction (RSI) hours, and completed within approximately twelve (12) months.

The period of probation shall be reasonable in relation to the full apprenticeship term, with full credit given for such period toward completion of the apprenticeship, and in no event shall exceed the shorter of 25 percent of the length of the program or one year. The period of probation shall be three (3) months.

### Article II Wage Schedule

#### Professional Worker Wage:

\$ 35.00 per hour + benefits effective 8/15/2025.

#### Professional Worker Benefits:

Health & Welfare \$ 0.75 per hour

Pension \$ 0.75 per hour

#### Apprentice Wage and Advancement Schedule:

In no case shall an Apprentice receive a starting wage that is less than the applicable federal, state or local entity (city or county) minimum wage, whichever is higher for the county or city where the apprentice is working. The applicable minimum wage law shall establish the effective date of the minimum wage.

To advance from one period to the next, the apprentice shall have met the following requirements:

1st period	0% of demonstrated competencies	\$ 25.00 /hour + benefits
2nd period	50% of demonstrated competencies	\$ 26.50 /hour + benefits
3rd period	85% of demonstrated competencies	\$ 28.00 /hour + benefits
4th period	100% of demonstrated competencies	\$ 35.00 /hour + benefits

**Hours of Work and Working Conditions and Overtime Provision:**

Eight hours of labor constitutes a day's work. Employment beyond eight hours in any workday or more than six days in any workweek requires the employee to be compensated for the overtime at not less than one and one-half times the employee's regular rate of pay for all hours worked in excess of eight hours, up to and including 12 hours in any workday, and for the first eight hours worked on the seventh consecutive day of work in a workweek; and double the employee's regular rate of pay for all hours worked in excess of 12 hours in any workday and for all hours worked in excess of eight on the seventh consecutive day of work in a workweek. If employers utilize an alternative workweek schedule in accordance with the California Industrial Welfare Commission Orders, the overtime will be determined and paid in accordance with the applicable alternative workweek provisions.

The workday and workweek and all other conditions of employment for apprentices shall conform to all applicable laws and regulations and shall not be greater than for those of a professional worker.

Overtime shall not be allowed if it will interfere with or impair the training or be detrimental to the health and safety of the apprentice.

**ARTICLE III Work-Training**

- 1) The employer shall see that all apprentices are under the supervision of a qualified professional worker or instructor and shall provide the necessary diversified experience and training in order to develop the apprentice into a proficiently skilled worker, as outlined herein.
- 2) Each apprentice shall be trained in the use of new equipment, materials and processes as they come into use in the occupation.
- 3) The major categories in which apprentices will be trained (although not necessarily in the order listed) are as follows:

## **Competency Check List**

**Demonstrates Fundamentals:** Apprentice can perform the task with some coaching.

**Proficient in Task:** Apprentice performs task properly and consistently.

**Completion Date:** Date apprentice completes final demonstration of competency.

Detailed Work Activities Initial and date each task when Competency Check List has been completed.

## **SERVICENOW IMPLEMENTATION SPECIALIST (15-1252.00) Work Processes (Professional Competencies) and Performance Areas**

### On-the-Job Learning Outline

1. ServiceNow Fundamentals
  - a. Works with ServiceNow architecture, data models, and core components.
  - b. Navigates the ServiceNow platform to configure and manage system settings.
  - c. Implements instance security controls and user authentication methods.
  
2. IT Service Management (ITSM) Implementation
  - a. Configures ITSM modules, including Incident, Problem, Change, and Request Management.
  - b. Customizes forms, fields, and tables to align with ITSM best practices.
  - c. Integrates ITSM with third-party applications and external data sources.
  - d. Implements Service Level Agreements (SLAs) and Service Catalogs.
  - e. Develops automated workflows using Flow Designer and Business Rules.
  
3. Customer Service Management (CSM) Implementation
  - a. Configures CSM for case management and customer interaction tracking.
  - b. Customizes ServiceNow CSM portals for an enhanced user experience.
  - c. Implements Virtual Agent and AI-driven chatbots for customer service automation.
  - d. Develops workflow automations for case routing and resolution.
  - e. Integrates CSM with CRM and support tools.
  
4. HR Service Delivery (HRSD) Implementation
  - a. Implements HR case and knowledge management workflows.

- b. Configures Employee Service Center and HR Portals for self-service access.
  - c. Designs and automates HR onboarding, offboarding, and lifecycle events.
  - d. Ensures compliance with data privacy and security regulations in HR applications.
  - e. Integrates HRSD with enterprise HRIS and payroll systems.
5. Configuration Management Database (CMDB) and Asset Management
- a. Configures and maintains CMDB to track IT assets, services, and dependencies.
  - b. Implements automated discovery and reconciliation processes for data integrity.
  - c. Develops dependency maps for business services and infrastructure components.
  - d. Automates IT asset lifecycle management workflows.
  - e. Ensures compliance with CMDB best practices and governance frameworks.
6. Service Portal and UI Customization
- a. Designs and customizes ServiceNow Service Portals to improve user experience.
  - b. Develops UI pages and widgets using HTML, CSS, and AngularJS.
  - c. Implements responsive layouts and user-friendly navigation structures.
  - d. Configures Knowledge Base for self-service support and documentation.
  - e. Optimizes portal performance and accessibility for diverse user needs.
7. Automation and Scripting
- a. Develops and deploys Business Rules, Client Scripts, and UI Policies to automate processes.
  - b. Implements Workflow Editor, Flow Designer, and Scripted REST APIs for automation.
  - c. Configures Scheduled Jobs and Event Management automation within ServiceNow.
  - d. Uses ServiceNow APIs for system integrations and custom development.
8. Integrations and Data Management
- a. Implements ServiceNow Integration Hub for connecting external APIs and services.

- b. Configures data imports, transform maps, and data migration workflows.
- c. Develops middleware integrations using REST and SOAP web services.
- d. Ensures data integrity through validation, transformation, and error-handling mechanisms.
- e. Monitors integration performance and optimizes synchronization processes.
- f. Implements ServiceNow Integration Hub for connecting external APIs and services.

#### 9. Performance Analytics and Reporting

- a. Configures reports, dashboards, and Performance Analytics indicators for data visualization.
- b. Develops real-time operational and executive reports within ServiceNow.
- c. Implements Key Performance Indicators (KPIs) to measure IT and business metrics.
- d. Automates data collection, aggregation, and visualization processes.
- e. Optimizes report performance and enforces access control policies.

#### 10. Deployment and Governance

- a. Develops ServiceNow deployment roadmaps and project implementation plans.
- b. Implements DevOps best practices for ServiceNow development and release management.
- c. Adheres to Agile and ITIL methodologies in ServiceNow project execution.
- d. Manages testing, UAT, and production deployment cycles for ServiceNow solutions.
- e. Ensures compliance with enterprise governance policies and security standards.

### **ARTICLE IV Related Instruction**

Apprentices shall satisfactorily complete prescribed courses of related and supplemental instruction, which will not be less than 272 hours per year. Related and supplemental instruction will be provided by Creating Coding Careers Apprenticeship Program and overseen by San Diego County Office of Education.

Time spent in related and supplemental instruction may not be compensated.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
SN102	Introduction to ServiceNow Platform	24 hours

**Course Description:**

This is a competency-based course designed for the indentured ServiceNow Implementation Specialist apprentice. Covers the fundamentals of ServiceNow, including navigation, key modules (ITSM, HRIS, GRC, and CSM), and an overview of cloud-based workflow automation.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
SN201	Application Development (ADF)	24 hours

**Course Description:**

This is a competency-based course designed for the indentured ServiceNow Implementation Specialist apprentice. Participants will learn how to design, build, develop, and deploy an application in ServiceNow.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
SN250	Scripting in ServiceNow	40 hours

**Course Description:**

This is a competency-based course designed for the indentured ServiceNow Implementation Specialist apprentice. Covers JavaScript programming fundamentals, scripting in JavaScript on the ServiceNow Platform, business rules, client scripts, and automation using Flow Designer and ServiceNow APIs.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
SN280	ITSM Implementation	40 hours

**Course Description:**

This is a competency-based course designed for the indentured ServiceNow Implementation Specialist apprentice. Teaches configuration and implementation of IT Service Management (ITSM) modules, including Incident, Problem, Change, and Service Catalog Management.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
SN290	Service Portal Fundamentals	16 hours

**Course Description:**

This is a competency-based course designed for the indentured ServiceNow Implementation Specialist apprentice. Focuses on learning how to create Service Portals that offer users an intuitive and delightful experience when accessing an organizations services online.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
SN301	Automated Test Framework (ATF)	8 hours

**Course Description:**

This is a competency-based course designed for the indentured ServiceNow Implementation Specialist apprentice. Covers using Automated Test Framework (ATF) to create and run automated tests to confirm an instance works after making a change.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
SN330	HRSD Implementation	40 hours

**Course Description:**

This is a competency-based course designed for the indentured ServiceNow Implementation Specialist apprentice. Explores Human Resources Service Delivery (HRSD) module setup, configuration, and automation of HR case management, onboarding, and employee self-service portals. This course will prepare participants for CIS-HR certification, as well as the Predictive Intelligence micro-certification, and the Virtual Agent micro-certification.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
SN350	GRC: Integrate Risk Management	40 hours

**Course Description:**

This is a competency-based course designed for the indentured ServiceNow Implementation Specialist apprentice. Focuses on Governance, Risk, and Compliance (GRC) module implementation, including risk assessment, compliance tracking, and policy automation.

<u>Course Number</u>	<u>Course Title</u>	<u>RSI Hours</u>
SN360	CSM Implementation	40 hours

**Course Description:**

This is a competency-based course designed for the indentured ServiceNow Implementation Specialist apprentice. Teaches Customer Service Management (CSM) setup, case management, virtual agents, and customer portals.

**Total RSI Hours:** 272

**ARTICLE V Ratio**

The ratio of apprentices to professional workers shall be:

- 1) Ratio #1: Each professional worker may supervise five (5) apprentice(s)

# **Attachment B-8**

## **Training Schedule and Working Conditions**

Creating Coding Careers Apprenticeship Program

### **Occupation**

**Occupation:** Technical Sales Representative

**O\*Net Code:** 41-4011.00

### **Article I Term of Apprenticeship and Probation**

The standard term of apprenticeship shall be competency based, with approximately 2000 on-the-job training (OJT) hours, 191 related and supplemental instruction (RSI) hours, and completed within approximately twelve (12) months.

The period of probation shall be reasonable in relation to the full apprenticeship term, with full credit given for such period toward completion of the apprenticeship, and in no event shall exceed the shorter of 25 percent of the length of the program or one year. The period of probation shall be three (3) months.

### **Article II Wage Schedule**

#### **Professional Worker Wage:**

\$ 30.00 per hour + benefits effective 8/15/2025.

#### **Professional Worker Benefits:**

Health & Welfare                      \$ 0.75 per hour

Pension                                      \$ 0.75 per hour

#### **Apprentice Wage and Advancement Schedule:**

In no case shall an Apprentice receive a starting wage that is less than the applicable federal, state or local entity (city or county) minimum wage, whichever is higher for the county or city where the apprentice is working. The applicable minimum wage law shall establish the effective date of the minimum wage.

To advance from one period to the next, the apprentice shall have met the following requirements:

1st period	0% of demonstrated competencies	\$ 20.00 /hour + benefits
2nd period	50% of demonstrated competencies	\$ 22.00 /hour + benefits
3rd period	85% of demonstrated competencies	\$ 25.00 /hour + benefits
4th period	100% of demonstrated competencies	\$ 30.00 /hour + benefits

**Hours of Work and Working Conditions and Overtime Provision:**

Eight hours of labor constitutes a day's work. Employment beyond eight hours in any workday or more than six days in any workweek requires the employee to be compensated for the overtime at not less than one and one-half times the employee's regular rate of pay for all hours worked in excess of eight hours, up to and including 12 hours in any workday, and for the first eight hours worked on the seventh consecutive day of work in a workweek; and double the employee's regular rate of pay for all hours worked in excess of 12 hours in any workday and for all hours worked in excess of eight on the seventh consecutive day of work in a workweek. If employers utilize an alternative workweek schedule in accordance with the California Industrial Welfare Commission Orders, the overtime will be determined and paid in accordance with the applicable alternative workweek provisions.

The workday and workweek and all other conditions of employment for apprentices shall conform to all applicable laws and regulations and shall not be greater than for those of a professional worker.

Overtime shall not be allowed if it will interfere with or impair the training or be detrimental to the health and safety of the apprentice.

**ARTICLE III Work-Training**

- 1) The employer shall see that all apprentices are under the supervision of a qualified professional worker or instructor and shall provide the necessary diversified experience and training in order to develop the apprentice into a proficiently skilled worker, as outlined herein.
- 2) Each apprentice shall be trained in the use of new equipment, materials and processes as they come into use in the occupation.
- 3) The major categories in which apprentices will be trained (although not necessarily in the order listed) are as follows:

### **Competency Check List**

**Demonstrates Fundamentals:** Apprentice can perform the task with some coaching.

**Proficient in Task:** Apprentice performs task properly and consistently.

**Completion Date:** Date apprentice completes final demonstration of competency.

Detailed Work Activities Initial and date each task when Competency Check List has been completed.

## **TECHNICAL SALES REPRESENTATIVE (41-4011.00) Work Processes (Professional Competencies) and Performance Areas**

### On-the-Job Learning Outline

1. Sales Methodologies and Consultative Selling
  - a. Understand SaaS revenue models, customer acquisition costs, and key performance indicators (KPIs).
  - b. Analyze customer pain points and identify solutions using software products.
  - c. Apply the Sandler method in sales conversations, including rapport-building and pain point discovery.
  - d. Utilize SPIN Selling (Situation, Problem, Implication, Need-Payoff) to guide consultative sales conversations.
  
2. Negotiation and Closing Techniques
  - a. Apply negotiation tactics to secure favorable deals and handle objections.
  - b. Develop strategies for contract negotiations and pricing discussions.
  - c. Reframe customer thinking and present commercial insights effectively.
  - d. Design compelling sales presentations using PowerPoint, incorporating data visualization and storytelling.
  - e. Deliver persuasive sales pitches with confidence, handling objections and closing deals.
  
3. Lead Generation, Prospecting, and Tracking
  - a. Identify and research potential leads using market analysis and prospecting techniques.
  - b. Demonstrate effective cold calling techniques and handle objections.
  - c. Craft compelling email sequences for outreach and appointment setting.
  - d. Able to operate CRMs like: Salesforce, HubSpot, Apollo, and LinkedIn Sales Navigator for lead tracking and sales conversion.

- e. Use prospecting tools to build and qualify sales pipelines.
4. Relationship Management and Customer Success
- a. Build long-term relationships with prospects and customers to ensure continued success.
  - b. Engage in active listening and consultative discussions to align solutions with customer needs.
  - c. Monitor and update sales opportunities in CRM to ensure accurate forecasting.
  - d. Analyze sales data to predict trends and adjust strategies accordingly.

**ARTICLE IV Related Instruction**

Apprentices shall satisfactorily complete prescribed courses of related and supplemental instruction, which will not be less than 191 hours per year. Related and supplemental instruction will be provided by Creating Coding Careers Apprenticeship Program and overseen by San Diego County Office of Education.

Time spent in related and supplemental instruction may not be compensated.

<u>Course Number</u>	<u>Course Title</u>	<u>RSI Hours</u>
SE101	Introduction to Sales	8 hours

**Course Description:**

This is a competency-based course designed for the indentured Technical Sales Representative apprentice. An introduction to sales to equip individuals with fundamental knowledge and skills in sales, covering topics like communication, understanding customer needs, sales strategies, and closing techniques.

<u>Course Number</u>	<u>Course Title</u>	<u>RSI Hours</u>
SE201	Advanced SaaS Sales Strategies	23 hours

**Course Description:**

This is a competency-based course designed for the indentured Technical Sales Representative apprentice. Deep dive into SaaS business models, key sales metrics, and customer retention strategies.

<u>Course Number</u>	<u>Course Title</u>	<u>RSI Hours</u>
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SE202	Mastering Outbound Prospecting	16 hours
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**Course Description:**

This is a competency-based course designed for the indentured Technical Sales Representative apprentice. Advanced techniques for lead generation, cold calling, and email outreach using Apollo and LinkedIn Sales Navigator.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
SE203	Sales Negotiation & Closing Tactics	40 hours

**Course Description:**

This is a competency-based course designed for the indentured Technical Sales Representative apprentice. Participants will focus on negotiation strategies, handling objections, and closing deals with confidence.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
SE301	CRM System Mastery & Sales Automation	40 hours

**Course Description:**

This is a competency-based course designed for the indentured Technical Sales Representative apprentice. In-depth training on platforms for Customer Relationship Management, including GoHighLevel, Salesforce, HubSpot, and automation tools to optimize sales workflow.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
SE310	Customer Relationship Management and Retention	16 hours

**Course Description:**

This is a competency-based course designed for the indentured Technical Sales Representative apprentice. Strategies for customer retention, upselling, and building long-term relationships with clients.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
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SE305 Data-Driven Selling & Analytics 16 hours

**Course Description:**

This is a competency-based course designed for the indentured Technical Sales Representative apprentice.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
SE250	Advanced Sales Presentations & Storytelling	32 hours

**Course Description:**

This is a competency-based course designed for the indentured Technical Sales Representative apprentice. Enhancing sales presentations using presentation software and storytelling techniques to engage prospects.

**Total RSI Hours:** 191

**ARTICLE V Ratio**

The ratio of apprentices to professional workers shall be:

- 1) Ratio #1: Each professional worker may supervise five (5) apprentice(s)

# **Attachment B-9**

## **Training Schedule and Working Conditions**

Creating Coding Careers Apprenticeship Program

### **Occupation**

**Occupation:** Digital Marketer

**O\*Net Code:** 13-1161.00

### **Article I Term of Apprenticeship and Probation**

The standard term of apprenticeship shall be competency based, with approximately 2000 on-the-job training (OJT) hours, 290 related and supplemental instruction (RSI) hours, and completed within approximately twelve (12) months.

The period of probation shall be reasonable in relation to the full apprenticeship term, with full credit given for such period toward completion of the apprenticeship, and in no event shall exceed the shorter of 25 percent of the length of the program or one year. The period of probation shall be three (3) months.

### **Article II Wage Schedule**

#### **Professional Worker Wage:**

\$ 30.00 per hour + benefits effective 8/15/2025.

#### **Professional Worker Benefits:**

Health & Welfare \$ 0.75 per hour

Pension \$ 0.75 per hour

#### **Apprentice Wage and Advancement Schedule:**

In no case shall an Apprentice receive a starting wage that is less than the applicable federal, state or local entity (city or county) minimum wage, whichever is higher for the county or city where the apprentice is working. The applicable minimum wage law shall establish the effective date of the minimum wage.

To advance from one period to the next, the apprentice shall have met the following requirements:

1st period	0% of demonstrated competencies	\$ 25.00 /hour + benefits
2nd period	50% of demonstrated competencies	\$ 26.50 /hour + benefits
3rd period	85% of demonstrated competencies	\$ 28.00 /hour + benefits
4th period	100% of demonstrated competencies	\$ 30.00 /hour + benefits

### **Hours of Work and Working Conditions and Overtime Provision:**

Eight hours of labor constitutes a day's work. Employment beyond eight hours in any workday or more than six days in any workweek requires the employee to be compensated for the overtime at not less than one and one-half times the employee's regular rate of pay for all hours worked in excess of eight hours, up to and including 12 hours in any workday, and for the first eight hours worked on the seventh consecutive day of work in a workweek; and double the employee's regular rate of pay for all hours worked in excess of 12 hours in any workday and for all hours worked in excess of eight on the seventh consecutive day of work in a workweek. If employers utilize an alternative workweek schedule in accordance with the California Industrial Welfare Commission Orders, the overtime will be determined and paid in accordance with the applicable alternative workweek provisions.

The workday and workweek and all other conditions of employment for apprentices shall conform to all applicable laws and regulations and shall not be greater than for those of a professional worker.

Overtime shall not be allowed if it will interfere with or impair the training or be detrimental to the health and safety of the apprentice.

### **ARTICLE III Work-Training**

- 1) The employer shall see that all apprentices are under the supervision of a qualified professional worker or instructor and shall provide the necessary diversified experience and training in order to develop the apprentice into a proficiently skilled worker, as outlined herein.
- 2) Each apprentice shall be trained in the use of new equipment, materials and processes as they come into use in the occupation.
- 3) The major categories in which apprentices will be trained (although not necessarily in the order listed) are as follows:

#### **Competency Check List**

**Demonstrates Fundamentals:** Apprentice can perform the task with some coaching.

**Proficient in Task:** Apprentice performs task properly and consistently.

**Completion Date:** Date apprentice completes final demonstration of competency.  
Detailed Work Activities Initial and date each task when Competency Check List has been completed.

**DIGITAL MARKETER (13-1161.00)**  
**Work Processes (Professional Competencies) and Performance Areas**

On-the-Job Learning Outline

1. Search Engine Optimization (SEO)
  - a. Conducts keyword research and competitive analysis.
  - b. Implements on-page and off-page SEO strategies.
  - c. Understands and applies search engine ranking factors.
2. Content Marketing & Strategy
  - a. Develops, optimizes, and distributes content across platforms.
  - b. Uses content management systems (CMS) effectively.
  - c. Implements copywriting best practices for digital marketing.
3. Pay-Per-Click (PPC) & Paid Advertising
  - a. Develops and manages PPC campaigns (Google Ads, social media ads).
  - b. Conducts A/B testing and conversion rate optimization (CRO).
  - c. Uses analytics tools to track ROI and campaign performance.
4. Social Media Marketing
  - a. Develops and executes organic and paid social media campaigns.
  - b. Engages with audience and monitors brand sentiment.
  - c. Uses analytics tools to measure campaign effectiveness.
5. Email Marketing & Automation
  - a. Designs and optimizes email marketing campaigns.
  - b. Segments audiences and personalizes email content.
  - c. Analyzes email campaign performance and improves deliverability.
6. Web Analytics & Data Analysis
  - a. Uses Google Analytics, Google Search Console, and other reporting tools.
  - b. Tracks key performance indicators (KPIs) and user behavior.
  - c. Interprets data to optimize marketing strategies.
  - d. Conversion Rate Optimization (CRO) & UX Design

- e. Conducts usability testing and user experience analysis.
- f. Implements strategies to improve website conversion rates.
- g. Uses heatmaps, A/B testing, and user feedback to enhance digital experience.

7. Marketing Technology & Tools

- a. Utilizes CRM platforms for customer engagement.
- b. Understands marketing automation and personalization tools.
- c. Implements chatbots, AI-driven insights, and emerging technologies.
- d. Regulatory Compliance & Ethical Considerations
- e. Understands GDPR, CCPA, and other data privacy regulations.
- f. Ensures ethical marketing practices and compliance with ad policies.

**ARTICLE IV Related Instruction**

Apprentices shall satisfactorily complete prescribed courses of related and supplemental instruction, which will not be less than 290 hours per year. Related and supplemental instruction will be provided by Creating Coding Careers Apprenticeship Program and overseen by San Diego County Office of Education.

Time spent in related and supplemental instruction may not be compensated.

<u>Course Number</u>	<u>Course Title</u>	<u>RSI Hours</u>
DM101	Introduction to Digital Marketing	30 hours

**Course Description:**

This is a competency-based course designed for the indentured Digital Marketer apprentice. This course provides an overview of digital marketing, including key channels such as search engines, social media, and email marketing. Apprentices will learn foundational concepts in branding, customer engagement, and campaign strategies.

<u>Course Number</u>	<u>Course Title</u>	<u>RSI Hours</u>
DM201	Search Engine Optimization (SEO)	80 hours

**Course Description:**

This is a competency-based course designed for the indentured Digital Marketer apprentice. This course covers the fundamentals of SEO, including keyword research, on-page and off-page optimization, and technical SEO. Apprentices will learn how to analyze search intent and leverage SEO tools to improve website

visibility.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
DM230	Pay-Per-Click (PPC) Advertising	60 hours

**Course Description:**

This is a competency-based course designed for the indentured Digital Marketer apprentice. Apprentices will gain hands-on experience in setting up and managing PPC campaigns using Google Ads and social media platforms. The course also covers budgeting, targeting strategies, and conversion tracking.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
DM250	Social Media Marketing	25 hours

**Course Description:**

This is a competency-based course designed for the indentured Digital Marketer apprentice. This course explores strategies for leveraging social media platforms to build brand awareness and engage audiences. Apprentices will learn content creation, paid ad strategies, and social media analytics.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
DM270	Content Marketing & Strategy	30 hours

**Course Description:**

This is a competency-based course designed for the indentured Digital Marketer apprentice. This course provides training on developing, distributing, and optimizing digital content for various channels. Apprentices will learn how to craft compelling copy, create multimedia content, and measure content effectiveness.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
DM301	Web Analytics & Data Analysis	25 hours

**Course Description:**

This is a competency-based course designed for the indentured Digital Marketer apprentice. This course focuses on using data to inform marketing decisions. Apprentices will learn to track and analyze key performance indicators (KPIs), set up

Google Analytics, interpret reports, and optimize marketing strategies based on insights.

<b><u>Course Number</u></b>	<b><u>Course Title</u></b>	<b><u>RSI Hours</u></b>
DM350	CRM & Marketing Automation	40 hours

**Course Description:**

This is a competency-based course designed for the indentured Digital Marketer apprentice. This course provides an in-depth understanding of CRMs, including lead generation, automation workflows, and client relationship management. Apprentices will learn to set up and optimize funnels for marketing automation.

**Total RSI Hours:** 290

**ARTICLE V Ratio**

The ratio of apprentices to professional workers shall be:

- 1) Ratio #1: Each professional worker may supervise five (5) apprentice(s)