Division of Apprenticeship Standards (DAS)

Apprenticeship Program Summary Sheet

To: Adele Burnes, Chief
From: Kelenia Olsen
CC: Program Planning and Review
Date: May 13, 2025

Program Name: South Bay Workforce Investment Board (SBWIB)
Industry: Healthcare, Transportation, Advanced Manufacturing
DAS File No.: 100634
Grant Awardee: ☐ No ☒ Yes SAEEI, COYA

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.

Labor Organizations Representing Any of the Apprentices:

None

Request for Approval under Labor Code 3075:

South Bay Workforce Investment Board (SBWIB) 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:

South Bay Workforce Investment Board (SBWIB) embraces comprehensive strategies to meet the needs of business for a skilled workforce, while creating opportunities for workers to prepare for and enter into well-paid careers.

South Bay Workforce Investment Board (SBWIB) 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:

- Bio Medical Quality Technician O*Net: 19-4021.00
  Professional Worker Wage: $21.00 per hour
  Proposed Apprentice Wage: $16.50 - $20.50 per hour
  Proposed No. of Apprentices: 10

- Aircraft Interior Design & Upholstery Assembler Installer O*Net: 51-2011.00
  Professional Worker Wage: $21.00 per hour
  Proposed Apprentice Wage: $16.50 - $20.50 per hour
  Proposed No. of Apprentices: 10

- Certified Nursing Assistant O*Net: 31-1131.00
  Professional Worker Wage: $21.00 per hour
  Proposed Apprentice Wage: $16.50 - $20.50 per hour
  Proposed No. of Apprentices: 10

- Optics Manufacturing Technician O*Net: 17-3029.08
  Professional Worker Wage: $21.00 per hour
  Proposed Apprentice Wage: $16.50 - $20.50 per hour
  Proposed No. of Apprentices: 10

- Bio Medical Quality Assurance Specialist 1yr O*Net: 11-3051.01
  Professional Worker Wage: $21.00 per hour
  Proposed Apprentice Wage: $16.50 - $20.50 per hour
  Proposed No. of Apprentices: 10

- Bio Medical Quality Assurance Specialist 2 yr O*Net: 11-3051.01
  Professional Worker Wage: $21.00 per hour
  Proposed Apprentice Wage: $16.50 - $20.50 per hour
  Proposed No. of Apprentices: 10

- Aerospace Systems Assembler O*Net: 51-2011.00
  Professional Worker Wage: $21.00 per hour
  Proposed Apprentice Wage: $16.50 - $20.50 per hour
  Proposed No. of Apprentices: 10

- Aerospace Systems Technician O*Net: 17-3021.00
  Professional Worker Wage: $21.00 per hour
  Proposed Apprentice Wage: $16.50 - $20.50 per hour
  Proposed No. of Apprentices: 10

Proposed Employers:

- Northrop Grumman System Corporation - 3520 E. Ave. M, Palmdale, CA 93550
- Oak Crest Institute of Science - 132 W. Chestnut Ave., Monrovia, CA 91016
- Adams Autoworx Inc. - 20697 Park Way, Castro Valley, CA 94546

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South Bay Workforce Investment Board (SBWIB) 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

Occupation	O*Net Code	Attachment
Bio Medical Quality Technician	19-4021.00	B-1
Aircraft Interior Design & Upholstery Assembler Installer	51-2011.00	B-2
Certified Nursing Assistant	31-1131.00	B-3
Optics Manufacturing Technician	17-3029.08	B-4
Bio Medical Quality Assurance Specialist 1yr	11-3051.01	B-5
Bio Medical Quality Assurance Specialist 2yr	11-3051.01	B-5a
Aerospace Systems Assembler	51-2011.00	B-6
Aerospace Systems Technician	17-3021.00	B-7

Article III Organization

For each employer participating in this program, an “Employer Agreement” (See Attachment D) will be provided to specify the information particular to that employer as noted herein, including the option to waive or offer participation on the committee, employer committee members will be selected as outlined in the rules & regulations.

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 apprentice's 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 ensure 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 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 Apprentice Agreement

1) Each apprentice agreement shall conform to the State law governing apprentice 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 with a copy of or be given an opportunity to study these standards before registration. These standards shall be considered a part of the apprentice 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 apprentice 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 apprentice agreement shall be terminated by the apprenticeship committee at the request in writing of either party. After such probationary period, an apprentice 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 apprentice 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 apprentice agreement.

Article XI Lay-off

1) If for any reason a lay-off of an apprentice occurs, the apprentice 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 apprentice 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.

South Bay Workforce Investment Board (SBWIB) will ensure selection procedures meet objective standards and maintain a fair and equitable selection process for all applicants.

Article XV Written Applications

Interested applicants should send an email to info@sbwib.org.

Article XVI Records

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

South Bay Workforce Investment Board (SBWIB)
11539 Hawthorne Blvd., Suite 500
Hawthorne, CA 90250

Article XVII Annual Compliance

South Bay Workforce Investment Board (SBWIB) will submit an annual compliance report to the Division of Apprenticeship Standards as requested by the Division.

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South Bay Workforce Investment Board (SBWIB) 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 South Bay Workforce Investment Board (SBWIB) on February 7, 2025 (Committee approval date).

Employer Organization

South Bay Workforce Investment Board

11539 Hawthorne Blvd., Suite 500, Hawthorne, CA 90250

_____ _____

Jan Voegel, Executive Director 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 Date

Division of Apprenticeship Standards

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Attachment B-1

Training Schedule and Working Conditions

South Bay Workforce Investment Board (SBWIB)

Occupation

Occupation: Bio Medical Quality Technician
O*Net Code: 19-4021.00

Article I Term of Apprenticeship and Probation

The standard term of apprenticeship shall be competency-based with 144 related and supplemental instruction (RSI) hours and completed within approximately 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:

$ 21.00 per hour effective 8/14/2024.

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 for no less than the wages stated below:

In-School Youth Apprentice Schedule

In-School Youth apprentices must be compensated at or above 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. Upon completion of high school, In-School Youth apprentices must be compensated at or above the wage schedules shown in the Out-of-School Youth and Non-Youth Apprentice section of these Standards.

To advance from one period to the next, In-School Youth apprentices shall have met the following requirements for no less than the wages stated below:

Entry Wage $16.50 / hour**

Exit Wage Entry wage + $1.00 / hour*

Out-of-School Youth and Non-Youth Apprentice Schedule

All apprentices participating in the program while not enrolled in High School must be compensated at or above the wage scales shown below.

Counties	Entry Wage	Exit Wage
Alameda, Marin, San Mateo, Santa Clara, and San Francisco	$20.50	$21.50
Contra Costa	$20.21	$21.21
Los Angeles	$19.30	$20.30
Orange	$18.76	$19.76
San Diego	$18.94	$19.94
All Other Counties	$18.45	$19.45

* All mention of previous wage periods reference the current appropriate rate for that period and not necessarily the rate reflected in these Standards at the time of approval.

** References to specific minimum wages use the CA State minimum wage as a general example. All employers must pay the appropriate wages for the type of work and area where the job is being performed. See https://www.dir.ca.gov/dlse/minimum_wage.htm for details.

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:

Work Processes Outline and 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.

A. Environmental, Health & Safety

1. Inspect workplace for potential hazards before each shift or work
2. Wear appropriate personal protective equipment, including clothing footwear, head protection, eye protection and gloves
3. Adhere to the emergency procedures for spills, fire injuries and other incidents, including bloodborne pathogens
4. Identify the location of first aid kits, emergency showers, eyewash stations, fire extinguishers and spill cleanup materials and how to use them
5. Read and interpret the material safety data sheets for any hazardous products used and follow any recommended precautions
6. Maintain a clean and orderly workplace, storing hazardous materials properly and disposing of waste products according to company policies and local/federal laws and regulations
7. Use, store and maintain hand-tools properly to eliminate trip hazards, injury, electrocution or damage
8. Adhere to safety rules for an individual’s facility
9. Ensure confined space procedures are followed according to site specifications and jurisdictional regulations
10. Recognize, plan and organize layout and work for ergonomic problems

B. Biomedical Quality Requirements

1. Adhere to regulatory laws and requirements (i.e., FDA, U.S. Requirements, EU MDR, Health Canada, other International Agencies)
2. Adhere to standards for International quality systems (i.e., ISO 9001, ISO 13485, ISO 17025)
3. Adhere to and enforce quality system requirements (i.e., management responsibility, design controls, document and record control, purchasing and controls and acceptance activities, identification and traceability, production and process controls, inspection measuring and testing equipment, nonconforming product, corrective and preventative action, product handling, storage, distribution and installation, complaint files, servicing, statistical techniques, and post market surveillance)

C. Quality Concepts and Tools

1. Adhere to quality plan documentation and reporting requirements mandated by laws, regulations and accrediting standards, as well as guidelines of relevant governmental and non-governmental agencies
2. Validate correlation between quality manuals, procedures, and work instructions
3. Adhere to requirements surrounding configuration management for quality system documentation
4. Conduct internal and external audits, product, process, and systems audits, and first-, second-, and third-party audits
5. Identify, interpret, analyze, and draw conclusions based upon quality tools (i.e., pareto charts, cause and effect diagrams, flowcharts, statistical process control (SPC) charts, check sheets, scatter diagrams, histograms, root cause analysis, plan-do-check-act (PDCA), setting alert and action levels, 5 whys, Is/Is Not)
6. Apply Lean tools and processes (set-up time reduction, pull (just-in-time, Kanban), 5S, continuous flow, value stream, poka-yoke, total productive/predictive maintenance (TPM) to reduce waste in areas of cost, inventory, labor and distance
7. Use scheduling and monitoring project management tools (i.e., gantt charts, program evaluation and review technique and critical path method)

D. Data Collection and Analysis

1. Assemble and install wiring and components according to NEC requirements, drawings, and specifications
2. Use lab equipment to include, but not limited to autoclaves/sterilization products, balances and scales, bottle top dispensers, HPLC, UPLC, mass spectrometers, centrifuges, colorimeters/turbidity meters, conductivity meters and controllers, desiccators, dissolved oxygen meters, electrical meters, filtration equipment, environmental and weather monitoring equipment, flowmeters, fume hoods, general laboratory equipment and glassware, homogenizers, hotplates/stirrers, hydrometers, hygrometers and barometer, incubators, jar testing equipment, light and sound meters, microscopes, orbital shakers, pH/ORP/ISE meters/controllers, pipettors, polarimeters, refractometers, temperature control baths, thermometers, vacuum pumps, vortex mixers, and water analysis equipment
3. Calibrate and label laboratory test equipment to meet requirements
4. Perform and monitor quality control indicators recognizing factors that affect procedures and results, take appropriate action within predetermined limits when corrections are indicated, and notify the chain of command, when needed

5. Apply principles of quality assurance and performing measurements to assure validity and accuracy of laboratory data generated
6. Use data obtained from lab equipment to construct graphs and judge the accuracy and precision of results
7. Perform calculations interpret measures of central tendency (mean, median, mode) and measures of dispersion (standard deviation, range, variance)
8. Identify frequency distributions and potential skewed distributions of data
9. Apply concepts to predict probability and reliability of data
10. Determine if sampling plans are based on risk and statistically valid rationale

E. Customer – Supplier Relations

1. Apply strategies and techniques for communicating and working with internal, external and suppliers
2. Apply tools used to gather customer feedback (surveys, complaint forms, warranty analysis)
3. Apply validation and qualification methods for the approval of products and processes
4. Evaluate supplier key performance measures (quality, price, delivery, level of service)
5. Evaluate supplier common metrics (defect rates, functional performance, timeliness, responsiveness, technical support)
6. Apply proper practices for material identification, status and traceability of products
7. Use various methods to segregate nonconforming materials according to procedures

F. Corrective and Preventative Actions

1. Apply key elements of the corrective action process (identify the problem, contain the problem, determine the cause(s) of the problem, propose solutions to eliminate or prevent their recurrence, verify solutions are implemented and confirm their effectiveness)
2. Apply key elements of a preventative action process (track data trends/patterns, use failure mode and effects analysis (FMEA), review product/process monitoring reports, study the process to identify potential failures/defects/deficiencies, improve the process (error-proofing/procedural changes), verify changes are made and confirm their effectiveness)

G. Biomedical Technical Knowledge

1. Apply principles of academic specialization areas to include chemistry, biology, physics and natural sciences to perform job duties
2. Apply principles of risk management, including risk analysis, evaluation, control, benefit-risk analysis, and the incorporation of production and post-production information
3. Evaluate company-specific biomedical controls against product/process requirements (i.e., design, software, labeling, controlled environments and utilities, sterile medical devices, laboratory testing, product/process validation, reprocessing/reuse/cleaning of medical devices)
4. Apply new and evolving standards to product and process quality management systems

In addition to mastering all the essential technical competencies, an apprentice must consistently demonstrate, at an acceptable level, the following behavioral competencies to complete the apprenticeship. Additional behavioral competencies may be added or exchanged that are specific to the worksite and will be identified in the Employer Acceptance Agreement.

1. Participate and in team discussions/meetings
2. Seek constant improvement in work processes and techniques
3. Perform satisfactory independent work
4. Express openness to new ideas and change
5. Deal with ambiguity by exploring, asking questions, etc.
6. Know when to ask for help
7. Demonstrate excellent communication skills
8. Demonstrate effective one-on-one communication skills
9. Maintain an acceptable attendance record
10. Report to work on time
11. Organize, multitask and work in a fast-paced deadline-driven work environment
12. Complete assigned tasks on time and independently
13. Use appropriate language
14. Demonstrate respect for co-workers and supervisors
15. Demonstrate trust, honesty and integrity
16. Request and perform work assignments without prompting
17. Troubleshoot and resolve problems
18. Work under pressure and time constraints while maintaining a high level of work quality
19. Care appropriately for personal dress, grooming and hygiene
20. Maintain a positive attitude
21. Cooperate with and assists co-workers
22. Follow instructions/directions
23. Work under supervision
24. Accept constructive feedback and criticism
25. Follow safety rules
26. Take care of equipment and workplace
27. Keep work area neat and clean
28. Meet supervisor's work standards
29. Prevent interference of personal life with work
30. Adhere to work policies/rules/regulations
31. Adapt effectively to change
32. Learn and apply new procedures and techniques

In-School Youth Only

In-School Youth participating in this apprenticeship program must complete two phases (if applicable, see below).

Phase I - OJT

Completion of at least 300 hours of paid on-the-job training (OJT).

Should the Division of Apprenticeship Standards or California Department of Education develop a certificate (or comparable) and recognize and approve this portion of the apprenticeship as an in-school youth program, a certificate will be issued for the completion of Phase I.

Phase II - OJT

Completion of all remaining competencies of the apprenticeship program.

ARTICLE IV Related Instruction

Apprentices shall satisfactorily complete prescribed courses of related and supplemental instruction, which will not be less than 144 hours per year. Related and supplemental instruction will be provided by West Los Angeles College.

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

A. General Safety Training **8 hours**

This course fosters a safer work environment and reduces the likelihood of injuries, property damage, hazardous materials releases, etc. Documented safety training in the following subject areas may be required through regulatory agencies. The following list includes a minimum list of safety topics, but employers may require additional training, per regulation.

- Injury & Illness Prevention Program
- Fume hoods
- Chemical Hygiene Plan
- Regulated Carcinogens
- Personal Protective Equipment
- Bloodborne Pathogens
- Aerosol Transmittable Diseases
- Emergency Action Plan
- Fire Extinguishers
- Material Safety Data Sheets
- Hazardous. Waste Operations. & Emergency. Response
- Heat Stress
- Laser Equipment
- Control of Hazardous Energy

- Respiratory Protection
- Permissible Exposure Limits
- Confined Spaces
- Workplace Ergonomics
- Lock-Out/Tag-Out (LOTO)
- Rigging and Lifting

B. Laboratory Safety Fundamentals Training 16 hours

This course provides an overview of laboratory safety requirements and is required by all laboratory personnel. Documented safety training in the following subject areas may be required through regulatory agencies. The following list includes a minimum list of safety topics, but employers may require additional training, per regulation.

- Laboratory Emergency Procedures
- Engineering Controls (i.e., chemical fume hoods, biological safety cabinets, chemical storage locations, etc.)
- Administrative Controls (i.e., laboratory safety manual, SDS sheets, SOPs, chemical and hazard identification, etc.)
- Personal Protective Equipment (i.e., lab coat, eye protection, gloves, etc.)
- Waste Disposal (location, proper labeling, proper storage requirements, proper shipping process)
- Other Safety Laboratory-Specific Procedures (i.e., UV light, laser, safe use of specialized equipment, high voltage equipment, confined space, etc.)

C. Oral and Interpersonal Communication 8 hours

This course focuses on developing various communication skills including speaking and listening. Apprentices should practice intrapersonal/interpersonal and nonverbal communication skills through oral presentations, group activities and written projects.

D. Bio-Medical Mathematics 22 hours

This course is designed to cover concepts in algebra, function analysis, and trigonometry. Topics include exponential and logarithmic functions, transformations of functions, Law of Sines, Law of Cosines, vectors, and statistics. Upon completion, students should be able to demonstrate the ability to use mathematics and technology for problem-solving, analyzing and communicating results.

E. Introduction to Bio-Medical Quality Assurance 30 hours

This introductory course in Quality Assurance/Quality Control (QA/QC) for Bio-Medical provides guidance in the following areas: 1) understanding the importance and underlying principles of QA/QC; 2) developing a cost-effective, risk-managed QA/QC strategy for products through the different phases of clinical development and into commercialization; 3) handling biosafety, potency, and impurity profile issues for biologic/biopharmaceutical products; 4) setting appropriate and meaningful product specifications and expiration dates; 5) managing manufacturing process changes; 6)

identifying pressures on QA/QC groups today; and 7) meeting FDA's/ISO's expectations for the role of Quality Systems.

F. Good Manufacturing Practices (GMP) Principles 30 hours

The goal of this course is to teach you how to apply the knowledge gained about GMP regulations to institutions that are either trying to develop clinical trial materials or commercial product for treatment to assure compliance. Teaching the foundation of current Good Manufacturing Practices and similar legislative edicts in other countries that are applied to Chemistry Manufacturing and Controls (CMC) in the biotechnology, pharmaceutical and nutritional supplement industries should provide that knowledge base.

G. Advanced Lab Skills 30 hours

This course covers the continued or advanced principles and procedures performed in the laboratory. Apprentices continue development in additional or advanced laboratory equipment, following safety precautions. Topics include general laboratory skills, guidelines, government regulations, safety, quality assurance/control and professional standards and conduct.

Total RSI Hours: 144 hours

In-School Youth Only

In-School Youth participating in this apprenticeship program must complete two phases (if applicable, see below).

Phase I - RSI

Complete 144 hours of related and supplemental instruction (RSI). Should the Division of Apprenticeship Standards or California Department of Education develop a certificate (or comparable) and recognize and approve this portion of the apprenticeship as an in-school youth program, a certificate will be issued for the completion of Phase I.

Phase II - RSI

N/A. All related and supplemental instruction (RSI) is to be completed in Phase I.

ARTICLE V Ratio

The ratio of apprentices to professional workers shall be:

1) Ratio #1: Each professional worker may supervise three (3) apprentice(s)

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Attachment B-2

Training Schedule and Working Conditions

South Bay Workforce Investment Board (SBWIB)

Occupation

Occupation: Aircraft Interior Design & Upholstery Assembler Installer
O*Net Code: 51-2011.00

Article I Term of Apprenticeship and Probation

The standard term of apprenticeship shall be competency-based with 144 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:

$ 21.00 per hour effective 2/6/2025.

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:

In-School Youth Apprentice Schedule

In-School Youth apprentices must be compensated at or above 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. Upon completion of high school, In-School Youth apprentices must be compensated at or above the wage schedules shown in the Out-of-School Youth and Non-Youth Apprentice section of these Standards.

To advance from one period to the next, In-School Youth apprentices shall have met the following requirements for no less than the wages stated below:

Entry Wage $16.50 / hour**

Exit Wage Entry wage + $1.00 / hour*

Out-of-School Youth and Non-Youth Apprentice Schedule

All apprentices participating in the program while not enrolled in High School must be compensated at or above the wage scales shown below.

Counties	Entry Wage	Exit Wage
Alameda, Marin, San Mateo, Santa Clara, and San Francisco	$20.50	$21.50
Contra Costa	$20.21	$21.21
Los Angeles	$19.30	$20.30
Orange	$18.76	$19.76
San Diego	$18.94	$19.94
All Other Counties	$18.45	$19.45

* All mention of previous wage periods reference the current appropriate rate for that period and not necessarily the rate reflected in these Standards at the time of approval.

** References to specific minimum wages use the CA State minimum wage as a general example. All employers must pay the appropriate wages for the type of work and area where the job is being performed. See https://www.dir.ca.gov/dlse/minimum_wage.htm for details.

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:

Work Processes Outline and 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.

A. Technical:

1. Mark outline for soft goods based on patterns, cut the product to prepare for sewing; fold or stretch edges or lengths of items while sewing to facilitate forming specified sections.
2. Match material pieces in correct sequences and verify that dye lots and patterns match.
3. Set-up commercial sewing machine and mounting attachments, such as needles, cutting blades, or pattern plates, and adjust machine guides according to specifications.
4. Monitor machine operation to detect problems such as defective stitching, breaks in thread, or machine malfunctions.
5. Position and mark patterns on materials to prepare for sewing.
6. Position items under needles, using marks on machines, clamps, templates, or material guides.
7. Position material or articles in clamps, templates, or hoop frames prior to automatic operation of machines.
8. Record quantities of materials processed.
9. Repair or alter items by adding replacement parts or missing stitches.
10. Select materials and supplies according to job requirements.
11. Align parts or workpieces to ensure proper assembly and installation.
12. Compare physical characteristics of materials or products to specifications or standards.
13. Design, create and make master patterns.

14. Proficient using equipment and hand tools such as: Power Tools: drill, screwdriver, sander, nail gun, spray gun. Hand Tools: staple guns, mauls, scissors, regulators, brass nail guns, tack pullers, etc.
15. Measure dimensions of completed products or workpieces to verify conformance to specifications.
16. Package final product.
17. Label and create packing list for shipping.

In addition to mastering all the essential technical competencies, an apprentice must consistently demonstrate, at an acceptable level, the following behavioral competencies to complete the apprenticeship. Additional behavioral competencies may be added or exchanged that are specific to the work site and will be identified in the Employer Acceptance Agreement.

1. Participate and in team discussions/meetings
2. Seek constant improvement in work processes and techniques
3. Perform satisfactory independent work
4. Express openness to new ideas and change
5. Deal with ambiguity by exploring, asking questions, etc.
6. Know when to ask for help
7. Demonstrate excellent communication skills
8. Demonstrate effective one-on-one communication skills
9. Maintain an acceptable attendance record
10. Report to work on time
11. Organize, multitask and work in a fast-paced deadline-driven work environment
12. Complete assigned tasks on time and independently
13. Use appropriate language
14. Demonstrate respect for co-workers and supervisors
15. Demonstrate trust, honesty and integrity
16. Request and perform work assignments without prompting
17. Troubleshoot and resolve problems
18. Work under pressure and time constraints while maintaining a high level of work quality
19. Care appropriately for personal dress, grooming and hygiene
20. Maintain a positive attitude
21. Cooperate with and assists co-workers
22. Follow instructions/directions
23. Work under supervision
24. Accept constructive feedback and criticism
25. Follow safety rules
26. Take care of equipment and workplace
27. Keep work area neat and clean
28. Meet supervisor's work standards
29. Prevent interference of personal life with work
30. Adhere to work policies/rules/regulations
31. Adapt effectively to change
32. Learn and apply new procedures and techniques

In-School Youth Only

In-School Youth participating in this apprenticeship program must complete two phases (if applicable, see below).

Phase I - OJT

Completion of at least 300 hours of paid on-the-job training (OJT).

Should the Division of Apprenticeship Standards or California Department of Education develop a certificate (or comparable) and recognize and approve this portion of the apprenticeship as an in-school youth program, a certificate will be issued for the completion of Phase I.

Phase II - OJT

Completion of all remaining competencies of the apprenticeship program.

ARTICLE IV Related Instruction

Apprentices shall satisfactorily complete prescribed courses of related and supplemental instruction, which will not be less than 144 hours per year. Related and supplemental instruction will be provided by West Los Angeles College.

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

A. Safety and Ergonomics **4 hours**

- Ergonomics, safety /proper clothing
- Types of machines in lab
- Work ethic & workplace conduct
- Class expectations
- Demo of machines by instructor

B. Industrial Cutting and Sewing Terminology **4 hours**

- Patterns and symbols lecture
- Pattern terminology
- Glossary of terms terminology
- Fabric glossary

C. Types of Industrial Cutting, Sewing Machines, Seams, Stitches & Finishes

6 hours

- Machine problems and troubleshooting
- Parts of sewing machine/terminology
- Maintenance
- Demo threading machines
- Machine set up & threading

D. Types of Fabrics, Vinyl, Leather and other Materials **10 hours**

- Fabric weights, seams with different weights of fabric with corresponding stitch length and thread
- Fabric & sewing handling
- Intro to leather

E. Industrial Sewing and Cutting Machine Set-up, Adjustments and Maintenance, Troubleshooting **45 hours**

- Machine set up & threading
- Threading a Juki lockstitch machine and bobbin
- Change needles
- Serger threading

F. Power and Hand Tool Use & Technique (e.g., sander, nail gun spray gun, staple guns, mauls, scissors, regulators, brass nail guns, tack pullers, etc.) **20 hours**

- Heat sealing, ultrasonic and hot knife use
- Demo cording/welting
- Use of skiver, cement
- Binding and elastics

G. Standardized Work Methods **10 hours**

- Math intro & practice
- Sew on paper
- Ruler (metric & standard)

H. Material and Sewing Handling **10 hours**

- Fabric & sewing handling
- Demo finishes - Flat Fell, Zig Zag (lecture) on typical and Juki
- Closed seam, cover stitch
- Finish Binding

I. Quality Control/ Measuring/Pattern Design **20 hours**

- Standardized work methods and reading specifications and routings
- Quality & quality control
- Pattern design

J. Reading Prints, Specifications **15 hours**

- Print reading
- Pattern reading
- Design specifications

Total RSI Hours: **144 hours**

In-School Youth Only

In-School Youth participating in this apprenticeship program must complete two phases (if applicable, see below).

Phase I - RSI

Complete 144 hours of related and supplemental instruction (RSI). Should the Division of Apprenticeship Standards or California Department of Education develop a certificate (or comparable) and recognize and approve this portion of the apprenticeship as an in-school youth program, a certificate will be issued for the completion of Phase I.

Phase II - RSI

N/A. All related and supplemental instruction (RSI) is to be completed in Phase I.

ARTICLE V Ratio

The ratio of apprentices to professional workers shall be:

1) Ratio #1: Each professional worker may supervise three (3) apprentice(s)

DAS FILE # 100634

Attachment B-3

Training Schedule and Working Conditions

South Bay Workforce Investment Board (SBWIB)

Occupation

Occupation: Certified Nursing Assistant
O*Net Code: 31-1131.00

Article I Term of Apprenticeship and Probation

The standard term of apprenticeship shall be competency-based with 144 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:

$ 21.00 per hour effective 2/6/2025.

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:

In-School Youth Apprentice Schedule

In-School Youth apprentices must be compensated at or above 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. Upon completion of high school, In-School Youth apprentices must be compensated at or above the wage schedules shown in the Out-of-School Youth and Non-Youth Apprentice section of these Standards.

To advance from one period to the next, In-School Youth apprentices shall have met the following requirements for no less than the wages stated below:

Entry Wage $16.50 / hour**

Exit Wage Entry wage + $1.00 / hour*

Out-of-School Youth and Non-Youth Apprentice Schedule

All apprentices participating in the program while not enrolled in High School must be compensated at or above the wage scales shown below.

Counties	Entry Wage	Exit Wage
Alameda, Marin, San Mateo, Santa Clara, and San Francisco	$20.50	$21.50
Contra Costa	$20.21	$21.21
Los Angeles	$19.30	$20.30
Orange	$18.76	$19.76
San Diego	$18.94	$19.94
All Other Counties	$18.45	$19.45

* All mention of previous wage periods reference the current appropriate rate for that period and not necessarily the rate reflected in these Standards at the time of approval.

** References to specific minimum wages use the CA State minimum wage as a general example. All employers must pay the appropriate wages for the type of work and area where the job is being performed. See https://www.dir.ca.gov/dlse/minimum_wage.htm for details.

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:

Work Processes Outline and 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.

A. Provide basic nursing care

1. Follow the patient's or resident's plan of care
2. Assist with nurses' examinations and procedures
3. Take and record vital signs
4. Measure and record height and weight
5. Frequently check patient or resident status
6. Recognize and report abnormal changes
7. Assist with collection of specimens
8. Assist with provision of end-of-life care
9. Measure and record dietary intake

B. Transfer and reposition patient or resident

1. Safely position and/or turn patient or resident to prevent bed sores and ulcers
2. Safely transfer patient or resident from bed to wheelchair or wheelchair to bed
3. Safely transfer patient or resident from bed to stretcher
4. Assist with ambulation
5. Assist with patient transport in facility
6. Measure and report urinary and fecal output

C. Provide basic nursing treatments and procedures

1. Bathe and shower patient or resident

2. Groom patient or resident
3. Provide oral care to a patient or resident
4. Dress patient or resident
5. Assist patient or resident with using the toilet
6. Assist patient or resident with eating and hydration
7. Feed a patient or resident who cannot on their own
8. Provide and promote hand hygiene for patient or resident
9. Provide skin care for patient or resident
10. Assist patient or resident with personal equipment and devices per facility policy
11. Maintain safe and clean environment for patient or resident
12. Provide physical comfort measures to patient or resident
13. Provide basic restorative care to patient or resident
14. Make patient or resident's bed

D. Follow infection control procedures

1. Evaluate and maintain a safe environment
2. Report symptoms to licensed professionals/RN
3. Perform and maintain proper hand hygiene
4. Use personal protective equipment
5. Observe and maintain isolation precautions
6. Practice respiratory hygiene/cough etiquette
7. Safely handle sharps

E. Follow safety and emergency procedures

1. Recognize and respond to Foreign Body Airway Obstruction (FBAO)/competency in CPR
2. Recognize, respond to, and promptly report other medical emergencies: cardiac arrest, stroke, and bleeding/hemorrhage
3. Recognize and respond to convulsions
4. Prevent and respond to falls
5. Prevent and respond to burns and scalds
6. Prevent and respond to poisoning
7. Maintain and respond to patient alarm systems
8. Safely handle hazardous waste
9. Follow oxygen safety precautions
10. Prepare for facility emergencies
11. Protect self from harm (workplace accidents or violence)

F. Communication

1. Effectively communicate with patients or residents
2. Communicate with visually impaired patients or residents
3. Communicate with hearing impaired patients or residents
4. Encourage family involvement in patient or resident care
5. Communicate with staff and other care providers
6. Assist with admission, discharge and transfer

G. Care for cognitively impaired patients or residents

1. Address unique needs of individuals with dementia or cognitive impairments
2. Communicate with cognitively impaired patients or residents
3. Monitor the mobility of cognitively impaired patients or residents

H. Maintain standards of professional care and develop professional skills

1. Provide privacy and maintain confidentiality
2. Promote patient's or resident's rights to make choices that accommodate their needs
3. Promote esteem and dignity
4. Promote sense of security
5. Avoid the need for restraints in accordance with current professional standards
6. Participate in performance-improvement and cost-containment programs
7. Promote and provide culturally sensitive care to patients or residents
8. Promote and provide compassionate care

AS-ASSIGNED COMPETENCIES:

The following are "as assigned" work processes for the apprenticeship determined by the employer.

I. Additional basic nursing care

1. Assist with medication management (not in acute care)
2. Assist in management of wound care
3. Provide catheter and peri care
4. Communicate medical information within scope of practice

In addition to mastering all the essential technical competencies, an apprentice must consistently demonstrate, at an acceptable level, the following behavioral competencies to complete the apprenticeship. Additional behavioral competencies may be added or exchanged that are specific to the work site and will be identified in the Employer Acceptance Agreement.

1. Participate and in team discussions/meetings
2. Seek constant improvement in work processes and techniques
3. Perform satisfactory independent work
4. Express openness to new ideas and change
5. Deal with ambiguity by exploring, asking questions, etc.
6. Know when to ask for help
7. Demonstrate excellent communication skills
8. Demonstrate effective one-on-one communication skills
9. Maintain an acceptable attendance record
10. Report to work on time
11. Organize, multitask and work in a fast-paced deadline-driven work environment
12. Complete assigned tasks on time and independently
13. Use appropriate language
14. Demonstrate respect for co-workers and supervisors
15. Demonstrate trust, honesty and integrity
16. Request and perform work assignments without prompting
17. Troubleshoot and resolve problems

18. Work under pressure and time constraints while maintaining a high level of work quality
19. Care appropriately for personal dress, grooming and hygiene
20. Maintain a positive attitude
21. Cooperate with and assists co-workers
22. Follow instructions/directions
23. Work under supervision
24. Accept constructive feedback and criticism
25. Follow safety rules
26. Take care of equipment and workplace
27. Keep work area neat and clean
28. Meet supervisor's work standards
29. Prevent interference of personal life with work
30. Adhere to work policies/rules/regulations
31. Adapt effectively to change
32. Learn and apply new procedures and techniques

In-School Youth Only

In-School Youth participating in this apprenticeship program must complete two phases (if applicable, see below).

Phase I - OJT

Completion of at least 300 hours of paid on-the-job training (OJT).

Should the Division of Apprenticeship Standards or California Department of Education develop a certificate (or comparable) and recognize and approve this portion of the apprenticeship as an in-school youth program, a certificate will be issued for the completion of Phase I.

Phase II - OJT

Completion of all remaining competencies of the apprenticeship program.

ARTICLE IV Related Instruction

Apprentices shall satisfactorily complete prescribed courses of related and supplemental instruction, which will not be less than 144 hours per year. Related and supplemental instruction will be provided by West Los Angeles College.

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

A. The Art of Caregiving 10 hours

- Being a Nurse Assistant: Description of the nurse assistant’s roles and responsibilities as a member of the healthcare team, the educational requirements necessary to become a nurse assistant and an overview of the healthcare system, including the

settings where care is delivered, methods of paying for healthcare and organizations that serve to protect the recipients and providers of healthcare
- Protecting the People in Your Care: Overview of legislation affecting healthcare and basic understanding of legal issues that can arise in healthcare and explains how nurse assistants can protect themselves from legal difficulties on the job
- Acting in an Ethical and Professional Manner: Introduction to the key ethical principles involved in healthcare, exploration of ethical issues that can arise, ways to avoid ethical difficulties, and the key elements of being a professional
- Understanding the People in Your Care: Review of the qualities and experiences that all human beings have in common, despite the increasing diversity of the population
- Communicating with People: How to communicate effectively with those in your care, as well as with your co-workers
- Understanding the Body and How It Functions: Review of the structure and function of the eleven organ systems and the normal age-related changes for each

B. Promoting Safety **30 hours**

- Controlling the Spread of Infection: Basic understanding of how infection scan spread throughout a healthcare facility and the methods that are used to protect recipients of healthcare and healthcare workers from healthcare–associated infections
- Preventing Injuries: Information about how to maintain a safe workplace and living environment, including principles of body mechanics and safe lifting, “no-lift” policies which seek to limit on-the-job injuries, factors that put recipients of healthcare at risk for injury, common injuries and their prevention, and safe use of equipment, including issues related to the use of side rails and restraints
- Responding to Emergencies: Overview of common medical emergencies, how to prevent and respond to fire emergencies, and basic principles of care in the event of common weather emergencies or disasters

C. Providing Care **25 hours**

- Concepts and skills used to provide routine care to patients, residents and clients
- Measuring Vital Signs and Other Data: How to obtain basic measurements accurately
- Assisting with Positioning and Transferring: Pressure injury prevention strategies and the skills needed to safely assist with repositioning and transferring
- Providing Restorative Care: Introduction to the important role nurse assistants play in helping those in their care maintain or regain function, and skills related to exercise and preventing complications of immobility
- Maintaining a Comfortable Environment: Learn bedmaking skills and environmental factors that can affect a person’s comfort while in a healthcare facility
- Assisting with Personal Cleanliness and Grooming: Learn personal care skills
- Assisting with Meals and Fluids: Concepts and skills needed to ensure adequate nutrition and fluid balance
- Assisting with Elimination: Skills needed to assist people with elimination and common problems with elimination
- Promoting Comfort and Rest: The nurse assistant’s role in recognizing, reporting and managing pain, and in promoting adequate rest and sleep

- Assisting with Admissions: The nurse assistant's responsibilities in assisting with admissions, transfers and discharges, including providing emotional support during these times of transition

D. Special Care Instructions 30 hours

- Providing Care for People with Specific Illnesses: Overview of commonly encountered medical conditions and special considerations for the nurse assistant in caring for people with these conditions
- Providing Care for People with Dementia and Other Cognitive Changes: Review of common causes of cognitive changes, including normal age-related changes in cognition, delirium and dementia; how a person with dementia experiences the world, and strategies for effectively communicating with and providing care for a person with dementia
- Providing Care for People at the End of Life: Understand the very important role nurse assistants have in caring for people and their family members in the time leading up to and following a person's death
- Providing Care to Infants and Children: Overview of care considerations for the pediatric population
- Providing Care for People in Their Homes: Introduction to the unique aspects of working as a home health aide and providing care in the home

E. Transitioning from Student to Employee 19 hours

- Entering the Workforce: Basic information about identifying and applying for appropriate job opportunities, preparing a resume and reference list, writing cover letters and thank-you notes, and interviewing successfully
- Enjoying Professional Success: Skills and knowledge necessary to stay healthy and happy on the job, including time-management strategies, interpersonal skills, self-care skills and opportunities for career advancement

F. Clinical Lab 30 hours

- Application of skills learned in clinical environment under direct supervisor of the instructors and clinical staff

Total RSI Hours: 144 hours

In-School Youth Only

In-School Youth participating in this apprenticeship program must complete two phases (if applicable, see below).

Phase I - RSI

Complete 144 hours of related and supplemental instruction (RSI). Should the Division of Apprenticeship Standards or California Department of Education develop a certificate (or comparable) and recognize and approve this portion of the apprenticeship as an in-school youth program, a certificate will be issued for the completion of Phase I.

Phase II - RSI

N/A. All related and supplemental instruction (RSI) is to be completed in Phase I.

ARTICLE V Ratio

The ratio of apprentices to professional workers shall be:

1) Ratio #1: Each professional worker may supervise three (3) apprentice(s)

DAS FILE # 100634

Attachment B-4

Training Schedule and Working Conditions

South Bay Workforce Investment Board (SBWIB)

Occupation

Occupation: Optics Manufacturing Technician
O*Net Code: 17-3029.08

Article I Term of Apprenticeship and Probation

The standard term of apprenticeship shall be competency based with 200 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:

$ 19.45 per hour effective 2/6/2025.

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:

In-School Youth Apprentice Schedule

In-School Youth apprentices must be compensated at or above 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. Upon completion of high school, In-School Youth apprentices must be compensated at or above the wage schedules shown in the Out-of-School Youth and Non-Youth Apprentice section of these Standards.

To advance from one period to the next, In-School Youth apprentices shall have met the following requirements for no less than the wages stated below:

Entry Wage $16.50 / hour**

Exit Wage Entry wage + $1.00 / hour*

Out-of-School Youth and Non-Youth Apprentice Schedule

All apprentices participating in the program while not enrolled in High School must be compensated at or above the wage scales shown below.

Counties	Entry Wage	Exit Wage
Alameda, Marin, San Mateo, Santa Clara, and San Francisco	$20.50	$21.50
Contra Costa	$20.21	$21.21
Los Angeles	$19.30	$20.30
Orange	$18.76	$19.76
San Diego	$18.94	$19.94
All Other Counties	$18.45	$19.45

* All mention of previous wage periods reference the current appropriate rate for that period and not necessarily the rate reflected in these Standards at the time of approval.

** References to specific minimum wages use the CA State minimum wage as a general example. All employers must pay the appropriate wages for the type of work and area where the job is being performed. See https://www.dir.ca.gov/dlse/minimum_wage.htm for details.

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:

Work Processes Outline and 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.

A. Technical:

1. Identify, inspect, and qualify materials for manufacturing optical components
2. Participate in the planning and verification of optical fabrication processes
3. Operate, maintain, and calibrate optics manufacturing and testing equipment
4. Conduct inspections for in-process work and final distribution
5. Assemble optical components and systems
6. Identify and correct concerns that effect testing results in accordance with established procedures
7. Perform final check on unit for adequacy and accuracy during and upon completion.
8. Understand and interpret test results
9. Uphold company standards to ensure maximum customer satisfaction and optimize work efficiency

AS-ASSIGNED COMPETENCIES:

The following are “as assigned” work processes for the apprenticeship determined by the employer upon assignment.

1. Inspect and identify quality concerns with anti-reflective coatings on corrector lenses.
2. Inspect and identify quality concerns with reflective coatings on lens assembly and primary mirrors.

3. Correctly Install optical components into the optical tube assembly and complete installation of all other telescope components based on the Engineering assembly process.
4. Perform a 3-point inspection process including collimation, alignment, and final acceptance testing.

In addition to mastering all the essential technical competencies, an apprentice must consistently demonstrate, at an acceptable level, the following behavioral competencies to complete the apprenticeship. Additional behavioral competencies may be added or exchanged that are specific to the work site and will be identified in the Employer Acceptance Agreement.

1. Participate and in team discussions/meetings
2. Seek constant improvement in work processes and techniques
3. Perform satisfactory independent work
4. Express openness to new ideas and change
5. Deal with ambiguity by exploring, asking questions, etc.
6. Know when to ask for help
7. Demonstrate excellent communication skills
8. Demonstrate effective one-on-one communication skills
9. Maintain an acceptable attendance record
10. Report to work on time
11. Organize, multitask and work in a fast-paced deadline-driven work environment
12. Complete assigned tasks on time and independently
13. Use appropriate language
14. Demonstrate respect for co-workers and supervisors
15. Demonstrate trust, honesty and integrity
16. Request and perform work assignments without prompting
17. Troubleshoot and resolve problems
18. Work under pressure and time constraints while maintaining a high level of work quality
19. Care appropriately for personal dress, grooming and hygiene
20. Maintain a positive attitude
21. Cooperate with and assists co-workers
22. Follow instructions/directions
23. Work under supervision
24. Accept constructive feedback and criticism
25. Follow safety rules
26. Take care of equipment and workplace
27. Keep work area neat and clean
28. Meet supervisor's work standards
29. Prevent interference of personal life with work
30. Adhere to work policies/rules/regulations
31. Adapt effectively to change
32. Learn and apply new procedures and techniques

In-School Youth Only

In-School Youth participating in this apprenticeship program must complete two phases (if applicable, see below).

Phase I - OJT

Completion of at least 300 hours of paid on-the-job training (OJT).

Should the Division of Apprenticeship Standards or California Department of Education develop a certificate (or comparable) and recognize and approve this portion of the apprenticeship as an in-school youth program, a certificate will be issued for the completion of Phase I.

Phase II - OJT

Completion of all remaining competencies of the apprenticeship program.

ARTICLE IV Related Instruction

Apprentices shall satisfactorily complete prescribed courses of related and supplemental instruction, which will not be less than 200 hours per year. Related and supplemental instruction will be provided by West Los Angeles College.

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

A. Introduction to Optics — 20 hours

- Describe Optics concepts in a real-world setting
- Explain the functioning of the human visual system
- Describe the properties of light
- Define the processes used to manufacture optical components
- Identify the properties that make glass a phenomenal material

B. Optical Instruments and Testing — 80 hours

- Describe the properties of optical systems
- Demonstrate the proper use of equipment for optical testing
- Calculate the magnification for a given microscope
- Test optical components following established guidelines
- Analyze optical components test data for defects and aberrations
- Create multi-element optical systems

C. Optical Fabrication and Metrology — 80 hours

- Create optical components using manual optical fabrication equipment
- Compare optical components to the specification of the drawings provided by engineering

- Test optical components to the specification required by engineering
- Create a laboratory notebook according to standard engineering guidelines
- Document optical fabrication practices
- Utilize appropriate computer technology

Apprentices must complete the CORE COURSE WORK shown above and, in addition, one (1) of the following AS ASSIGNED courses will be determined by the employer. If any additional courses are requested by the employer, the course will be assigned upon agreement by the apprentice, the program and the employer.

D. Telescope Assembly Training **20 hours**

- Installation of the primary mirror
- Installation of the corrector
- Installation of the OTA

Total *Core* Hours:	**180 hours**
Total *As Assigned* Hours:	**20 hours**
Total RSI Hours:	**200 hours**

In-School Youth Only

In-School Youth participating in this apprenticeship program must complete two phases (if applicable, see below).

Phase I - RSI

Complete 144 hours of related and supplemental instruction (RSI). Should the Division of Apprenticeship Standards or California Department of Education develop a certificate (or comparable) and recognize and approve this portion of the apprenticeship as an in-school youth program, a certificate will be issued for the completion of Phase I.

Phase II - RSI

Completion of all remaining related and supplemental instruction (RSI) of the apprenticeship program.

ARTICLE V Ratio

The ratio of apprentices to professional workers shall be:

1) Ratio #1: Each professional worker may supervise three (3) apprentice(s)

DAS FILE # 100634

Attachment B-5

Training Schedule and Working Conditions

South Bay Workforce Investment Board (SBWIB)

Occupation

Occupation: Bio Medical Quality Assurance Specialist 1y
O*Net Code: 11-3051.01

Article I Term of Apprenticeship and Probation

The standard term of apprenticeship shall be competency-based with 144 related and supplemental instruction (RSI) hours and completed within approximately 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:

$ 21.00 per hour effective 2/6/2025.

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:

In-School Youth Apprentice Schedule

In-School Youth apprentices must be compensated at or above 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. Upon completion of high school, In-School Youth apprentices must be compensated at or above the wage schedules shown in the Out-of-School Youth and Non-Youth Apprentice section of these Standards.

To advance from one period to the next, In-School Youth apprentices shall have met the following requirements for no less than the wages stated below:

Entry Wage $16.50 / hour**

Exit Wage Entry wage + $1.00 / hour*

Out-of-School Youth and Non-Youth Apprentice Schedule

All apprentices participating in the program while not enrolled in High School must be compensated at or above the wage scales shown below.

Counties	Entry Wage	Exit Wage
Alameda, Marin, San Mateo, Santa Clara, and San Francisco	$20.50	$21.50
Contra Costa	$20.21	$21.21
Los Angeles	$19.30	$20.30
Orange	$18.76	$19.76
San Diego	$18.94	$19.94
All Other Counties	$18.45	$19.45

* All mention of previous wage periods reference the current appropriate rate for that period and not necessarily the rate reflected in these Standards at the time of approval.

** References to specific minimum wages use the CA State minimum wage as a general example. All employers must pay the appropriate wages for the type of work and area where the job is being performed. See https://www.dir.ca.gov/dlse/minimum_wage.htm for details.

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:

Work Processes Outline and 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.

A. Environmental, Health & Safety

1. Recognize and report potential hazards in workplace before and during each shift. Provide inspection before and after shift if required by employer.
2. Wear appropriate personal protective equipment, including clothing footwear, head protection, eye protection and gloves
3. Adhere to the emergency procedures for spills, fire injuries and other incidents, including bloodborne pathogens.
4. Identify the location of first aid kits, emergency showers, eyewash stations, fire extinguishers and spill cleanup materials and how to use them
5. Read and interpret the material safety data sheets for any hazardous products used and follow any recommended precautions
6. Maintain a clean and orderly workplace, storing hazardous materials properly and disposing of waste products according to company policies and local/federal laws and regulations
7. Use, store and maintain hand-tools properly to eliminate trip hazards, injury, electrocution or damage
8. Adhere to safety rules for an individual’s facility
9. As relevant to facility, ensure confined space procedures are followed according to site specifications and jurisdictional regulations
10. Recognize, plan and organize layout and work for ergonomic problems

B. Biomedical Quality Requirements

1. Adhere to regulatory laws and requirements (i.e., FDA, U.S. Requirements, EU MDR, Health Canada, other International Agencies)
2. Adhere to standards for International quality systems (i.e., ISO 9001, ISO 13485, ISO 17025)

C. Quality concepts and tools

Adhere to and enforce quality system requirements (i.e., management responsibility, design controls, document and record control, purchasing and controls and acceptance activities, identification and traceability, production and process controls, inspection measuring and testing equipment, nonconforming product, corrective and preventative action, product handling, storage, distribution and installation, complaint files, servicing, statistical techniques, and post market surveillance).Quality Concepts and Tools

1. Adhere to quality plan documentation and reporting requirements mandated by laws, regulations and accrediting standards, as well as guidelines of relevant governmental and non-governmental agencies
2. Validate correlation between quality manuals, procedures, and work instructions.
3. Adhere to requirements surrounding configuration management for quality system documentation
4. Conduct internal and external audits, product, process, and systems audits, and first-, second-, and third-party audits
5. Identify, interpret, analyze, and draw conclusions based upon quality tools (i.e., pareto charts, cause and effect diagrams, flowcharts, statistical process control (SPC) charts, check sheets, scatter diagrams, histograms, root cause analysis, plan- do-check-act (PDCA), setting alert and action levels, 5 whys, Is/Is Not)
6. Apply Lean tools and processes which may include set-up time reduction, pull (just-in-time, Kanban), 5S, continuous flow, value stream, poka-yoke, total productive/predictive maintenance (TPM) to reduce waste in areas of cost, inventory, labor and distance
7. Use scheduling and monitoring project management tools (i.e., gantt charts, program evaluation and review technique and critical path method)

D. Data Collection and Analysis

1. Assemble and install wiring and components according to NEC requirements, drawings, and specifications
2. Use lab equipment which may include, but not limited to autoclaves/sterilization products, balances and scales, bottle top dispensers, HPLC, UPLC, mass spectrometers, centrifuges, colorimeters/turbidity meters, conductivity meters and controllers, desiccators, dissolved oxygen meters, electrical meters, filtration equipment, environmental and weather monitoring equipment, flowmeters, fume hoods, general laboratory equipment and glassware, homogenizers, hotplates/stirrers, hydrometers, hygrometers and barometer, incubators, jar testing equipment, light and sound meters, microscopes, orbital shakers, pH/ORP/ISE meters/controllers, pipettors, polarimeters, refractometers, temperature control baths, thermometers, vacuum pumps, vortex mixers, and water analysis equipment
3. Calibrate and label laboratory test equipment to meet requirements

4. Perform and monitor quality control indicators recognizing factors that affect procedures and results, take appropriate action within predetermined limits when corrections are indicated, and notify the chain of command, when needed
5. Apply principles of quality assurance and performing measurements to assure validity and accuracy of laboratory data generated
6. Use data obtained from lab equipment to construct graphs, and judge the accuracy and precision of results
7. Perform calculations interpret measures of central tendency (mean, median, mode) and measures of dispersion (standard deviation, range, variance)
8. Identify frequency distributions and potential skewed distributions of data
9. Apply concepts to predict probability and reliability of data
10. Determine if sampling plans are based on risk and statistically valid rationale

E. Customer – Supplier Relations

1. Apply strategies and techniques for communicating and working with internal, external and suppliers
2. Apply tools used to gather customer feedback (i.e. surveys, complaint forms, warranty analysis)
3. Apply validation and qualification methods for the approval of products and processes
4. Evaluate supplier key performance measures (quality, price, delivery, level of service)
5. Evaluate supplier common metrics (defect rates, functional performance, timeliness, responsiveness, technical support)
6. Apply proper practices for material identification, status and traceability of products
7. Use various methods to segregate nonconforming materials according to procedures

F. Corrective and Preventative Actions

1. Apply key elements of the corrective action process (identify the problem, contain the problem, determine the cause(s) of the problem, propose solutions to eliminate or prevent their recurrence, verify solutions are implemented and confirm their effectiveness)
2. Apply key elements of a preventative action process (track data trends/patterns, use failure mode and effects analysis (FMEA), review product/process monitoring reports, study the process to identify potential failures/defects/deficiencies, improve the process (error-proofing/procedural changes), verify changes are made and confirm their effectiveness)

G. Biomedical Technical Knowledge

1. Apply principles of academic specialization areas which may include chemistry, biology, physics and natural sciences to perform job duties
2. Apply principles of risk management, including risk analysis, evaluation, control, benefit-risk analysis, and the incorporation of production and post-production information

3. Evaluate company-specific biomedical controls against product/process requirements (i.e., design, software, labeling, controlled environments and utilities, sterile medical devices, laboratory testing, product/process validation, reprocessing/reuse/cleaning of medical devices)
4. Apply new and evolving standards to product and process quality management systems

In addition to mastering all the essential technical competencies outlined in the work processes, an apprentice must consistently demonstrate, at an acceptable level, the following behavioral competencies to complete the apprenticeship. Additional behavioral competencies may be added or exchanged that are specific to the work site and will be identified in the Employer Acceptance Agreement.

1. Participate and in team discussions/meetings
2. Seek constant improvement in work processes and techniques
3. Perform satisfactory independent work
4. Express openness to new ideas and change
5. Deal with ambiguity by exploring, asking questions, etc.
6. Know when to ask for help
7. Demonstrate excellent communication skills
8. Demonstrate effective one-on-one communication skills
9. Maintain an acceptable attendance record
10. Report to work on time
11. Organize, multitask and work in a fast-paced deadline-driven work environment
12. Complete assigned tasks on time and independently
13. Use appropriate language
14. Demonstrate respect for co-workers and supervisors
15. Demonstrate trust, honesty and integrity
16. Request and perform work assignments without prompting
17. Troubleshoot and resolve problems
18. Work under pressure and time constraints while maintaining a high level of work quality
19. Care appropriately for personal dress, grooming and hygiene
20. Maintain a positive attitude
21. Cooperate with and assists co-workers
22. Follow instructions/directions
23. Work under supervision
24. Accept constructive feedback and criticism
25. Follow safety rules
26. Take care of equipment and workplace
27. Keep work area neat and clean
28. Meet supervisor's work standards
29. Prevent interference of personal life with work
30. Adhere to work policies/rules/regulations
31. Adapt effectively to change
32. Learn and apply new procedures and techniques

In-School Youth Only

In-School Youth participating in this apprenticeship program must complete two phases (if applicable, see below).

Phase I - OJT

Completion of at least 300 hours of paid on-the-job training (OJT).

Should the Division of Apprenticeship Standards or California Department of Education develop a certificate (or comparable) and recognize and approve this portion of the apprenticeship as an in-school youth program, a certificate will be issued for the completion of Phase I.

Phase II - OJT

Completion of all remaining competencies of the apprenticeship program.

ARTICLE IV Related Instruction

Apprentices shall satisfactorily complete prescribed courses of related and supplemental instruction, which will not be less than 144 hours per year. Related and supplemental instruction will be provided by West Los Angeles College.

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

A. General Safety Training **8 hours**

Content fosters a safer work environment and reduces the likelihood of injuries, property damage, hazardous materials releases, etc. Documented safety training in the following subject areas may be required through regulatory agencies. The following list includes a recommended list of safety topics, but employers may require alternative and/or additional training, per regulation.

- Injury & Illness Prevention Program
- Fume hoods
- Chemical Hygiene Plan
- Regulated Carcinogens
- Personal Protective Equipment
- Bloodborne Pathogens
- Aerosol Transmittable Diseases
- Emergency Action Plan
- Fire Extinguishers
- Material Safety Data Sheets
- Hazardous Waste Operations & Emergency Response
- Heat Stress
- Laser Equipment

- Control of Hazardous Energy
- Respiratory Protection Permissible Exposure Limits
- Confined Spaces
- Workplace Ergonomics
- Lock-Out/Tag-Out (LOTO)
- Rigging and Lifting

B. Laboratory Safety Fundamentals Training 16 hours

Content provides an overview of laboratory safety requirements and is required by all laboratory personnel. Documented safety training in the following subject areas may be required through regulatory agencies. The following list includes a minimum list of safety topics, but employers may require additional training, per regulation.

- Laboratory Emergency Procedures
- Engineering Controls (i.e., chemical fume hoods, biological safety cabinets, chemical storage locations, etc.)
- Administrative Controls (i.e., laboratory safety manual, SDS sheets, SOPs, chemical and hazard identification, etc.)
- Personal Protective Equipment (i.e., lab coat, eye protection, gloves, etc.)
- Waste Disposal (location, proper labeling, proper storage requirements, proper shipping process)
- Other Safety Laboratory-Specific Procedures (i.e., UV light, laser, safe use of specialized equipment, high voltage equipment, confined space, etc.)

C. Oral and Interpersonal Communication 8 hours

Content focuses on developing various communication skills including speaking and listening. Apprentices should practice intrapersonal/interpersonal and nonverbal communication skills through oral presentations, group activities and written projects.

D. Applied Mathematics 22 hours

Content is designed to cover concepts in such related mathematics as algebra, function analysis, and trigonometry. Topics may include exponential and logarithmic functions, transformations of functions, Law of Sines, Law of Cosines, vectors, and statistics. Upon completion, students should be able to demonstrate the ability to use mathematics and technology for problem-solving, analyzing and communicating results.

E. Introduction to Bio-Medical Quality Assurance 30 hours

An introductory course in Quality Assurance/Quality Control (QA/QC) for Bio-Medical provides guidance in the following areas: 1) understanding the importance and underlying principles of QA/QC; 2) developing a cost-effective, risk-managed QA/QC strategy for products through the different phases of clinical development and into commercialization; 3) handling biosafety, potency, and impurity profile issues for

biologic/biopharmaceutical products; 4) setting appropriate and meaningful product specifications and expiration dates; 5) managing manufacturing process changes; 6) identifying pressures on QA/QC groups today; and 7) meeting FDA's/ISO's expectations for the role of Quality Systems.

F. Good Manufacturing Practices (GMP) Principles 30 hours

The goal is to teach how to apply the knowledge gained about GMP regulations to institutions that are either trying to develop clinical trial materials or commercial product for treatment to assure compliance. Teaching the foundation of current Good Manufacturing Practices and similar legislative edicts in other countries that are applied to Chemistry Manufacturing and Controls (CMC) in the biotechnology, pharmaceutical and nutritional supplement industries should provide that knowledge base.

G. Advanced Lab Skills 30 hours

Content covers the continued or advanced principles and procedures performed in the laboratory. Apprentices continue development in additional or advanced laboratory equipment, following safety precautions. Topics may include general laboratory skills, guidelines, government regulations, safety, quality assurance/control and professional standards and conduct.

Total RSI Hours: 144 hours

In-School Youth Only

In-School Youth participating in this apprenticeship program must complete two phases (if applicable, see below).

Phase I - RSI

Complete 144 hours of related and supplemental instruction (RSI). Should the Division of Apprenticeship Standards or California Department of Education develop a certificate (or comparable) and recognize and approve this portion of the apprenticeship as an in-school youth program, a certificate will be issued for the completion of Phase I.

Phase II - RSI

N/A. All related and supplemental instruction (RSI) is to be completed in Phase I.

ARTICLE V Ratio

The ratio of apprentices to professional workers shall be:

1) Ratio #1: Each professional worker may supervise one (1) apprentice(s)

DAS FILE # 100634

Attachment B-5a

Training Schedule and Working Conditions

South Bay Workforce Investment Board (SBWIB)

Occupation

Occupation: Bio Medical Quality Assurance Specialist 2y
O*Net Code: 11-3051.01

Article I Term of Apprenticeship and Probation

The standard term of apprenticeship shall be competency-based with 288 related and supplemental instruction (RSI) hours and completed within approximately 24 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 six (6) months.

Article II Wage Schedule

Professional Worker Wage:

$ 21.00 per hour effective 2/6/2025.

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:

In-School Youth Apprentice Schedule

In-School Youth apprentices must be compensated at or above 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. Upon completion of high school, In-School Youth apprentices must be compensated at or above the wage schedules shown in the Out-of-School Youth and Non-Youth Apprentice section of these Standards.

To advance from one period to the next, In-School Youth apprentices shall have met the following requirements for no less than the wages stated below:

Entry Wage $16.50 / hour**

Exit Wage Entry wage + $1.00 / hour*

Out-of-School Youth and Non-Youth Apprentice Schedule

All apprentices participating in the program while not enrolled in High School must be compensated at or above the wage scales shown below.

Counties	Entry Wage	Exit Wage
Alameda, Marin, San Mateo, Santa Clara, and San Francisco	$20.50	$21.50
Contra Costa	$20.21	$21.21
Los Angeles	$19.30	$20.30
Orange	$18.76	$19.76
San Diego	$18.94	$19.94
All Other Counties	$18.45	$19.45

* All mention of previous wage periods reference the current appropriate rate for that period and not necessarily the rate reflected in these Standards at the time of approval.

** References to specific minimum wages use the CA State minimum wage as a general example. All employers must pay the appropriate wages for the type of work and area where the job is being performed. See https://www.dir.ca.gov/dlse/minimum_wage.htm for details.

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:

Work Processes Outline and 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.

A. Environmental, Health & Safety

1. Recognize and report potential hazards in workplace before and during each shift. Provide inspection before and after shift if required by employer.
2. Wear appropriate personal protective equipment, including clothing footwear, head protection, eye protection and gloves
3. Adhere to the emergency procedures for spills, fire injuries and other incidents, including bloodborne pathogens.
4. Identify the location of first aid kits, emergency showers, eyewash stations, fire extinguishers and spill cleanup materials and how to use them
5. Read and interpret the material safety data sheets for any hazardous products used and follow any recommended precautions
6. Maintain a clean and orderly workplace, storing hazardous materials properly and disposing of waste products according to company policies and local/federal laws and regulations
7. Use, store and maintain hand-tools properly to eliminate trip hazards, injury, electrocution or damage
8. Adhere to safety rules for an individual’s facility
9. As relevant to facility, ensure confined space procedures are followed according to site specifications and jurisdictional regulations
10. Recognize, plan and organize layout and work for ergonomic problems

B. Biomedical Quality Requirements

1. Adhere to regulatory laws and requirements (i.e., FDA, U.S. Requirements, EU MDR, Health Canada, other International Agencies)
2. Adhere to standards for International quality systems (i.e., ISO 9001, ISO 13485, ISO 17025)

C. Quality concepts and tools

Adhere to and enforce quality system requirements (i.e., management responsibility, design controls, document and record control, purchasing and controls and acceptance activities, identification and traceability, production and process controls, inspection measuring and testing equipment, nonconforming product, corrective and preventative action, product handling, storage, distribution and installation, complaint files, servicing, statistical techniques, and post market surveillance).Quality Concepts and Tools

1. Adhere to quality plan documentation and reporting requirements mandated by laws, regulations and accrediting standards, as well as guidelines of relevant governmental and non-governmental agencies
2. Validate correlation between quality manuals, procedures, and work instructions.
3. Adhere to requirements surrounding configuration management for quality system documentation
4. Conduct internal and external audits, product, process, and systems audits, and first-, second-, and third-party audits
5. Identify, interpret, analyze, and draw conclusions based upon quality tools (i.e., pareto charts, cause and effect diagrams, flowcharts, statistical process control (SPC) charts, check sheets, scatter diagrams, histograms, root cause analysis, plan-do-check-act (PDCA), setting alert and action levels, 5 whys, Is/Is Not)
6. Apply Lean tools and processes which may include set-up time reduction, pull (just-in-time, Kanban), 5S, continuous flow, value stream, poka-yoke, total productive/predictive maintenance (TPM) to reduce waste in areas of cost, inventory, labor and distance
7. Use scheduling and monitoring project management tools (i.e., gantt charts, program evaluation and review technique and critical path method)

D. Data Collection and Analysis

1. Assemble and install wiring and components according to NEC requirements, drawings, and specifications
2. Use lab equipment which may include, but not limited to autoclaves/sterilization products, balances and scales, bottle top dispensers, HPLC, UPLC, mass spectrometers, centrifuges, colorimeters/turbidity meters, conductivity meters and controllers, desiccators, dissolved oxygen meters, electrical meters, filtration equipment, environmental and weather monitoring equipment, flowmeters, fume hoods, general laboratory equipment and glassware, homogenizers, hotplates/stirrers, hydrometers, hygrometers and barometer, incubators, jar testing equipment, light and sound meters, microscopes, orbital shakers, pH/ORP/ISE meters/controllers, pipettors, polarimeters, refractometers, temperature control baths, thermometers, vacuum pumps, vortex mixers, and water analysis equipment
3. Calibrate and label laboratory test equipment to meet requirements

4. Perform and monitor quality control indicators recognizing factors that affect procedures and results, take appropriate action within predetermined limits when corrections are indicated, and notify the chain of command, when needed
5. Apply principles of quality assurance and performing measurements to assure validity and accuracy of laboratory data generated
6. Use data obtained from lab equipment to construct graphs, and judge the accuracy and precision of results
7. Perform calculations interpret measures of central tendency (mean, median, mode) and measures of dispersion (standard deviation, range, variance)
8. Identify frequency distributions and potential skewed distributions of data
9. Apply concepts to predict probability and reliability of data
10. Determine if sampling plans are based on risk and statistically valid rationale

E. Customer – Supplier Relations

1. Apply strategies and techniques for communicating and working with internal, external and suppliers
2. Apply tools used to gather customer feedback (i.e. surveys, complaint forms, warranty analysis)
3. Apply validation and qualification methods for the approval of products and processes
4. Evaluate supplier key performance measures (quality, price, delivery, level of service)
5. Evaluate supplier common metrics (defect rates, functional performance, timeliness, responsiveness, technical support)
6. Apply proper practices for material identification, status and traceability of products
7. Use various methods to segregate nonconforming materials according to procedures

F. Corrective and Preventative Actions

1. Apply key elements of the corrective action process (identify the problem, contain the problem, determine the cause(s) of the problem, propose solutions to eliminate or prevent their recurrence, verify solutions are implemented and confirm their effectiveness)
2. Apply key elements of a preventative action process (track data trends/patterns, use failure mode and effects analysis (FMEA), review product/process monitoring reports, study the process to identify potential failures/defects/deficiencies, improve the process (error-proofing/procedural changes), verify changes are made and confirm their effectiveness)

G. Biomedical Technical Knowledge

1. Apply principles of academic specialization areas which may include chemistry, biology, physics and natural sciences to perform job duties
2. Apply principles of risk management, including risk analysis, evaluation, control, benefit-risk analysis, and the incorporation of production and post-production information
3. Evaluate company-specific biomedical controls against product/process

requirements (i.e., design, software, labeling, controlled environments and utilities, sterile medical devices, laboratory testing, product/process validation, reprocessing/reuse/cleaning of medical devices)

4. Apply new and evolving standards to product and process quality management systems

In addition to mastering all the essential technical competencies outlined in the work processes, an apprentice must consistently demonstrate, at an acceptable level, the following behavioral competencies to complete the apprenticeship. Additional behavioral competencies may be added or exchanged that are specific to the work site and will be identified in the Employer Acceptance Agreement.

1. Participate and in team discussions/meetings
2. Seek constant improvement in work processes and techniques
3. Perform satisfactory independent work
4. Express openness to new ideas and change
5. Deal with ambiguity by exploring, asking questions, etc.
6. Know when to ask for help
7. Demonstrate excellent communication skills
8. Demonstrate effective one-on-one communication skills
9. Maintain an acceptable attendance record
10. Report to work on time
11. Organize, multitask and work in a fast-paced deadline-driven work environment
12. Complete assigned tasks on time and independently
13. Use appropriate language
14. Demonstrate respect for co-workers and supervisors
15. Demonstrate trust, honesty and integrity
16. Request and perform work assignments without prompting
17. Troubleshoot and resolve problems
18. Work under pressure and time constraints while maintaining a high level of work quality
19. Care appropriately for personal dress, grooming and hygiene
20. Maintain a positive attitude
21. Cooperate with and assists co-workers
22. Follow instructions/directions
23. Work under supervision
24. Accept constructive feedback and criticism
25. Follow safety rules
26. Take care of equipment and workplace
27. Keep work area neat and clean
28. Meet supervisor's work standards
29. Prevent interference of personal life with work
30. Adhere to work policies/rules/regulations
31. Adapt effectively to change
32. Learn and apply new procedures and techniques

In-School Youth Only

In-School Youth participating in this apprenticeship program must complete two phases (if applicable, see below).

Phase I - OJT

Completion of at least 300 hours of paid on-the-job training (OJT).

Should the Division of Apprenticeship Standards or California Department of Education develop a certificate (or comparable) and recognize and approve this portion of the apprenticeship as an in-school youth program, a certificate will be issued for the completion of Phase I.

Phase II - OJT

Completion of all remaining competencies of the apprenticeship program.

ARTICLE IV Related Instruction

Apprentices shall satisfactorily complete prescribed courses of related and supplemental instruction, which will not be less than 288 hours per year. Related and supplemental instruction will be provided by West Los Angeles College.

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

Year One

A. General Safety Training **8 hours**

Content fosters a safer work environment and reduces the likelihood of injuries, property damage, hazardous materials releases, etc. Documented safety training in the following subject areas may be required through regulatory agencies. The following list includes a recommended list of safety topics, but employers may require alternative and/or additional training, per regulation.

- Injury & Illness Prevention Program
- Fume hoods
- Chemical Hygiene Plan
- Regulated Carcinogens
- Personal Protective Equipment
- Bloodborne Pathogens
- Aerosol Transmittable Diseases
- Emergency Action Plan
- Fire Extinguishers
- Material Safety Data Sheets

- Hazardous Waste Operations & Emergency Response
- Heat Stress
- Laser Equipment
- Control of Hazardous Energy
- Respiratory Protection Permissible Exposure Limits
- Confined Spaces
- Workplace Ergonomics
- Lock-Out/Tag-Out (LOTO)
- Rigging and Lifting

B. Laboratory Safety Fundamentals Training 16 hours

Content provides an overview of laboratory safety requirements and is required by all laboratory personnel. Documented safety training in the following subject areas may be required through regulatory agencies. The following list includes a minimum list of safety topics, but employers may require additional training, per regulation.

- Laboratory Emergency Procedures
- Engineering Controls (i.e., chemical fume hoods, biological safety cabinets, chemical storage locations, etc.)
- Administrative Controls (i.e., laboratory safety manual, SDS sheets, SOPs, chemical and hazard identification, etc.)
- Personal Protective Equipment (i.e., lab coat, eye protection, gloves, etc.)
- Waste Disposal (location, proper labeling, proper storage requirements, proper shipping process)
- Other Safety Laboratory-Specific Procedures (i.e., UV light, laser, safe use of specialized equipment, high voltage equipment, confined space, etc.)

C. Oral and Interpersonal Communication 8 hours

Content focuses on developing various communication skills including speaking and listening. Apprentices should practice intrapersonal/interpersonal and nonverbal communication skills through oral presentations, group activities and written projects.

D. Applied Mathematics 22 hours

Content is designed to cover concepts in such related mathematics as algebra, function analysis, and trigonometry. Topics may include exponential and logarithmic functions, transformations of functions, Law of Sines, Law of Cosines, vectors, and statistics. Upon completion, students should be able to demonstrate the ability to use mathematics and technology for problem-solving, analyzing and communicating results.

E. Introduction to Bio-Medical Quality Assurance 30 hours

An introductory course in Quality Assurance/Quality Control (QA/QC) for Bio- Medical provides guidance in the following areas: 1) understanding the importance and underlying principles of QA/QC; 2) developing a cost-effective, risk-managed QA/QC

strategy for products through the different phases of clinical development and into commercialization; 3) handling biosafety, potency, and impurity profile issues for biologic/biopharmaceutical products; 4) setting appropriate and meaningful product specifications and expiration dates; 5) managing manufacturing process changes; 6) identifying pressures on QA/QC groups today; and 7) meeting FDA's/ISO's expectations for the role of Quality Systems.

F. Good Manufacturing Practices (GMP) Principles 30 hours

The goal is to teach how to apply the knowledge gained about GMP regulations to institutions that are either trying to develop clinical trial materials or commercial product for treatment to assure compliance. Teaching the foundation of current Good Manufacturing Practices and similar legislative edicts in other countries that are applied to Chemistry Manufacturing and Controls (CMC) in the biotechnology, pharmaceutical and nutritional supplement industries should provide that knowledge base.

G. Advanced Lab Skills 30 hours

Content covers the continued or advanced principles and procedures performed in the laboratory. Apprentices continue development in additional or advanced laboratory equipment, following safety precautions. Topics may include general laboratory skills, guidelines, government regulations, safety, quality assurance/control and professional standards and conduct.

Year One Total Hours: 144 hours

<u>Year Two</u>

Apprentices must complete the CORE COURSE WORK shown above and, in addition, 144 hours of the following AS ASSIGNED courses will be determined by the employer. If any additional courses are requested by the employer, the course will be assigned upon agreement by the apprentice, the program and the employer.

H. Refresher Safety Training 20 hours

Content focuses on the study of codes, standards and management principles related to biomedical instrumentation, with emphasis on the proper use and application of safety test equipment, preventive maintenance procedures, and documentation of work performed.

I. Good Documentation Practices 45 hours

Fundamental principles and techniques required to write GMP procedures. Students will learn techniques to write and improve GMP documentation to ensure compliance

with regulatory documentation. Topics may include and are not limited to: Document Hierarchy, Document Pyramid; SOPs; Document Control; Laboratory notebook; Data Integrity and Compliance; and Auditing Practices.

J. Applied Statistics and Process Validation **30 hours**

Content presents the statistics essentials for the non-statistician involved in testing product. Topics may include and are not limited to: study designs, hypothesis testing, sample size calculations, assumptions, controls, endpoints, data management principles, data presentations and analysis plans, methods for analysis, and conclusions.

K. Integrating Risk Management into your Quality System **30 hours**

Content provides an in-depth understanding of risk how risk management is linked to other quality management related process; which links need to be put in place in order to maximize the effectiveness of the risk management process and the quality management system.

L. Troubleshooting **30 hours**

Content introduces the principles of troubleshooting and logical diagnosis by using critical thinking skills to define, analyze, and implement a solution.

M. Introduction to Ethics **15 hours**

Content provides a basic understanding of ethical theories and uses diverse ethical perspectives to analyze and compare relevant issues. Apprentices should critically evaluate individual, social and/or professional standards of behavior and apply a systematic decision-making process to these situations.

N. Project Management Essentials **45 hours**

Content will explain how to define, plan and execute a project whether your goal is simple or complex. Gain the tools and knowledge for delivering projects on time and on budget, while meeting performance specifications. Explore the basic components of project management and the project life cycle which may include: determining the correct project through strategic portfolio analysis; creating a successful charter; assembling and managing a team; analyzing and controlling risk; monitoring project milestones; and closing out the project.

O. Auditing Fundamentals **45 hours**

Content is designed to provide quality practitioners, managers, professionals, auditors, and improvement team members with an understanding of auditing process steps and requirements and the basic quality tools and techniques to conduct and report the results of an audit.

P. General Anatomy & Physiology **30 hours**

This course examines basic concepts of human anatomy and physiology as they relate to health sciences. Using a body systems approach, the course emphasizes the interrelationships between structure and function at the gross and microscopic levels of organization of the entire human body.

Q. Molecular Diagnostics **60 hours**

Content introduces the principles and application of molecular diagnostics in the clinical laboratory.

R. Fundamentals of Chemistry **60 hours**

Content introduces concepts which may include and are not limited to: dimensional analysis, mole concept, atomic and molecular structure, nomenclature, chemical reactions, thermochemistry, intermolecular interactions, gases, mixtures, kinetics, equilibrium and acid base chemistry.

S. Introduction to Biochemistry **60 hours**

Content provides the skills and knowledge for organic and biological chemistry. Emphasis is on recognizing the structure, physical properties and chemical reactions of organic molecules, body fluids, and acids. Additional emphasis is placed on biological functions and their relationships to enzymes, proteins, lipids, carbohydrates and DNA.

T. Microbiology **60 hours**

Content examines microbial structure, metabolism, genetics, growth, and the relationship between humans and microorganisms. The content addresses disease production, epidemiology, host defense mechanisms and the medical impact of microbes. Apprentices will examine the role of microbes in the environment, industry and biotechnology.

U. Clinical Chemistry **60 hours**

Content introduces clinical chemistry techniques and procedures for routine analysis using photometric, potentiometric and separation techniques. Topics in this course may include and not limited to: pathophysiology and methodologies for carbohydrate, lipids, proteins, renal function and blood gas analysis.

V. Clinical Microbiology **60 hours**

Content presents the clinical importance of infectious diseases with emphasis upon the appropriate collection, handling and identification of clinically relevant bacteria. Disease states, modes transmission and methods of prevention and control, including antibiotic susceptibility testing, may be discussed.

W. Advanced Microbiology **60 hours**

Content provides an overview of acid-fast organisms, fungi, parasites, and anaerobic bacteria. The organisms, their pathophysiology, epidemiology, the diseases and conditions that they cause, laboratory methods of handling, culturing and identification will be discussed.

Year Two Total Hours:	**144 hours**
Year One Total Hours:	**144 hours**
Total RSI Hours Required:	**288 hours**

In-School Youth Only

In-School Youth participating in this apprenticeship program must complete two phases (if applicable, see below).

Phase I - RSI

Complete 144 hours of related and supplemental instruction (RSI). Should the Division of Apprenticeship Standards or California Department of Education develop a certificate (or comparable) and recognize and approve this portion of the apprenticeship as an in-school youth program, a certificate will be issued for the completion of Phase I.

Phase II - RSI

Completion of all remaining related and supplemental instruction (RSI) of the apprenticeship program.

ARTICLE V Ratio

The ratio of apprentices to professional workers shall be:

1) Ratio #1: Each professional worker may supervise one (1) apprentice(s)

DAS FILE # 100634

Attachment B-6
Training Schedule and Working Conditions

South Bay Workforce Investment Board (SBWIB)

Occupation

Occupation: Aerospace Systems Assembler
O*Net Code: 51-2011.00

Article I Term of Apprenticeship and Probation

The standard term of apprenticeship shall be competency-based with 144 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:

$ 21.00 per hour effective 2/6/2025.

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:

In-School Youth Apprentice Schedule

In-School Youth apprentices must be compensated at or above 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. Upon completion of high school, In-School Youth apprentices must be compensated at or above the wage schedules shown in the Out-of-School Youth and Non-Youth Apprentice section of these Standards.

To advance from one period to the next, In-School Youth apprentices shall have met the following requirements for no less than the wages stated below:

Entry Wage $16.50 / hour**

Exit Wage Entry wage + $1.00 / hour*

Out-of-School Youth and Non-Youth Apprentice Schedule

All apprentices participating in the program while not enrolled in High School must be compensated at or above the wage scales shown below.

Counties	Entry Wage	Exit Wage
Alameda, Marin, San Mateo, Santa Clara, and San Francisco	$20.50	$21.50
Contra Costa	$20.21	$21.21
Los Angeles	$19.30	$20.30
Orange	$18.76	$19.76
San Diego	$18.94	$19.94
All Other Counties	$18.45	$19.45

* All mention of previous wage periods reference the current appropriate rate for that period and not necessarily the rate reflected in these Standards at the time of approval.

** References to specific minimum wages use the CA State minimum wage as a general example. All employers must pay the appropriate wages for the type of work and area where the job is being performed. See https://www.dir.ca.gov/dlse/minimum_wage.htm for details.

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:

Work Processes Outline and 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.

A. Technical:

1. Perform operations to assist with assembling and making major assembly structures such as, panels and structural subassemblies
2. Work from diagrams and drawings, make initial layouts, and use hand and/or power tools, jigs, and saws
3. Align parts on jigs using templates and fixtures
4. Perform minor part-fitting operations such as drilling, reaming and installation of fasteners
5. Measure parts with micrometers and calipers to verify dimensions and calibrated equipment
6. Monitor and verify quality in accordance with statistical process or other control procedures with team members
7. Detect errors easily and quickly and bring issues to team members to be corrected, resulting in minor disruption or expense to correct
8. Communicate with immediate work unit member for obtaining or providing information requiring brief explanation or interpretation
9. Perform production assembly operations with minimal supervision on electronic and/or mechanical assemblies and subassemblies such as modules, boards, panels, drawers, frames, and cables
10. Make continuity checks on work in process and completed for assembler's own work
11. Conduct quality inspections on processing line in accordance with quality specifications (only at sites utilizing self-inspection system)

12. Understand general and detailed aspects of the job through detailed verbal and written work instructions, with constant checking on assembler's own work performance
13. Communicate with assigned lead about daily constraints, pressure or enhancement opportunities

In addition to mastering all the essential technical competencies outlined in the work processes, an apprentice must consistently demonstrate, at an acceptable level, the following behavioral competencies to complete the apprenticeship. Additional behavioral competencies may be added or exchanged that are specific to the work site and will be identified in the Employer Acceptance Agreement.

1. Participate and in team discussions/meetings
2. Seek constant improvement in work processes and techniques
3. Perform satisfactory independent work
4. Express openness to new ideas and change
5. Deal with ambiguity by exploring, asking questions, etc.
6. Know when to ask for help
7. Demonstrate excellent communication skills
8. Demonstrate effective one-on-one communication skills
9. Maintain an acceptable attendance record
10. Report to work on time
11. Organize, multitask and work in a fast-paced deadline-driven work environment
12. Complete assigned tasks on time and independently
13. Use appropriate language
14. Demonstrate respect for co-workers and supervisors
15. Demonstrate trust, honesty and integrity
16. Request and perform work assignments without prompting
17. Troubleshoot and resolve problems
18. Work under pressure and time constraints while maintaining a high level of work quality
19. Care appropriately for personal dress, grooming and hygiene
20. Maintain a positive attitude
21. Cooperate with and assists co-workers
22. Follow instructions/directions
23. Work under supervision
24. Accept constructive feedback and criticism
25. Follow safety rules
26. Take care of equipment and workplace
27. Keep work area neat and clean
28. Meet supervisor's work standards
29. Prevent interference of personal life with work
30. Adhere to work policies/rules/regulations
31. Adapt effectively to change
32. Learn and apply new procedures and techniques

In-School Youth Only

In-School Youth participating in this apprenticeship program must complete two phases (if applicable, see below).

Phase I - OJT

Completion of at least 300 hours of paid on-the-job training (OJT).

Should the Division of Apprenticeship Standards or California Department of Education develop a certificate (or comparable) and recognize and approve this portion of the apprenticeship as an in-school youth program, a certificate will be issued for the completion of Phase I.

Phase II - OJT

Completion of all remaining competencies of the apprenticeship program.

ARTICLE IV Related Instruction

Apprentices shall satisfactorily complete prescribed courses of related and supplemental instruction, which will not be less than 144 hours per year. Related and supplemental instruction will be provided by West Los Angeles College.

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

A. Apprenticeship Orientation 8 hours

This course will prepare an apprentice for the requirements of participating in and completing their apprenticeship, including topics such as:

- Record keeping of related instruction classes and on-the-job learning experiences
- Professional communication
- Time management
- Goal setting
- Supervisor interaction preparation
- Building strong relationships, feedback, and tough conversations
- Workplace conflict, and workplace safety and ergonomics

B. Shop Procedures 14 hours

This course will prepare an apprentice to understand operation procedures and protocol to be in alignment with our contractual agreements/commitments. Topics may include:

- Attendance
- Time keeping
- Expectations
- Constraints
- Deliverables

C. Manufacturing Accountability **20 hours**

This course will prepare an apprentice to learn the areas of importance of what they will be accountable for when working on the shop floor. Topics may include:

- Quality
- Schedule
- Rate
- Efficiency
- Foreign Object Debris (FOD)
- 5S

D. Computer Based Trainings **10 hours**

This course will prepare an apprentice with basic knowledge of aerospace compliance. Topics may include:

- Aircraft safety
- Electrostatic discharge
- Stamp verification
- Hazardous communication
- Respiratory protection
- F.O.E./Factory accountability

E. Manufacturing Process Awareness and Quality **20 hours**

This course will prepare an apprentice for all the step functions of operations, support groups, resources, and constraints. Topics may include:

- Material Review Board (MRB)
- Part shortages
- Manufacturing Execution System (MES)
- Process Work Instructions (PWI)
- Defect Identification
- Defect Documentation
- High drivers
- Quality trends
- Defect escapes

F. Tool Familiarization / Composite Handling **20 hours**

This course will teach an apprentice how to operate, maintain and identify the proper techniques and function of tools, material, and equipment. Topics may include:

- Tool recognition
  - Tool usage
  - Tool maintenance
  - Tool repair
  - Missing/Lost tools (modified tools/shop aids)
- Inspection techniques
- Measuring techniques
- Material handling (composite, aluminum, titanium)
- Part protection

- Part handling
- Part storages

G. Environmental, Health and Safety **12 hours**

This course will cover the environmental health and safety concepts. Topics may include:

- Personal Protection Equipment (PPE)
- Hazardous materials
- Injury prevention
- Emergency protocols
- Ergonomics

Total Core Hours: 104 hours

Apprentices must complete the CORE COURSE WORK shown above and, in addition, one (1) of the following AS ASSIGNED courses will be determined by the employer. If any additional courses are requested by the employer, the course will be assigned upon agreement by the apprentice, the program and the employer.

H. Advanced Structures **40 hours**

This course will teach an apprentice to properly perform the installation of aircraft components and assemblies, including authorized repairs, in accordance with all applicable safety and process standards. Topics may include:

- Hole location and drilling
- Close tolerance hole drilling
- Nutplate installation
- Shimming (Hard / Liquid)
- Peening
- Dimpling
- Cold working
- Bearing installation
- Safety wire / cable
- Countersinking
- Sealing
- Identification and installation of fasteners

I. Composites Fabrication **40 hours**

This course will teach an apprentice familiarization of aircraft composite manufacturing, component installation, and performance of minor repairs. Topics may include:

- Lay-up
- Vacuum bagging
- Surface prep and tape
- Manufacturing of composite components/parts
- Composite repairs

J. Coatings Application **40 hours**

This course will teach an apprentice to properly prepare and apply various surface coatings in accordance with all safety and environmental requirements. Topics may include:

- Surface prep and tape
- Fairing
- Coating prep
- Environmental controls
- Mixing
- HVLP usage

K. Systems **40 hours**

This course will teach an apprentice to properly perform correct routing and installation of hydraulic and pneumatic assemblies, including installation of various fittings. Topics may include:

- Cleanliness and contamination limits
- Identification and marking
- Torquing
- Swaging
- Clamping
- Safety wiring
- Maintaining proper clearances

Total *Core* Hours:	**104 hours**
Total *As Assigned* Hours:	**40 hours**
Total RSI Hours:	**144 hours**

In-School Youth Only

In-School Youth participating in this apprenticeship program must complete two phases (if applicable, see below).

Phase I - RSI

Complete 144 hours of related and supplemental instruction (RSI). Should the Division of Apprenticeship Standards or California Department of Education develop a certificate (or comparable) and recognize and approve this portion of the apprenticeship as an in-school youth program, a certificate will be issued for the completion of Phase I.

Phase II - RSI

N/A. All related and supplemental instruction (RSI) is to be completed in Phase I.

ARTICLE V Ratio

The ratio of apprentices to professional workers shall be:

1) Ratio #1: Each professional worker may supervise three (3) apprentice(s)

DAS FILE # 100634

Attachment B-7
Training Schedule and Working Conditions

South Bay Workforce Investment Board (SBWIB)

Occupation

Occupation: Aerospace Systems Technician
O*Net Code: 17-3021.00

Article I Term of Apprenticeship and Probation

The standard term of apprenticeship shall be competency-based with 224 related and supplemental instruction (RSI) hours and completed within approximately 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:

$ 21.00 per hour effective 2/6/2025.

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:

In-School Youth Apprentice Schedule

In-School Youth apprentices must be compensated at or above 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. Upon completion of high school, In-School Youth apprentices must be compensated at or above the wage schedules shown in the Out-of-School Youth and Non-Youth Apprentice section of these Standards.

To advance from one period to the next, In-School Youth apprentices shall have met the following requirements for no less than the wages stated below:

Entry Wage $16.50 / hour**

Exit Wage Entry wage + $1.00 / hour*

Out-of-School Youth and Non-Youth Apprentice Schedule

All apprentices participating in the program while not enrolled in High School must be compensated at or above the wage scales shown below.

Counties	Entry Wage	Exit Wage
Alameda, Marin, San Mateo, Santa Clara, and San Francisco	$20.50	$21.50
Contra Costa	$20.21	$21.21
Los Angeles	$19.30	$20.30
Orange	$18.76	$19.76
San Diego	$18.94	$19.94
All Other Counties	$18.45	$19.45

* All mention of previous wage periods reference the current appropriate rate for that period and not necessarily the rate reflected in these Standards at the time of approval.

** References to specific minimum wages use the CA State minimum wage as a general example. All employers must pay the appropriate wages for the type of work and area where the job is being performed. See https://www.dir.ca.gov/dlse/minimum_wage.htm for details.

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:

Work Processes Outline and 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.

A. Technical:

1. Perform operations to lead assembling processes and make major assembly structures such as, panels and structural subassemblies across multiple disciplines
2. Work from diagrams and drawings, make initial layouts, and use hand and/or power tools, jigs, and saws across multiple disciplines
3. Align parts on jigs using templates and fixtures
4. Perform minor part-fitting operations such as drilling, reaming and installation of fasteners
5. Measure parts with micrometers and calipers to verify dimensions and calibrated equipment across multiple disciplines
6. Monitor and verify quality independently across multiple disciplines in accordance with statistical process or other control procedures
7. Detect errors across multiple disciplines easily and quickly and independently correct such errors resulting in minor disruption or expense to correct
8. Communicate with immediate work unit member for obtaining or providing information requiring little-to-no explanation or interpretation
9. Perform production assembly operations independently on electronic and/or mechanical assemblies and subassemblies such as modules, boards, panels, drawers, frames, and cables across multiple disciplines
10. Make continuity checks on work in process and completed for technician’s own work and others’ work

11. Conduct quality inspections on processing line across multiple disciplines in accordance with quality specifications (only at sites utilizing self-inspection system)
12. Ability to teach general and detailed aspects of the job through detailed verbal and written work instructions, with constant checking on technician's own and other team members' work performance
13. Communicate with assigned lead about daily constraints, pressure or enhancement opportunities.

In addition to mastering all the essential technical competencies outlined in the work processes, an apprentice must consistently demonstrate, at an acceptable level, the following behavioral competencies to complete the apprenticeship. Additional behavioral competencies may be added or exchanged that are specific to the work site and will be identified in the Employer Acceptance Agreement.

1. Participate and in team discussions/meetings
2. Seek constant improvement in work processes and techniques
3. Perform satisfactory independent work
4. Express openness to new ideas and change
5. Deal with ambiguity by exploring, asking questions, etc.
6. Know when to ask for help
7. Demonstrate excellent communication skills
8. Demonstrate effective one-on-one communication skills
9. Maintain an acceptable attendance record
10. Report to work on time
11. Organize, multitask and work in a fast-paced deadline-driven work environment
12. Complete assigned tasks on time and independently
13. Use appropriate language
14. Demonstrate respect for co-workers and supervisors
15. Demonstrate trust, honesty and integrity
16. Request and perform work assignments without prompting
17. Troubleshoot and resolve problems
18. Work under pressure and time constraints while maintaining a high level of work quality
19. Care appropriately for personal dress, grooming and hygiene
20. Maintain a positive attitude
21. Cooperate with and assists co-workers
22. Follow instructions/directions
23. Work under supervision
24. Accept constructive feedback and criticism
25. Follow safety rules
26. Take care of equipment and workplace
27. Keep work area neat and clean
28. Meet supervisor's work standards
29. Prevent interference of personal life with work
30. Adhere to work policies/rules/regulations
31. Adapt effectively to change
32. Learn and apply new procedures and techniques

In-School Youth Only

In-School Youth participating in this apprenticeship program must complete two phases (if applicable, see below).

Phase I - OJT

Completion of at least 300 hours of paid on-the-job training (OJT).

Should the Division of Apprenticeship Standards or California Department of Education develop a certificate (or comparable) and recognize and approve this portion of the apprenticeship as an in-school youth program, a certificate will be issued for the completion of Phase I.

Phase II - OJT

Completion of all remaining competencies of the apprenticeship program.

ARTICLE IV Related Instruction

Apprentices shall satisfactorily complete prescribed courses of related and supplemental instruction, which will not be less than 224 hours per year. Related and supplemental instruction will be provided by West Los Angeles College .

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

A. Apprenticeship Orientation 8 hours

This course will prepare an apprentice for the requirements of participating in and completing their apprenticeship, including topics such as:

- Record keeping of related instruction classes and on-the-job learning experiences
- Professional communication
- Time management
- Goal setting
- Supervisor interaction preparation
- Building strong relationships, feedback, and tough conversations
- Workplace conflict, and workplace safety and ergonomics

B. Shop Procedures 14 hours

This course will prepare an apprentice to understand operation procedures and protocol to be in alignment with our contractual agreements/commitments. Topics may include:

- Attendance
- Time keeping
- Expectations
- Constraints
- Deliverables

C. Manufacturing Accountability **20 hours**

This course will prepare an apprentice to learn the areas of importance of what they will be accountable for when working on the shop floor. Topics may include:

- Quality
- Schedule
- Rate
- Efficiency
- Foreign Object Debris (FOD)
- 5S

D. Computer Based Trainings **10 hours**

This course will prepare an apprentice with basic knowledge of aerospace compliance. Topics may include:

- Aircraft safety
- Electrostatic discharge
- Stamp verification
- Hazardous communication
- Respiratory protection
- F.O.E./Factory accountability

E. Manufacturing Process Awareness and Quality **20 hours**

This course will prepare an apprentice for all the step functions of operations, support groups, resources, and constraints. Topics may include:

- Material Review Board (MRB)
- Part shortages
- Manufacturing Execution System (MES)
- Process Work Instructions (PWI)
- Defect Identification
- Defect Documentation
- High drivers
- Quality trends
- Defect escapes

F. Tool Familiarization / Composite Handling **20 hours**

This course will teach an apprentice how to operate, maintain and identify the proper techniques and function of tools, material, and equipment. Topics may include:

- Tool recognition
  - Tool usage
  - Tool maintenance
  - Tool repair
  - Missing/Lost tools (modified tools/shop aids)
- Inspection techniques
- Measuring techniques
- Material handling (composite, aluminum, titanium)
- Part protection

- Part handling
- Part storages

G. Environmental, Health and Safety **12 hours**

This course will cover the environmental health and safety concepts. Topics may include:

- Personal Protection Equipment (PPE)
- Hazardous materials
- Injury prevention
- Emergency protocols
- Ergonomics

Total Core Hours: 104 hours

Apprentices must complete the CORE COURSE WORK shown above and, in addition, three (3) of the following AS ASSIGNED courses will be determined by the employer. If any additional courses are requested by the employer, the course will be assigned upon agreement by the apprentice, the program and the employer.

H. Advanced Structures **40 hours**

This course will teach an apprentice to properly perform the installation of aircraft components and assemblies, including authorized repairs, in accordance with all applicable safety and process standards. Topics may include:

- Hole location and drilling
- Close tolerance hole drilling
- Nutplate installation
- Shimming (Hard / Liquid)
- Peening
- Dimpling
- Cold working
- Bearing installation
- Safety wire / cable
- Countersinking
- Sealing
- Identification and installation of fasteners

I. Composites Fabrication **40 hours**

This course will teach an apprentice familiarization of aircraft composite manufacturing, component installation, and performance of minor repairs. Topics may include:

- Lay-up
- Vacuum bagging
- Surface prep and tape
- Manufacturing of composite components/parts
- Composite repairs

J. Coatings Application **40 hours**

This course will teach an apprentice to properly prepare and apply various surface coatings in accordance with all safety and environmental requirements. Topics may include:

- Surface prep and tape
- Fairing
- Coating prep
- Environmental controls
- Mixing
- HVLP usage

K. Systems **40 hours**

This course will teach an apprentice to properly perform correct routing and installation of hydraulic and pneumatic assemblies, including installation of various fittings. Topics may include:

- Cleanliness and contamination limits
- Identification and marking
- Torquing
- Swaging
- Clamping
- Safety wiring
- Maintaining proper clearances

L. Electrical Systems **40 hours**

This course will teach an apprentice to properly perform routing and installation of electrical/fiber optic components and assemblies in accordance with all applicable processes and procedures. Topics may include:

1. Make continuity checks on work in process and completed
2. Fabrication and installation
3. Identification and marking
4. Crimping
5. Interconnecting cables
6. Harness wiring and mating
7. Wire stripping
8. Routing techniques
9. Spot tie
10. Clamping
11. Soldering methods
12. Fiber Optic handling
13. Pinning / Depinning

Total *Core* Hours: **104 hours**

Total *As Assigned* Hours: **120 hours**

Total RSI Hours: **224 hours**

In-School Youth Only

In-School Youth participating in this apprenticeship program must complete two phases (if applicable, see below).

Phase I - RSI

Complete 144 hours of related and supplemental instruction (RSI). Should the Division of Apprenticeship Standards or California Department of Education develop a certificate (or comparable) and recognize and approve this portion of the apprenticeship as an in-school youth program, a certificate will be issued for the completion of Phase I.

Phase II - RSI

Completion of all remaining related and supplemental instruction (RSI) of the apprenticeship program.

ARTICLE V Ratio

The ratio of apprentices to professional workers shall be:

1) Ratio #1: Each professional worker may supervise three (3) apprentice(s)