Division of Apprenticeship Standards (DAS)
Apprenticeship Program Summary Sheet

To: Adele Burns, Acting Chief
From: Mike Quiroz
CC: Program Planning and Review
Date: July 24, 2024

Program Name: Stanford University & SEIU Higher Education Workers Local 2007 Apprenticeship
Industry: Advanced Manufacturing
DAS File No.: 5167
Grant Awardee: ☒ No ☐ Yes

Actions:

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

Labor Organizations Representing Any of the Apprentices:

SEIU Higher Education Workers Local 2007

Request for Approval under Labor Code 3075:

Stanford University & SEIU Higher Education Workers Local 2007 Apprenticeship 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:

The intent of the Stanford University and SEIU Local 2007 Apprenticeship Program is to offer training opportunities primarily to existing Stanford University employees and affiliates with the goal of training them for in-house (i.e. Stanford University) work only. The apprenticeship program will provide opportunities for individuals to expand their career options at the university and will, in turn, provide the university with workers who are expressly trained for work at Stanford University. The Laboratory Machinist apprenticeship program will train apprentices at Stanford University including at SLAC National Accelerator Laboratory (SLAC), which is a Department of Energy national lab run by Stanford. The apprentices will be trained to create, modify, repair and develop specialized equipment of all types including, but not

limited to, scientific research prototypes, short run productions, machining of exotic and radioactive materials, as well as utilizing normal industrialized high precision practices. The apprentices will be trained to work on high precision equipment, holding close tolerances of up to +- .0002". This type of work distinguishes it from that completed by other occupations, such as that of the Millwright trade. Due to the novel and cutting-edge work conducted at Stanford, there is a need to train in-house machinists to work on equipment and projects that are unique to Stanford University and the DOE. Apprentices through Stanford's Apprenticeship Program, therefore, will differ from those who have received training outside Stanford. The Stanford/SEIU Local 2007 apprentices are represented by SEIU 2007. Their total compensation package (wages and benefits) is union bargained and exceeds a living wage. Each apprentice is hired at a starting wage rate equivalent to 60% of the Step 3 rate (based on a 4-year program) for journeymen level Laboratory Machinist. Depending on good performance and upon approval by Stanford and the JATC, apprentices receive an increase of 5% every 6 months during the apprenticeship. Below are the current rates as of September 1, 2023.The Collective Bargaining Agreement between SEIU Higher Education Workers Local 2007 and the Board of Trustees of Leland Stanford Junior University is effective from September 1, 2019 to August 31, 2024.

Stanford University & SEIU Higher Education Workers Local 2007 Apprenticeship 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:

- Laboratory Machinist O*Net: 51-4041.00
  Professional Worker Wage: $52.58 per hour
  Proposed Apprentice Wage: $31.548 per hour
  Proposed No. of Apprentices: 1

Proposed Employers:

- Stanford University - 505 Broadway, Cardinal Hall, 5th Floor, Redwood City, CA 94063

DAS FILE # 5167

Standard University & SEIU Higher Education Workers Local 2007 Apprenticeship Program Standards

405 Jane Standford Way, Stanford, CA 94305-2004
(650) 721-4272
standfordelr@standford.edu

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Article I Jurisdiction

These standards shall apply to the employer signatory hereto and to all apprentice agreements hereunder.

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

Occupation	O*Net Code	Attachment
Maintenance Mechanic	49-9041.00	B-1
High Volt Electrician	49-9041.00	B-2
Maintenance Mechanic (Residential)	49-9041.00	B-3
Maintenance Carpenter (Housing)	49-9041.00	B-4
Laboratory Machinist	51-4041.00	B-5

Article IV Responsibilities of Program Sponsor

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 and provide a copy of said rules and regulations to each apprentice;
3) make periodic evaluations of each apprentices on-the-job training and related and supplemental instruction;
4) provide reasonably continuous employment to all apprentices in its employ;
5) ensure safe work site facilities, skilled workers as trainers at the work site, and safe equipment sufficient to train apprentices;
6) determine the qualifications of apprentice applicants and ensure fair and impartial treatment of applicants for apprenticeship selected through uniform selection procedures;

7) 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;
8) 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;
9) establish and utilize a system for the periodic review and evaluation of the apprentice's progress in job performance and related instruction;
10) 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;
11) annually prepare and submit a Self-Assessment Review as well as a Program Improvement Plan to the Chief of the Division of Apprenticeship Standards;
12) 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;
13) ensure training in the recognition of illegal discrimination and sexual harassment;
14) establish an adequate mechanism to be used for the rotation of the apprentice from work process to work process to assure the apprentice of complete training in the apprenticeable occupation;
15) 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;
16) ensure there is meaningful representation of the apprentice in the management of the program;
17) adopt changes to these standards, as necessary, subject to the approval of the parties hereto and the Chief of the Division of Apprenticeship Standards.
18) abide by any and all relevant California Labor Codes and California Code of Regulations regarding apprenticeship.

Article V Definition of an Apprentice

An apprentice is a person at least 18 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 VI 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 VII Apprentice Agreement

1) Each apprentice agreement shall conform to the State law governing apprentice agreements, shall be signed by the program sponsor and by the apprentice and shall remain in effect during a lay-off unless cancelled.
2) Each apprentice shall be furnished a copy of or be given an opportunity to study these standards before registration. These standards shall be considered a part of the apprentice agreement as though expressly written therein.

Article VIII Termination

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) Disciplinary proceedings for apprentices shall be duly noticed in writing to such individuals. The Division of Apprenticeship Standards shall attend all such proceedings.

Article IX Controversies

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

Article X 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 program sponsor or 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 program sponsor, 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 XI Equal Opportunity in Apprenticeship

Standard University & SEIU Higher Education Workers Local 2007 Apprenticeship will not discriminate against apprenticeship applicants or apprentices based on race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age for individuals over forty years of age, military or veteran status, or sexual orientation.

Standard University & SEIU Higher Education Workers Local 2007 Apprenticeship will take affirmative steps to provide equal opportunity in apprenticeship.

Article XII Written Applications

Applications for apprenticeship will be accepted:

Applications for apprenticeship will be accepted when an apprenticeship position has been posted and is active.

Applicants can apply online at https://careersearch.stanford.edu/.

Article XIII Records

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

Standard University & SEIU Higher Education Workers Local 2007 Apprenticeship
505 Broadway, 5th floor
Redwood City, CA 94063

Article XIV Annual Compliance

Standard University & SEIU Higher Education Workers Local 2007 Apprenticeship will submit an annual compliance report to the Division of Apprenticeship Standards as requested by the Division.

Standard University & SEIU Higher Education Workers Local 2007 Apprenticeship 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 Standard University & SEIU Higher Education Workers Local 2007 Apprenticeship on June 3, 2024 (Committee approval date).

Employer Organization

Leland Stanford Junior University

450 Jane Stanford Way, Stanford, CA 94305

_____ _____

Phung Truong, Assistant Vice President Date

Employee & Labor Relations

Employee Organization

SEIU Higher Education Workers Local 2007

P.O. Box 19152, Stanford, CA 94305

_____ _____

Paul Regalado, SEIU HEW Local 2007 President Date

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

_____.

(DAS approval date)

_____ _____

Adele Burns, Chief Date

Division of Apprenticeship Standards

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Attachment B

Training Schedule and Working Conditions

Standard University & SEIU Higher Education Workers Local 2007 Apprenticeship

Occupation

Occupation: Laboratory Machinist
O*Net Code: 51-4041.00

Article I Term of Apprenticeship and Probation

The standard term of apprenticeship shall be 6,680 on-job-training (OJT) hours, 1,170 related and supplemental instruction (RSI) hours, and completed within 48 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 4 months.

Article II Wage Schedule

Professional Worker Wage:

$ 54.95 per hour effective 9/1/2024; A39, Step 3

Apprentice Wage and Advancement Schedule:

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

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

1st period	0 – 6 months / 0 – 835 hrs	$ 32.970 /hour
2nd period	7 – 12 months / 836 – 1,670 hrs	$ 35.718 /hour
3rd period	13 – 18 months / 1,671 – 2,505 hrs	$ 38.465 /hour
4th period	19 – 24 months / 2,506 – 3,340 hrs	$ 41.213 /hour
5th period	25 – 30 months / 3,341 – 4,175 hrs	$ 43.960 /hour

6th period	31 – 36 months / 4,176 – 5,010 hrs	$ 46.708 /hour
7th period	37 – 42 months / 5,011 – 5,845 hrs	$ 49.455 /hour
8th period	43 – 48 months / 5,846 – 6,680 hrs	$ 52.203 /hour

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.

The Collective Bargaining Agreement (CBA) between Stanford University and SEIU Higher Education Workers Local 2007 addresses wages, hours, and working conditions. Any inconsistencies between the above language and the CBA will be administered in accordance with the terms of the CBA.

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:

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Work Processes

Year I

Shop Safety **72**
Computer, shop practices, PPE, personal conduct

Bench Work **144**
Print reading, deburring, filing, power tools

Introduction to precision inspection equipment, utilization, and application **72**
Calipers, Micrometers, Pin Gages, Indicators

Manual/Powered Saw Equipment **284**
Horizontal Band Saw, Vertical Band Saw, Pistorius Saw, Drill Press,
Operation of equipment, Maintenance, Band saw blade selections and applications

Knee Mills **432**
Bridgeports with Prototrak Control, Trak K4, Precision Speeds and Feeds, Tubing, Precision Block and Flat set-ups, Basic Understanding of Precision Tooling, Precision Set-Up, Precision Machining, Precision Drilling, Precision Tapping, Precision Milling, Precision Indicating, Precision Tolerancing, Machining of radioactive material and vacuum clean machining, Mastercam introduction

Tool Room Lathes **468**
Manual Lathes, Basic Understanding of Precision Tooling, Precision Turning, Precision Set-Up, Precision Threading, Precision Facing, Precision Boring, Precision Indicating, Precision Tolerancing, Prototrak Control, Mastercam Introduction, Machining of radioactive material and vacuum clean machining

Basic Programming **108**
Precision Milling/Facing, Precision Boring, Precision Threading, Precision Turning/Speeds and Precision Feeds, Precision Mill and Lathe

Year II

Knee Mills continued **288**
Basic Precision Machining, Advanced setups, Aluminum, Cold Rolled Steels, Hot Rolled Steels, Stainless Steels, Copper, Plastics, Ceramics, Sheet Metals, Phenolics, Exotics e.g.Titanium, Glidcop, radioactive materials, lead, particle free machining

Tool Room Lathes Continued **288**
Precision Turning, Precision Indicating, Precision Threading, Precision Boring, Precision Speeds and Feeds, Aluminum, Stainless Steels, Copper, Precision Cold Rolled/Hot Rolled Steels, Ceramics, Plastics, Phenolics, radioactive materials, lead, particle free machining

Grinding **180**
Precision Surface, Precision Flats, Precision Angles, Precision Cylindrical, Tool Steels, Stainless Steels, Ceramics, Hot/Cold Rolled Steels, Exotics

Computer Numerical Control (CNC) Lathe **212**
Precision Set-up, Programming, Operating, Precision Turning, Precision Facing, Precision Boring, Precision Threading, Aluminum, Stainless, Cold/Hot Rolled Steels, Ceramics, Plastics, Precision Speeds and Feeds, radioactive materials, lead, particle free machining

CNC Mill **432**
3 Axis Mills, Precision Set-Up, Precision Programming, Operating, Aluminum, Stainless Steel, Cold/Hot Rolled/Tool Steels, Ceramics, Plastics, Phenolics, Exotics, radioactive materials, lead, particle free machining

Precision Mastercam Programming **180**

Year III

CNC Mill **880**
Precision Set-up, Operate all Controls, Mastercam Methodology, Precision Pocket Milling Machining, Precision 3D Surface machining, Precision Profile Machining, High Speed Machining, Aluminum, Stainless Steels, Hot/Cold Rolled Steels, Plastics, Phenolics, Tool Steels, Exotics, radioactive materials, lead, particle free machining

CNC Lathe **880**
Precision Set-up, Operate All Controls, Precision Mastercam Methodology, Precision Turning, Precision Boring, Precision Facing, Precision Threading, Aluminum, Stainless Steels, Hot/Cold Rolled Steels, Plastics, Phenolics, Tool Steels, Exotics, radioactive materials, lead, particle free machining

Year IV

CNC Mill Continued **800**
Precision Pocket Milling Machining, Precision 3D Surface machining, Precision Profile Machining, Precision High Speed Machining, Aluminum, Stainless Steels, Hot/Cold Rolled Steels, Plastics, Phenolics, Tool Steels, Exotics, radioactive materials, lead, particle free machining

CNC Lathe Continued **800**
Precision Turning, Precision Boring, Precision Facing, Precision Threading, Precision Turning, Aluminum, Stainless Steels, Hot/Cold Rolled Steels, Plastics, Phenolics, Tool Steels, Exotics, radioactive materials, lead, particle free machining

Introduction to Precision Electro Discharge Machining (EDM)-Sinker and Wire **160**

TOTAL HOURS **6,680**

ARTICLE IV Related Instruction

Apprentices shall satisfactorily complete prescribed courses of related and supplemental instruction, which will not be less than 292 hours per year. Related and supplemental instruction will be provided by De Anza College of Chabot College.

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

De Anza College

Courses		**Hours (Units)**
DMT 90	Print Reading and Machine Shop Calculations	54 hrs (4.5)
DMT 95	Manufacturing Materials and Process	72 hrs (4)
DMT 80	Introduction to Machining and CNC Processes	108 hrs (5)
DMT 92	Applied GD&T; Coordinate Measuring Machine (CMM)	72 hrs (4)
DMT 84A	Introduction to Computer-Aided Numerical Control (CNC)	108 hrs (5)
DMT 84B	Computer-Aided Numerical Control (CNC) Advanced Mill	108 hrs (5)
DMT 84C	CNC Lathe & Horizontal Machining Center; Programming & Operation, 4th Rotary Axis, Fixture Design	108 hrs (5)

DMT 89A	CAM Based CNC Multi-Axis Using NX	108 hrs (5)
DMT 82	Conventional Machine Tools, Tool Design, Abrasive Machining	108 hrs (5)

Complete one (1) course each from the following three (3) 87 series:

DMT 87A-E	CAD/CAM Based CNC Programming Using Mastercam Introduction	108 hrs (5)
DMT 87F-K	CAD/CAM Based CNC Surface Contouring Programming Using Mastercam 3D Surfaces / 3D Tool Paths	108 hrs (5)
DMT 87L-Q	CAD/CAM Based CNC 4 and 5 Axis Mill/Lathe Programming Using Mastercam Lathe, 4th and 5th Axis Rotary, Horizontal Mill	108 hrs (5)

Complete two (2) units from the following:

DMT 77A	Special Projects in Manufacturing and CNC / Mastercam Level 1	72 hrs (2)
DMT 77B	Special Projects in Manufacturing and CNC / Mastercam Level 2	72 hrs (2)
DMT 77C	Special Projects in Manufacturing and CNC / Mastercam Level 3	72 hrs (2)

Complete four (4) units from the following:

DMT 77D	Special Projects in Manufacturing and CNC / NIMS Level 1	72 hrs (2)
DMT 77E	Special Projects in Manufacturing and CNC / NIMS Level 2	72 hrs (2)
DMT 77F	Special Projects in Manufacturing and CNC / NIMS Level 3	72 hrs (2)

Total Hours 1,170

Chabot College

Courses		**Hours (Units)**
MTT 50	Blueprint Reading and Introduction to CAD	90 hrs (3)
MTT 60A	Machine Tool Technology I	44 hrs (4)
MTT 60B	Machine Tool Technology II	144 hrs (4)
MTT 71A	Numerical Control Program I	144 hrs (4)

MTT 71B	Numerical Control Program II	144 hrs (4)
MTT 71C	Numerical Control Program III	144 hrs (4)
MTT 81C	Mastercam	90 hrs (3)
MTT 65	Basic Toolmaking	144 hrs (4)
MTT 66	Production Practices	144 hrs (4)
WELD 70	Introduction to Welding	72 hrs (2)
INDT 74	Measurements and Calculations	54 hours (3)

Total Hours 1,314

ARTICLE V Ratio

The ratio of apprentices to professional workers shall be:

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