

OCCUPATION - J

Occupation - Air Conditioning/Refrigeration Mechanic I (Maintenance)

DOT Code - 637.261 026

ARTICLE XIV Term of Apprenticeship

The term of apprenticeship shall be 7200 OJT hours within 48 months.
There shall be no tryout or probationary period.

ARTICLE XV Ratio

Each campus wishing to hire and train apprentices must have at least one journey-level worker in the same trade for the first apprentice. Thereafter, a campus must employ at least three journey-level workers in the same trade for each additional apprentice as follows:

- 1st Apprentice / 1 Journey Worker
- 2nd Apprentice / 4 Journey Workers
- 3rd Apprentice / 7 Journey Workers

ARTICLE XVI Wage Schedule

1. Apprentices shall be paid not less than the following percentages of the current journeymen's rate, which is \$XXXX per month, effective July 1, 20XX.

WAGE & ADVANCEMENT SCHEDULE				
Period	Percent of Journeyman Rate	Monthly Wage	Minimum OJT Hours Per Period	*Related & Supplemental Instruction (RSI) 144 hours/year
1 st period-6 months	65%	\$XXXX	0 – 900	Successful Completion
2 nd period-6 months	69%	\$XXXX	901 – 1800	Successful Completion
3 rd period-6 months	73%	\$XXXX	1801 – 2700	Successful Completion
4 th period-6 months	77%	\$XXXX	2701 – 3600	Successful Completion
5 th period-6 months	81%	\$XXXX	3601 – 4500	Successful Completion
6 th period-6 months	85%	\$XXXX	4501 – 5400	Successful Completion
7 th period-6 months	90%	\$XXXX	5401 – 6300	Successful Completion
8 th period-6 months	95%	\$XXXX	6301 - 7200	Successful Completion
*Advancement from one period to the next level, the apprentice must complete all of the following: 1) Minimum six (6) calendar months. 2) Completion of required OJT hours. 3) Successful completion of RSI with passing grade.				

2. Straight time hours per day 8, and 40 per week.
3. Overtime provisions – 1 1/2 times after 8 hours and after 40 hours per week.
4. Other Compensation:
 - a. Health & Welfare

Health benefits shall be paid by the employer. The employer contribution shall be based on the formula as provided in Government Code Section 22825.1

b. Pension

PERS – Pension shall be paid by the employer in accordance with Government Codes.

Pension shall be based on tier 1.

c. Vacation

Vacation Accrual Per monthly pay period:

<u>Service Requirements</u>	<u>Days</u>	<u>Hours</u>
1 month to 3 years	5/6	6-2/3
37 months to 6 years	1-1/4	10

ARTICLE XVII Work Training

The following are work processes required of apprentices enrolled in the CSU-SETC United Joint Apprenticeship and Training Program on any California State University Campuses or off-site center.

The major work processes in which apprentices will be trained (although not necessarily in the order listed) and the approximate hours (not necessarily continuous) to be spent on each are as follows:

Air Conditioning/Refrigeration Mechanic I

<u>WORK PROCESSES</u>	<u>Approximate Hours</u>
1) Air Conditioning Principles	900
a. Types of Air Conditioning Equipment in Use	
Refrigerant Recovery Systems	
2) Psychometrics (Measurement of Cold)	360
3) Advanced Air Conditioning Principles	900
a. Electrical Systems Used in Air Conditioning	
b. Heat Load Calculations	
Gas Heating	
4) Refrigeration Principles	1080
a. Tools, Fittings and Materials	
b. Fundamentals of Vapor Compression	
c. Fundamentals of Absorption Systems	
d. Characteristics of Refrigerants	
e. Compressors, Heat Exchangers and Filtering Devices	
f. Evaporators and Condensers	
g. Gas Laws and Basic Thermodynamics	
Charging Methods and Water Towers	
5) Service and Maintenance of Refrigeration Systems	900
a. Construction, Operation, Installation and Repair of Refrigeration Systems	
b. Walk-in Coolers, Freezers and Ice Machines	
c. Display Cases and Multiple Evaporator Systems	
Defrost Systems	

6)	Hydronics and Air Distribution	900
	a. Design, Installation and Maintenance of Hydronics for Heating and Cooling	
	b. Principles of Low Velocity Air Distribution Systems	
	c. Boiler and Pump Selection and Layout Steam-heated Water	
7)	Commercial and Industrial Controls	360
	a. Control Theory Electronic and Pneumatic Fluid Controls	
8)	Electricity	720
	a. Basics of Electrical and Electronic Circuits	
	b. AC/DC Motors	
	c. Controls and Transformers Troubleshooting and Repair	
9)	Welding	270
10)	Reading of Blueprints and Schematics, Estimating	270
11)	Plumbing and Electrical Codes	180
12)	Training in Health and Safety	360
	a. California Code of Regulations – Titles 8, 22, 24 and UBC	
	b. Proper Disposal of Wastes Storage of Flammable Materials	
Total Hours		7200

OCCUPATION - H

Occupation - Automotive/Equipment Mechanic

DOT Code - 620.261 010

ARTICLE XIV Term of Apprenticeship

The term of apprenticeship shall be 7200 OJT hours within 48 months.
There shall be no tryout or probationary period.

ARTICLE XV Ratio

Each campus wishing to hire and train apprentices must have at least one journey-level worker in the same trade for the first apprentice. Thereafter, a campus must employ at least three journey-level workers in the same trade for each additional apprentice as follows:

- 1st Apprentice / 1 Journey Worker
- 2nd Apprentice / 4 Journey Workers
- 3rd Apprentice / 7 Journey Workers

ARTICLE XVI Wage Schedule

1. Apprentices shall be paid not less than the following percentages of the current journeymen's rate, which is \$XXXX per month, effective July 1, 20XX.

WAGE & ADVANCEMENT SCHEDULE				
Period	Percent of Journeyman Rate	Monthly Wage	Minimum OJT Hours Per Period	*Related & Supplemental Instruction (RSI) 144 hours/year
1 st period-6 months	65%	\$XXXX	0 – 900	Successful Completion
2 nd period-6 months	69%	\$XXXX	901 – 1800	Successful Completion
3 rd period-6 months	73%	\$XXXX	1801 – 2700	Successful Completion
4 th period-6 months	77%	\$XXXX	2701 – 3600	Successful Completion
5 th period-6 months	81%	\$XXXX	3601 – 4500	Successful Completion
6 th period-6 months	85%	\$XXXX	4501 – 5400	Successful Completion
7 th period-6 months	90%	\$XXXX	5401 – 6300	Successful Completion
8 th period-6 months	95%	\$XXXX	6301 - 7200	Successful Completion
*Advancement from one period to the next level, the apprentice must complete all of the following: 1) Minimum six (6) calendar months. 2) Completion of required OJT hours. 3) Successful completion of RSI with passing grade.				

2. Straight time hours per day 8, and 40 per week.
3. Overtime provisions – 1 1/2 times after 8 hours and after 40 hours per week.
4. Other Compensation:
 - a. Health & Welfare

Health benefits shall be paid by the employer. The employer contribution shall be based on the formula as provided in Government Code Section 22825.1

b. Pension

PERS – Pension shall be paid by the employer in accordance with Government Codes.

Pension shall be based on tier 1.

c. Vacation

Vacation Accrual Per monthly pay period:

<u>Service Requirements</u>	<u>Days</u>	<u>Hours</u>
1 month to 3 years	5/6	6-2/3
37 months to 6 years	1-1/4	10

ARTICLE XVII Work Training

The following are work processes required of apprentices enrolled in the CSU-SETC United Joint Apprenticeship and Training Program on any California State University Campuses or off-site center.

The major work processes in which apprentices will be trained (although not necessarily in the order listed) and the approximate hours (not necessarily continuous) to be spent on each are as follows:

Automotive/Equipment Mechanic

<u>WORK PROCESSES</u>	<u>Approximate Hours</u>
1) Gasoline Engines & Repair	990
a. Troubleshooting	
b. Major and minor repairs	
c. Air conditioning Service	
d. Emission Controls	
e. Engine control systems	
2) Diesel Engines & Repair	315
a. Troubleshooting	
b. Major and minor repairs and problems	
3) Computerized Ignition and Engine Control	450
a. Computerized ignitions	
b. Engine control systems	
c. Diagnosis and tune-ups	
d. Emissions	
4) Fuel Systems	630
a. Carburetors	
b. Injection systems	
c. Alternative fuels systems (gas, methanol, propane, etc.)	
5) Power Transmissions	225
a. Clutches, single and double disc	
b. Manual transmissions	
c. Automatic Transmissions	
6) Differential and Rear Ends	157.5

7)	Frame and Chassis	450
	a. Front and rear suspensions	
	b. Steering (manual and power assist)	
8)	Brakes	900
	a. Hydraulic type	
	b. Air type	
	c. Vacuum boost type	
9)	Electrical	900
	a. Starting systems	
	b. Charging systems	
	c. Support systems (lights, etc.)	
10)	Hydraulics	180
11)	Other Campus Equipment	900
	a. Rollers, air compressors	
	b. Tractors, skip loaders, etc.	
	c. Gas and electric carts	
12)	Use and care of tools	225
	a. Hand and power tools	
	b. Tool room	
	c. Welding and cutting	
13)	Preventive Maintenance	720
	a. Minor and major service	
	b. CHP inspections	
	c. Bus maintenance (vehicles carrying more than 10 passengers)	
	d. Recordkeeping	
14)	Training in Health & Safety Codes	157.5
	a. California Code of Regulations	
	b. Titles 8, 22, 24 and UBC	
	c. Proper disposal of waste	
	d. Storage of flammable materials	

Total Hours	7200
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OCCUPATION - F

Occupation - Building Services Engineer (Stationary Engineer)

DOT Code - 950.382 026

ARTICLE XIV Term of Apprenticeship

The term of apprenticeship shall be 7200 OJT hours within 48 months.
There shall be no tryout or probationary period.

ARTICLE XV Ratio

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ARTICLE XVI Wage Schedule

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*Advancement from one period to the next level, the apprentice must complete all of the following: 1) Minimum six (6) calendar months. 2) Completion of required OJT hours. 3) Successful completion of RSI with passing grade.				

2. Straight time hours per day 8, and 40 per week.
3. Overtime provisions – 1 1/2 times after 8 hours and after 40 hours per week.
4. Other Compensation:
 - a. Health & Welfare

Health benefits shall be paid by the employer. The employer contribution shall be based on the formula as provided in Government Code Section 22825.1

b. Pension

PERS – Pension shall be paid by the employer in accordance with Government Codes.

Pension shall be based on tier 1.

c. Vacation

Vacation Accrual Per monthly pay period:

<u>Service Requirements</u>	<u>Days</u>	<u>Hours</u>
1 month to 3 years	5/6	6-2/3
37 months to 6 years	1-1/4	10

ARTICLE XVII Work Training

The following are work processes required of apprentices enrolled in the CSU-SETC United Joint Apprenticeship and Training Program on any California State University Campuses or off-site center.

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Building Service Engineer (Stationary Engineer)

<u>WORK PROCESSES</u>	<u>Approximate Hours</u>
1) Principles of Gas Heating	540
a. Basic Gas Heating and Heat Exchangers	
b. Electrical Heating	
c. Boiler Operation	
2) Heating Equipment, Selection and Use	540
a. Basic Principles of Combustion	
b. Valves and Their Functions	
3) Steam Heating	720
4) Solar Heating	450
5) Principles of Air Conditioning	720
a. Types of Air Conditioning Equipment	
Principles of Compression Air Conditioning and Refrigeration	
6) Electricity and Electronics, EMS Controls and Computer Control of Systems	900
a. Basic Electricity	
b. Generators	
c. Transformers	
d. Motors, AC/DC	
e. Controls	
f. Electronics	
Troubleshooting and Repair	
7) Hydronics and Pumps	900
a. Hot Water Heating Systems	

	b. Pump Curves	
	c. Layout and Design	
	d. Ducting and Piping	
	e. Properties of Water Distribution	
8)	Welding	360
9)	Bearing and Sheaves	360
	Relationships of Motors in Systems	
10)	Reading Blueprints and Schematics	270
11)	Plumbing Codes and Safety	180
	a. California Code of Regulations – Titles 8, 22, 24 and UBC	
	b. Proper Disposal of Waste	
	Storage of Flammable Materials	
12)	Air Properties	810
	a. Air Balancing	
	b. Air Distribution Systems	
	c. Psychometrics	
	Fan Properties	
13)	Pneumatic Controls	450
	a. Control Theory	
	b. Electronic and Pneumatic Fluid Controls	
Total Hours		7200

OCCUPATION - A

Occupation - **Carpenter I, (Maintenance)**

DOT Code - **860.281 010**

ARTICLE XIV Term of Apprenticeship

The term of apprenticeship shall be 7200 OJT hours within 48 months.
There shall be no tryout or probationary period.

ARTICLE XV Ratio

Each campus wishing to hire and train apprentices must have at least one journey-level worker in the same trade for the first apprentice. Thereafter, a campus must employ at least three journey-level workers in the same trade for each additional apprentice as follows:

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ARTICLE XVI Wage Schedule

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WAGE & ADVANCEMENT SCHEDULE				
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*Advancement from one period to the next level, the apprentice must complete all of the following: 1) Minimum six (6) calendar months. 2) Completion of required OJT hours. 3) Successful completion of RSI with passing grade.				

2. Straight time hours per day 8, and 40 per week.
3. Overtime provisions – 1 1/2 times after 8 hours and after 40 hours per week.
4. Other Compensation:
 - a. Health & Welfare

Health benefits shall be paid by the employer. The employer contribution shall be based on the formula as provided in Government Code Section 22825.1

b. Pension

PERS – Pension shall be paid by the employer in accordance with Government Codes.

Pension shall be based on tier 1.

c. Vacation

Vacation Accrual Per monthly pay period:

<u>Service Requirements</u>	<u>Days</u>	<u>Hours</u>
1 month to 3 years	5/6	6-2/3
37 months to 6 years	1-1/4	10

ARTICLE XVII Work Training

The following are work processes required of apprentices enrolled in the CSU-SETC United Joint Apprenticeship and Training Program on any California State University Campuses or off-site center.

The major work processes in which apprentices will be trained (although not necessarily in the order listed) and the approximate hours (not necessarily continuous) to be spent on each are as follows:

Carpenter I

WORK PROCESSES

Approximate Hours

1) Operation, Care and Use of Tools	810
2) General Maintenance Carpentry	1800
a. Knowledge of Woods	
b. Building Materials	
c. Steel Metal Studs	
3) Construction of Forms, Concrete and Building Foundations	900
4) Class “A” Construction	900
5) Millwork and Furniture Repair	450
6) Class “B” Construction, Framing, Erection, Exterior Finishing	900
7) Roofing	540
8) Construction of Partitions and Interior Systems	450
9) Training in Health and Safety Codes	450

Total Hours **7200**

OCCUPATION - C

Occupation - **Electrician I, (Maintenance)**

DOT Code - **829.281 018**

ARTICLE XIV Term of Apprenticeship

The term of apprenticeship shall be 7200 OJT hours within 48 months.
There shall be no tryout or probationary period.

ARTICLE XV Ratio

Each campus wishing to hire and train apprentices must have at least one journey-level worker in the same trade for the first apprentice. Thereafter, a campus must employ at least three journey-level workers in the same trade for each additional apprentice as follows:

- 1st Apprentice / 1 Journey Worker
- 2nd Apprentice / 4 Journey Workers
- 3rd Apprentice / 7 Journey Workers

ARTICLE XVI Wage Schedule

1. Apprentices shall be paid not less than the following percentages of the current journeymen's rate, which is \$XXXX per month, effective July 1, 2007.

WAGE & ADVANCEMENT SCHEDULE				
Period	Percent of Journeyman Rate	Monthly Wage	Minimum OJT Hours Per Period	*Related & Supplemental Instruction (RSI) 144 hours/year
1 st period-6 months	65%	\$XXXX	0 – 900	Successful Completion
2 nd period-6 months	69%	\$XXXX	901 – 1800	Successful Completion
3 rd period-6 months	73%	\$XXXX	1801 – 2700	Successful Completion
4 th period-6 months	77%	\$XXXX	2701 – 3600	Successful Completion
5 th period-6 months	81%	\$XXXX	3601 – 4500	Successful Completion
6 th period-6 months	85%	\$XXXX	4501 – 5400	Successful Completion
7 th period-6 months	90%	\$XXXX	5401 – 6300	Successful Completion
8 th period-6 months	95%	\$XXXX	6301 - 7200	Successful Completion
*Advancement from one period to the next level, the apprentice must complete all of the following: 1) Minimum six (6) calendar months. 2) Completion of required OJT hours. 3) Successful completion of RSI with passing grade.				

2. Straight time hours per day 8, and 40 per week.
3. Overtime provisions – 1 1/2 times after 8 hours and after 40 hours per week.
4. Other Compensation:
 - a. Health & Welfare

Health benefits shall be paid by the employer. The employer contribution shall be based on the formula as provided in Government Code Section 22825.1

b. Pension

PERS – Pension shall be paid by the employer in accordance with Government Codes.

Pension shall be based on tier 1.

c. Vacation

Vacation Accrual Per monthly pay period:

<u>Service Requirements</u>	<u>Days</u>	<u>Hours</u>
1 month to 3 years	5/6	6-2/3
37 months to 6 years	1-1/4	10

ARTICLE XVII Work Training

The following are work processes required of apprentices enrolled in the CSU-SETC United Joint Apprenticeship and Training Program on any California State University Campuses or off-site center.

The major work processes in which apprentices will be trained (although not necessarily in the order listed) and the approximate hours (not necessarily continuous) to be spent on each are as follows:

<u>Electrician I</u> <u>WORK PROCESSES</u>		<u>Approximate Hours</u>
1)	Commercial Wiring	1800
	a. Wiring of public, commercial buildings	
	b. Conduit	
	c. Wire (Number 8 & up)	
	d. Switchboards	
	e. Sign work	
	f. Metal Moldings	
	g. Bus Ducts and Wire Ways	
	h. Electrical Codes	
2)	Industrial Wiring	1800
	a. Conduit	
	b. Power house	
	c. Substation	
	d. Panels and Switchboards	
	e. Layout Lighting	
	f. Layout Power	
	g. Transformers	
	h. Rigging and Handling of Heavy Equipment	
	i. Motor Transformer Windings	
3)	Operations of Electrical Equipment	315
4)	New Construction and Remodeling	720
	a. Installing Wiring, Etc. to Architectural Specifications	
	b. Interpreting Schematics and Diagrams	
5)	General Maintenance & Shop Work	720

a. Troubleshooting malfunctions of all types of electrical equipment	
b. Estimating	
c. Interpreting Schematics and Diagrams	
d. Designing Appropriate Repair Measures After Diagnosing Problems	
e. Maintenance Procedures	
6) Electronics/Solid State Controls & Emergency Generators	720
a. Operation of Circuit Breakers, Emergency Power Systems, Starters, Variable Speed Controllers, Fans, AC Equipment & Pumps	
b. Troubleshooting Malfunctions of All Types of Equipment	
c. Inspecting Equipment to Determine Safety, Needed Upkeep or Replacement	
d. Adjusting Spring Tensions and Related Activity	
7) Fire & Intrusion Alarm Systems	675
a. Inspecting Equipment to Determine Safety & Needed Upkeep	
b. Designing Appropriate Repair Measures After Diagnosing Problems	
c. Interpreting Schematics and Diagrams	
d. Documenting Repair Work Done	
e. Installing Wiring, etc. According to Architectural Specifications	
8) Use and Care of Tools	180
9) Safety Procedures	270
a. Electrical Codes	
b. Cal OSHA & Code of Regulations –Title 8, 22, 24	
c. Uniform Building Codes	
d. Proper Disposal of Wastes – PCBs, etc	
Total Hours	7200

OCCUPATION - E

Occupation - **Locksmith I (Trade)**

DOT Code - **709.281 010**

ARTICLE XIV Term of Apprenticeship

The term of apprenticeship shall be 3600 OJT hours within 24 months.
There shall be no tryout or probationary period.

ARTICLE XV Ratio

Each campus wishing to hire and train apprentices must have at least one journey-level worker in the same trade for the first apprentice. Thereafter, a campus must employ at least three journey-level workers in the same trade for each additional apprentice as follows:

- 1st Apprentice / 1 Journey Worker
- 2nd Apprentice / 4 Journey Workers
- 3rd Apprentice / 7 Journey Workers

ARTICLE XVI Wage Schedule

1. Apprentices shall be paid not less than the following percentages of the current journeymen's rate, which is \$XXXX per month, effective July 1, 20XX.

WAGE & ADVANCEMENT SCHEDULE				
Period	Percent of Journeyman Rate	Monthly Wage	Minimum OJT Hours Per Period	*Related & Supplemental Instruction (RSI) 144 hours/year
1 st period-6 months	65%	\$XXXX	0 – 900	Successful Completion
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3 rd period-6 months	73%	\$XXXX	1801 – 2700	Successful Completion
4 th period-6 months	77%	\$XXXX	2701 – 3600	Successful Completion
5 th period-6 months	81%	\$XXXX	3601 – 4500	Successful Completion
6 th period-6 months	85%	\$XXXX	4501 – 5400	Successful Completion
7 th period-6 months	90%	\$XXXX	5401 – 6300	Successful Completion
8 th period-6 months	95%	\$XXXX	6301 - 7200	Successful Completion
*Advancement from one period to the next level, the apprentice must complete all of the following: 1) Minimum six (6) calendar months. 2) Completion of required OJT hours. 3) Successful completion of RSI with passing grade.				

2. Straight time hours per day 8, and 40 per week.
3. Overtime provisions – 1 1/2 times after 8 hours and after 40 hours per week.
4. Other Compensation:
 - a. Health & Welfare

Health benefits shall be paid by the employer. The employer contribution shall be based on the formula as provided in Government Code Section 22825.1

b. Pension

PERS – Pension shall be paid by the employer in accordance with Government Codes.

Pension shall be based on tier 1.

c. Vacation

Vacation Accrual Per monthly pay period:

<u>Service Requirements</u>	<u>Days</u>	<u>Hours</u>
1 month to 3 years	5/6	6-2/3
37 months to 6 years	1-1/4	10

ARTICLE XVII Work Training

The following are work processes required of apprentices enrolled in the CSU-SETC United Joint Apprenticeship and Training Program on any California State University Campuses or off-site center.

The major work processes in which apprentices will be trained (although not necessarily in the order listed) and the approximate hours (not necessarily continuous) to be spent on each are as follows:

<u>Locksmith I</u> WORK PROCESSES	<u>Approximate Hours</u>
1) Identify and to use stock hardware	225
a. Types of hardware	
b. Related items	
2) Duplicate Keys	225
3) Code and fits keys	450
a. Security	
b. Code Requirements	
c. Fits keys	
4) Install, repair and maintain door closers	270
5) Install & Repair Locks	585
a. Types of locks	
b. Repair & replacement	
6) Open Locks	225
7) Pins and key master lock systems	450
8) Card Key Access Systems	225
10) Change combinations & safes	180
11) Proper Use of Tools & Equipment	135
13) Computer skills, recordkeeping	180
14) Training on Health and Safety Codes	90
a. Trade-related safety factors	
b. California Code of Regulations	
c. Titles 8, 22, 24 and UBC	
d. Proper disposal of waste and/or flammable materials	
Total Hours	3600

OCCUPATION - G

Occupation - Operating Engineer (Boiler House Mechanic)

DOT Code - 805.361 010

ARTICLE XIV Term of Apprenticeship

The term of apprenticeship shall be 5400 OJT hours within 36 months.
There shall be no tryout or probationary period.

ARTICLE XV Ratio

Each campus wishing to hire and train apprentices must have at least one journey-level worker in the same trade for the first apprentice. Thereafter, a campus must employ at least three journey-level workers in the same trade for each additional apprentice as follows:

- 1st Apprentice / 1 Journey Worker
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5 th period-6 months	81%	\$XXXX	3601 – 4500	Successful Completion
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7 th period-6 months	90%	\$XXXX	5401 – 6300	Successful Completion
8 th period-6 months	95%	\$XXXX	6301 - 7200	Successful Completion
*Advancement from one period to the next level, the apprentice must complete all of the following: 1) Minimum six (6) calendar months. 2) Completion of required OJT hours. 3) Successful completion of RSI with passing grade.				

2. Straight time hours per day 8, and 40 per week.
3. Overtime provisions – 1 1/2 times after 8 hours and after 40 hours per week.
4. Other Compensation:
 - a. Health & Welfare

Health benefits shall be paid by the employer. The employer contribution shall be based on the formula as provided in Government Code Section 22825.1

b. Pension

PERS – Pension shall be paid by the employer in accordance with Government Codes.

Pension shall be based on tier 1.

c. Vacation

Vacation Accrual Per monthly pay period:

<u>Service Requirements</u>	<u>Days</u>	<u>Hours</u>
1 month to 3 years	5/6	6-2/3
37 months to 6 years	1-1/4	10

ARTICLE XVII Work Training

The following are work processes required of apprentices enrolled in the CSU-SETC United Joint Apprenticeship and Training Program on any California State University Campuses or off-site center.

The major work processes in which apprentices will be trained (although not necessarily in the order listed) and the approximate hours (not necessarily continuous) to be spent on each are as follows:

Operating Engineer (Boiler House Mechanic)

<u>WORK PROCESSES</u>	<u>Approximate Hours</u>
1) Electricity	675
a. Basic electricity Nat. Electrical Code	
b. Relays and transformers	
c. Basic wiring	
d. National Electrical Code	
2) Water Treatment	450
a. Chemistry	
b. Water treatment chemicals	
c. Water tests in steam systems	
d. Treatment of closed circulations systems	
3) Steam –Generation, Distribution and Use	900
a. Theory –steam tables	
b. Types of Boilers (shell and tube)	
c. Fire Tube Boilers	
d. Heaters and heat exchangers	
e. Emissions regulations	
f. Boiler water treatment	
g. Design and layout operations	
h. Repairs, performance monitoring	
4) Controls and Safeties/Computer controls	450
a. Servicing Control wiring for boilers	
b. Safety control circuits	
c. Computerized control circuits	
d. pneumatic control systems	

e. Variable speed drives	
f. Energy monitoring	
5) Air Distributions Systems	900
a. Theory – Psychometrics, fan theory, compressible fluid flow	
b. Air distribution system types	
c. Filters	
d. Control Components	
e. Fan types, sheaves and belts	
f. Central and distributed systems	
g. Air Compressors	
h. Bearings	
i. Testing, maintenance repair, air balancing	
6) Welding	360
7) Hydronic Systems	900
a. Characteristics of Water in sealed circulating systems	
b. Pump characteristics	
c. Piping, flow, distribution	
8) Refrigeration and Air Conditioning	225
a. Theory –gas laws, thermodynamics, vapor compression	
b. Refrigerant types, management, regulations	
c. Water Chillers	
d. DX, split systems	
e. Cooling towers	
f. Testing, maintenance repairs	
9) Insulation & Schematics	315
a. Building Codes, specifications	
b. Cellular plastics	
c. Metal building and air filtration	
d. Types and standards of insulation	
e. Blueprints and Schematics	
10) Training in Health & Safety	225
a. California Code of Regulations	
b. Titles 8, 22, 24 and UBC	
c. Proper use of Specific Tools	
d. Proper Disposal of waste	

Total Hours	5400
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OCCUPATION - B

Occupation - **Painter I, (Maintenance)**

DOT Code - **840.381 01E**

ARTICLE XIV Term of Apprenticeship

The term of apprenticeship shall be 5400 OJT hours within 36 months.
There shall be no tryout or probationary period.

ARTICLE XV Ratio

Each campus wishing to hire and train apprentices must have at least one journey-level worker in the same trade for the first apprentice. Thereafter, a campus must employ at least three journey-level workers in the same trade for each additional apprentice as follows:

- 1st Apprentice / 1 Journey Worker
- 2nd Apprentice / 4 Journey Workers
- 3rd Apprentice / 7 Journey Workers

ARTICLE XVI Wage Schedule

1. Apprentices shall be paid not less than the following percentages of the current journeymen's rate, which is \$XXXX per month, effective July 1, 20XX.

WAGE & ADVANCEMENT SCHEDULE				
Period	Percent of Journeyman Rate	Monthly Wage	Minimum OJT Hours Per Period	*Related & Supplemental Instruction (RSI) 144 hours/year
1 st period-6 months	65%	\$XXXX	0 – 900	Successful Completion
2 nd period-6 months	69%	\$XXXX	901 – 1800	Successful Completion
3 rd period-6 months	73%	\$XXXX	1801 – 2700	Successful Completion
4 th period-6 months	77%	\$XXXX	2701 – 3600	Successful Completion
5 th period-6 months	81%	\$XXXX	3601 – 4500	Successful Completion
6 th period-6 months	85%	\$XXXX	4501 – 5400	Successful Completion
7 th period-6 months	90%	\$XXXX	5401 – 6300	Successful Completion
8 th period-6 months	95%	\$XXXX	6301 - 7200	Successful Completion
*Advancement from one period to the next level, the apprentice must complete all of the following: 1) Minimum six (6) calendar months. 2) Completion of required OJT hours. 3) Successful completion of RSI with passing grade.				

2. Straight time hours per day 8, and 40 per week.
3. Overtime provisions – 1 1/2 times after 8 hours and after 40 hours per week.
4. Other Compensation:
 - a. Health & Welfare

Health benefits shall be paid by the employer. The employer contribution shall be based on the formula as provided in Government Code Section 22825.1

b. Pension

PERS – Pension shall be paid by the employer in accordance with Government Codes.

Pension shall be based on tier 1.

c. Vacation

Vacation Accrual Per monthly pay period:

<u>Service Requirements</u>	<u>Days</u>	<u>Hours</u>
1 month to 3 years	5/6	6-2/3
37 months to 6 years	1-1/4	10

ARTICLE XVII Work Training

The following are work processes required of apprentices enrolled in the CSU-SETC United Joint Apprenticeship and Training Program on any California State University Campuses or off-site center.

The major work processes in which apprentices will be trained (although not necessarily in the order listed) and the approximate hours (not necessarily continuous) to be spent on each are as follows:

<u>Painter</u> <u>WORK PROCESSES</u>		<u>Approximate Hours</u>
1)	Preparation and Maintenance of Equipment	540
2)	Preparation of Surfaces	720
3)	Interior/Exterior Base Coats – Spraying	720
4)	Interior/Exterior Finish Coats – Spraying	720
5)	Exterior Stucco/Masonry	540
6)	Interior Painting and Trim Work	630
7)	Wall Coverings and Applications	270
8)	Scaffolding and Health and Safety	270
9)	Taping and Finishing Work	270
Total Hours		5400

OCCUPATION - D

Occupation - **Plumber I (Maintenance)**

DOT Code - **862.381 03A**

ARTICLE XIV Term of Apprenticeship

The term of apprenticeship shall be 7200 OJT hours within 48 months.
There shall be no tryout or probationary period.

ARTICLE XV Ratio

Each campus wishing to hire and train apprentices must have at least one journey-level worker in the same trade for the first apprentice. Thereafter, a campus must employ at least three journey-level workers in the same trade for each additional apprentice as follows:

- 1st Apprentice / 1 Journey Worker
- 2nd Apprentice / 4 Journey Workers
- 3rd Apprentice / 7 Journey Workers

ARTICLE XVI Wage Schedule

1. Apprentices shall be paid not less than the following percentages of the current journeymen's rate, which is \$XXXX per month, effective July 1, 200X.

WAGE & ADVANCEMENT SCHEDULE				
Period	Percent of Journeyman Rate	Monthly Wage	Minimum OJT Hours Per Period	*Related & Supplemental Instruction (RSI) 144 hours/year
1 st period-6 months	65%	\$XXXX	0 – 900	Successful Completion
2 nd period-6 months	69%	\$XXXX	901 – 1800	Successful Completion
3 rd period-6 months	73%	\$XXXX	1801 – 2700	Successful Completion
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6 th period-6 months	85%	\$XXXX	4501 – 5400	Successful Completion
7 th period-6 months	90%	\$XXXX	5401 – 6300	Successful Completion
8 th period-6 months	95%	\$XXXX	6301 - 7200	Successful Completion
*Advancement from one period to the next level, the apprentice must complete all of the following: 1) Minimum six (6) calendar months. 2) Completion of required OJT hours. 3) Successful completion of RSI with passing grade.				

2. Straight time hours per day 8, and 40 per week.
3. Overtime provisions – 1 1/2 times after 8 hours and after 40 hours per week.
4. Other Compensation:
 - a. Health & Welfare

Health benefits shall be paid by the employer. The employer contribution shall be based on the formula as provided in Government Code Section 22825.1

b. Pension

PERS – Pension shall be paid by the employer in accordance with Government Codes.

Pension shall be based on tier 1.

c. Vacation

Vacation Accrual Per monthly pay period:

<u>Service Requirements</u>	<u>Days</u>	<u>Hours</u>
1 month to 3 years	5/6	6-2/3
37 months to 6 years	1-1/4	10

ARTICLE XVII Work Training

The following are work processes required of apprentices enrolled in the CSU-SETC United Joint Apprenticeship and Training Program on any California State University Campuses or off-site center.

The major work processes in which apprentices will be trained (although not necessarily in the order listed) and the approximate hours (not necessarily continuous) to be spent on each are as follows:

<u>Plumber I</u> <u>WORK PROCESSES</u>		<u>Approximate Hours</u>
1)	Installation and Maintenance of Soil, Waste and Vent Piping – Domestic Water Systems a. Cast Iron b. Steel c. Copper d. Sizing – Drain, Waste and Vent Sizing e. Copper f. Sizing – Drain, Waste and Vent Sizing	1125
2)	Installation and Maintenance of Hot/Cold Water, Solar Piping and Backflow Devices a. Cast Iron b. Steel c. Copper d. Backflow Prevention and Applicable Codes	1170
3)	Installation and Maintenance of Gas Piping a. Threaded b. Welded c. Plastic d. Gas Sizing	1170

4)	Strapping and Backing of Systems	540
	a. Wooden Backing	
	b. Strapping Hangers	
	c. Welded Backing and Hangers	
	d. Seismic and Support Hangers	
5)	Installation and Maintenance of Shower Pans, Roof Drains and Flashings	450
	a. Hot-mopped surfaces	
	b. Copper, Lead, Plastic and Other Materials	
	c. Swimming Pools – Chemicals	
6)	Testing of Sewer, Waste, Vents and Gas Lines	630
	a. Trouble-shooting	
	b. Pressure Testing	
	c. Unplugging Sewer Lines	
	d. Flues for Water Heaters and Boilers	
	e. Sewage Ejection Stations – Design and Operation	
7)	Installation, Maintenance and Connection of Fixtures and Equipment – Design and Installation	675
	a. Sanitary	
	b. Processing	
	c. Cooling	
	d. Wet Heating	
	e. Gas Heating	
	f. Air Conditioning	
9)	Shop Repairs	225
10)	Welding	180
	a. Soldering and Welding Techniques	
	b. Measuring, Cutting, Threading, Bending and Joining of Pipe	
11)	Estimating and Blueprint Reading	270
12)	Use and Care of Tools	135
13)	Rigging and Safety Practices	270
	a. Uniform Plumbing Codes	
	b. UBC	
	c. Titles 8, 22 and 24	
	d. Water Heater and Boiler Safety Procedures and Operation	
14)	Maintenance and Repair of Plumbing Fixtures – Domestic Water Booster Operation	180
Total Hours		7200

OCCUPATION - I

Occupation - Sheet Metal Worker (Maintenance)

DOT Code - 860.281 010

ARTICLE XIV Term of Apprenticeship

The term of apprenticeship shall be 7200 OJT hours within 48 months.
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ARTICLE XV Ratio

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Vacation Accrual Per monthly pay period:

<u>Service Requirements</u>	<u>Days</u>	<u>Hours</u>
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ARTICLE XVII Work Training

The following are work processes required of apprentices enrolled in the CSU-SETC United Joint Apprenticeship and Training Program on any California State University Campuses or off-site center.

The major work processes in which apprentices will be trained (although not necessarily in the order listed) and the approximate hours (not necessarily continuous) to be spent on each are as follows:

Sheet Metal Worker (Maintenance)

WORK PROCESSES	Approximate Hours
1) Operation of Machine Tools and Power Equipment	495
2) Layout and Pattern Development (bench work)	855
3) Fabrication of Sheet Metal Parts	450
4) Welding – Gas, Arc, Wire Feed and Spot	810
5) Installation, Replacement and Maintenance of Equipment	1440
a. Ducts	
b. Housings	
c. Plenums	
d. Mixing boxes	
e. Grilles	
f. Registers	
g. Diffusers	
h. Louvers	
i. Other equipment	
6) Reading of Blueprints and Schematics	270
7) Installation and Maintenance of Other Surfaces	315
a. Flashing	
b. Coping	
c. Curbs	
d. Fascia	
8) Maintenance of Equipment, Trouble-shooting	360

9)	Fabrication and Installation of Metal Roofing and Decking	180
10)	Fabrication and Installation of Gutters and Downspouts	360
11)	Instruction in System Design	405
12)	Service and Maintenance of Heating & Air Conditioning	720
	a. Gas heating	
	b. Solar heating	
	c. Air conditioning	
	d. Related controls	
13)	Proper storage of tools & equipment & Safety	270
	a. Training in safe work practices	
	b. Storage practices	
14)	Chain Link Fencing and Gates	270

Total Hours	7200
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