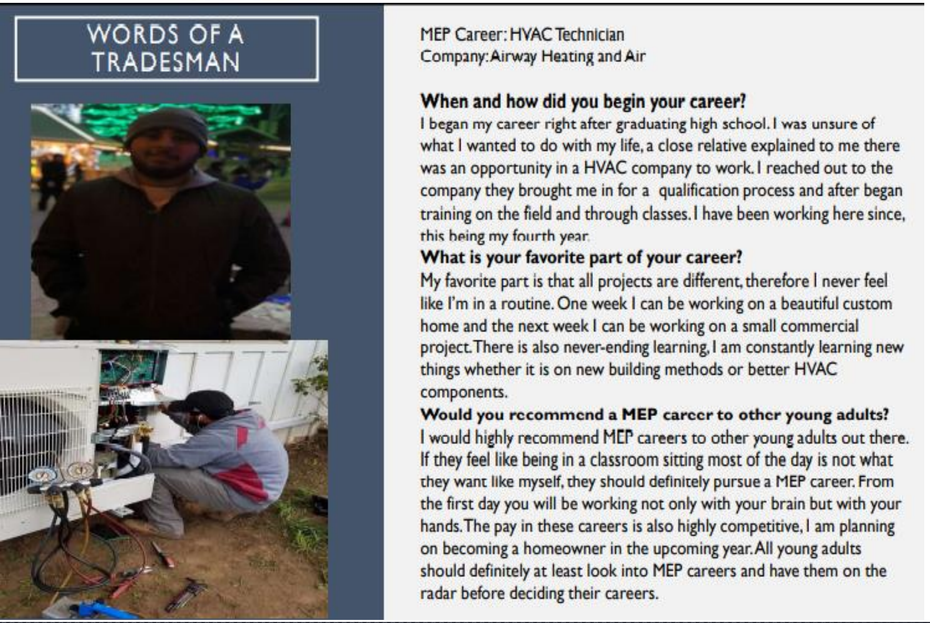
Addressing MEP Labor Shortages and Methods to Attract Young Adults into The Trades

The mechanical, electrical, and plumbing (MEP) fields require a large skilled workforce. In recent years, companies have experienced shortages of skilled employees. These shortages arise from many causes, a root cause identified is the decrease of young adults pursuing MEP careers. This project focuses on the reasons young adults are reluctant to enter these careers, such as misconceptions or lack of knowledge on MEP careers. A pool of twelve MEP companies was surveyed regarding their experiences with the causes of labor shortages and the short-term mitigation methods used. They were also asked about their perspective on the lack of young adults in their industry and the importance of attracting young talent. The responses indicated how crucial it is to attract young adults to the MEP fields, and that an efficient way to do so is by informing them on what they are and their associated benefits. In response to the survey outcome, a brochure and PowerPoint were developed. They will be presented in high schools for the purpose of informing students about the MEP industries. Through the PowerPoint and brochure, students in high school can learn about the MEP fields, potentially sparking interest to pursue a career in these trades.

Keywords: Construction, MEP, Labor Shortages, Specialties, High School



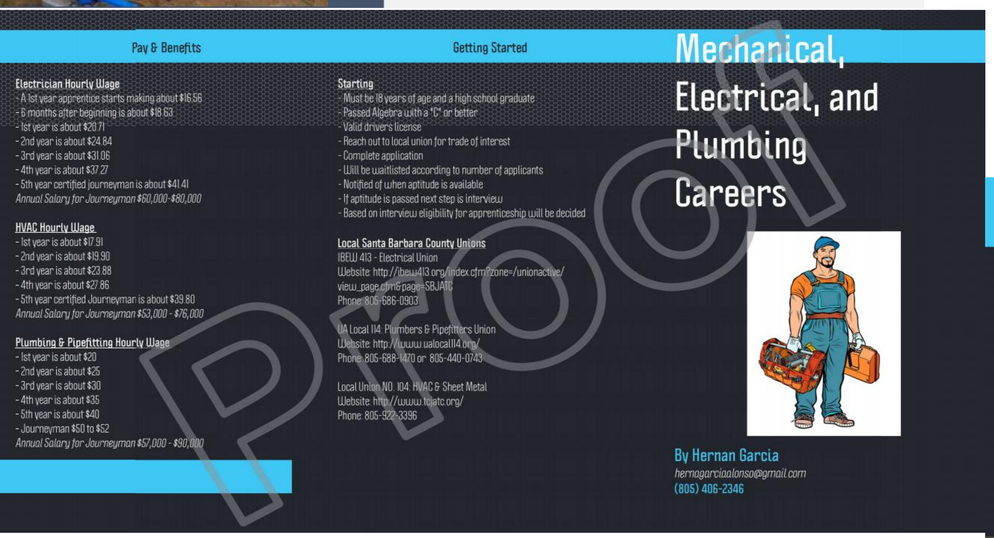
WORDS OF A TRADESMAN

MEP Career: HVAC Technician
Company: Airway Heating and Air

When and how did you begin your career?
I began my career right after graduating high school. I was unsure of what I wanted to do with my life, a close relative explained to me there was an opportunity in a HVAC company to work. I reached out to the company they brought me in for a qualification process and after began training on the field and through classes. I have been working here since, this being my fourth year.

What is your favorite part of your career?
My favorite part is that all projects are different, therefore I never feel like I'm in a routine. One week I can be working on a beautiful custom home and the next week I can be working on a small commercial project. There is also never-ending learning, I am constantly learning new things whether it is on new building methods or better HVAC components.

Would you recommend a MEP career to other young adults?
I would highly recommend MEP careers to other young adults out there. If they feel like being in a classroom sitting most of the day is not what they want like myself, they should definitely pursue a MEP career. From the first day you will be working not only with your brain but with your hands. The pay in these careers is also highly competitive, I am planning on becoming a homeowner in the upcoming year. All young adults should definitely at least look into MEP careers and have them on the radar before deciding their careers.



Pay & Benefits

Electrician Hourly Wage
- A 1st year apprentice starts making about $16.66
- 6 months after beginning is about $18.63
- 1st year is about $20.71
- 2nd year is about $24.84
- 3rd year is about $31.06
- 4th year is about $37.27
- 5th year certified journeyman is about $41.41

Annual Salary for Journeyman $60,000-$80,000

HVAC Hourly Wage
- 1st year is about $17.91
- 2nd year is about $19.90
- 3rd year is about $23.88
- 4th year is about $27.86
- 5th year certified Journeyman is about $39.80

Annual Salary for Journeyman $53,000 - $76,000

Plumbing & Pipefitting Hourly Wage
- 1st year is about $20
- 2nd year is about $25
- 3rd year is about $30
- 4th year is about $35
- 5th year is about $40
- Journeyman $50 to $52

Annual Salary for Journeyman $57,000 - $90,000

Getting Started

Starting
- Must be 18 years of age and a high school graduate
- Passed Algebra with a "C" or better
- Valid drivers license
- Reach out to local union for trade of interest
- Complete application
- Will be waitlisted according to number of applicants
- Notified of when aptitude is available
- If aptitude is passed next step is interview
- Based on interview eligibility for apprenticeship will be decided

Local Santa Barbara County Unions
IBEW 413 - Electrical Union
Website: http://ibew413.org/index.cfm?zone=/unionactive/view_page.cfm&page=SBJATC
Phone: 805-686-0303

UA Local 114: Plumbers & Pipefitters Union
Website: http://www.ualocal114.org/
Phone: 805-688-1470 or 805-440-0743

Local Union NO. 104: HVAC & Sheet Metal
Website: http://www.local104.org/
Phone: 805-922-3396

Mechanical, Electrical, and Plumbing Careers

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Proof Proof

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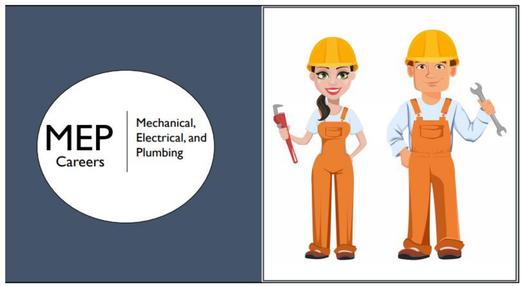
PowerPoint Outline

- Mechanical
- Electrical
- Plumbing & Pipefitting
- MEP Work
- Benefits of MEP Careers
- Pay & Process to Begin
- Words of Young Tradesman
- Contact Information to Begin A Career Process of For Further Research



MEP Careers

What is Mechanical?
- The mechanical construction industry is one which incorporates many fields including sheet metal, refrigeration, heating, ventilation, and air conditioning systems.
- Heating, Ventilation and Air Conditioning (HVAC) and refrigeration systems are to control interior temperature according to occupants needs. Sheet metal is a component used to fabricate duct to enable the flow of air in buildings which is bended and cut to desired dimensions, being part of the work done in the mechanical field.
- These systems are used in residential, commercial, and industrial construction. Residential construction being homes and any housing building like apartment or condominiums which will serve for people to live in. Commercial construction is buildings that will be for businesses such as restaurants, hotels, stores, and office skyscraper buildings, to name a few. Industrial construction can be factories or nuclear plants.
- Being in the mechanical field you will work with you hands building these different systems and learning how they function.
- Also, not only are you being trained on the job and in class but you will be paid while doing so.

What is Electrical?
- The electrical construction industry is also one that is very broad which will allow you to learn many different systems.
- Electrical construction is installing conductors like copper wire to provide a power source for lights, heat, power, and other systems. In the electrical industry you can choose the sector you want to pursue a career in.
- These sectors are outside lineman, inside wireman, residential wireman, and installer technician. Outside lineman install and maintain transmission lines which distribute power coming from power plants to buildings.
- Residential Wireman have the task of installing systems that distribute power for homes which involve lights, receptacles, fire alarm systems, and other systems.
- Inside wireman is very similar to a residential wireman but differs in the fact that they focus on distributing power for commercial and industrial buildings.
- Installer technicians install low voltage cabling and components which are used for data, video, voice, and signaling systems. All these fields are within the electrical industry, you choose based on your interests and availability in your area. This trade will allow also pay you while learning.

What is Plumbing and Pipefitting?
- The plumbing construction industry is one that is tasked with installing and maintaining the piping and plumbing systems in charge of distributing drinking water, waste, wastewater treatment, and ventilating systems.
- These systems are incorporated in all sectors of construction, residential, commercial, and industrial.
- Steamfitter-pipefitters are tasked with fabricating, installing, and maintaining process piping systems. These process piping systems differ from plumbing as they can transport other fluids besides water, ranging from oil, gas, and many other liquids. Steam fitting-pipefitting can require welding and there is demand for steamfitters-pipefitters in projects such as paper mills, oil refineries, and other chemical factories.
- There is demand for both plumbing and pipefitting in residential, commercial, and industrial construction. Both are great career options, as the other trades pursuing either of these careers is up to personal interest.
- This also a paid apprenticeship allowing you to earn an income while you learn.

Brochure Outline

- What is Mechanical
- What is Electrical
- What is Plumbing
- Electrician Hourly Wage
- HVAC Technician Hourly Wage
- Plumbing & Pipefitting Hourly Wage
- Starting
- Local Santa Barbara County Unions