

Good with your hands?  
Like solving problems?  
Then there's a skilled  
apprenticeship  
waiting for you.

## ► **INSIDE**

Why college doesn't  
always pay off

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New academy lets  
high-schoolers try the trades

**PG. 3**

He bought a house — at 21!

**PG. 4**

# Are you **Smart & Tough Enough?**



# Wanted: More Skilled Tradespeople

Apprenticeships give workers an edge in today's job market — so why aren't we telling young people about them?

BY MICHELLE CARL



**"I want to be good at my trade and make enough to support my family."**

KAYLA ADAMS  
Apprentice Sheet Metal Worker,  
Local 104

Kayla Adams was a single mom trying to make ends meet. With no high school diploma and a felony record, the only jobs she could get were in fast food restaurants.

Now a first-year apprentice with the Sheet Metal Workers Local 104, the 28-year-old is learning to build and install HVAC systems.

"I like the hands-on ... and the mental work," she says. "It's like a puzzle ... trying to get the pieces to fit, especially if there's a lot of sprinklers or lights or stuff in the air. You have to figure out how you're going to maneuver your duct around it."

Such apprenticeships give workers like Adams a chance to learn skills for jobs that are satisfying and in-demand. But many young people today are being told that college is the best path for career success. In reality, it's not the right path for everybody. Only 19 percent of students at most public four-year universities earn their bachelor's degree "on time."

And that degree comes at a high cost: An average student-loan debt of more than \$30,000.

Jeff Wright, a career technical education teacher and 2001 California Teacher of the Year, says that while he sees the benefits of college, he also feels high schools aren't showing students how an education in the building trades can lead to successful careers. In 2010 he helped create the Engineering Construction Academy in Stockton to introduce high school students to careers in drafting, carpentry, mechanical construction and more.

"The most exciting thing of all is seeing the kids get into the building trades," Wright says. "Some of them come back the next year and say, 'Mr. Wright! I'm making 30 bucks an hour already and I'm 18 years old!'"

An opportunity to "earn while you learn," an apprenticeship in the trades allows you to make a living while getting a no-cost education. And job prospects are good for those who complete the program, who are called journeymen. The

construction industry is slated to add 790,000 jobs by 2024, according to the Bureau of Labor Statistics, but some fear there won't be enough new skilled workers to fill them.

"We've basically lost a generation and half of our skilled tradespeople," Wright says, pointing to retiring Baby Boomers and workers who changed careers during the recession. This has left a "skills gap" that will impact economic growth across the country.

The answer lies in creating a pipeline of new tradespeople by revitalizing industrial arts in high schools and increasing interest in apprenticeship programs.

After she completes her apprenticeship program in five years, Adams knows that she'll be in a better situation to take care of herself and her 4-year-old daughter, who plays with a set of toy tools just like Mommy's.

"I want to be good at my trade and make enough to support my family [and] be comfortable," she says.

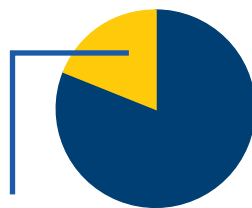
## THE REALITY OF GETTING A COLLEGE EDUCATION

Experts agree that some higher education is necessary for young people to have opportunities in today's job market. But a four-year college degree is expensive, takes a long time and is not going to be the best option for everyone.

The cost of a college education has **more than doubled** over the last three decades. <sup>1</sup>



Once you get there, it takes **longer to graduate**, only adding to costs.



**Only 19 percent** of full-time students at most public universities earn a bachelor's degree on time (four years). <sup>2</sup>

**7 in 10 seniors graduate with loans**, with an average of **\$30,100** per borrower. <sup>3</sup>



And when they enter the job market, just

**27 percent** of college grads have a job that is closely related to their major. <sup>4</sup>



SOURCES: 1) "Tuition Costs of Colleges and Universities." National Center for Education Statistics. Digest for Education Statistics. 2) Complete College America, "Four-Year Myth," 2014. 3) The Project on Student Debt, The Institute for College Access & Success, 2015. 4) Jaison Abel and Richard Dietz of the Federal Reserve Bank of New York, calculation based on U.S. Census data.

# Retooling Schools for Today's Jobs

New academy at Sacramento high school opens the door to a career in the trades

BY KATE GONZALES

**W**hen Rosemont High students step back onto campus in August, they will have new opportunities to give the trades a try thanks to a unique collaboration.

The new Engineering, Construction, & Design Academy opens the first day of school, with shops equipped with new and advanced industry technology, including 3-D printers and plasma cutters, so students can get hands-on experiences in careers with a demand for workers.

"It's about options," says Principal Elizabeth Vigil. "There are so many careers and so many pathways."

## Building on a popular program

The Academy builds on the school's existing Engineering Program, home to the award-winning Rosemont Robotics Club. Students in this program are so committed, they often stay after school or come early.

"We have kids who are here every day and weekends," Vigil says. "They want to be here all the time."

The Academy is a partnership between Sacramento City Unified School District, local unions and labor associations, which came

together to form the nonprofit MEP Career Pathway Academies.

"We're taking a small program and making it pretty robust," says Rob Fong, lead consultant on the project and former SCUSD board member.

## Filling a labor need

A major reason the Academy was created was to attract a younger generation of workers to the skilled trades. Many of these jobs are currently held by the Baby Boomer generation, but as they reach retirement age new slots are opening up.

Kaleah Parker is up for filling that need. An incoming senior, Parker looks forward to taking her first engineering design course at the academy. She'd like to pursue a career in engineering and, in addition to literally building bridges, inspire others.

"Once I'm actually in the engineering industry, I want to become a model for women engineers," she says.

## Expanding opportunities beyond high school

Due to a changing labor market, most jobs today require some kind of post-secondary

education. Rosemont High School is preparing students for college and career education.

Not every student will attend college, but "everyone will have the option of going to college if they want to," Vigil says, pointing out that all graduates will have completed the A-G requirements to enter the UC or CSU systems.

For those who don't choose college, the academy will link them with apprenticeships and certificate programs that will help them achieve success.

"The trades are still a great pathway to the middle class," says Fong. "Part of our deal with the school is, if kids are interested, we'll have apprenticeship spots waiting for them."

Now students in Sacramento City USD have a bigger picture of what career options are out there after high school.

"This really is not leaving any kids behind," Vigil says.

***Students from any SCUSD high school may attend the Engineering, Construction, & Design Academy by submitting an application during open enrollment (January/February).***

## CONSIDER A CAREER IN THE TRADES IF:

- ✓ You enjoy working with your hands
- ✓ Have an interest in math and science
- ✓ You're fascinated by how things are built
- ✓ You have a strong work ethic
- ✓ You value workplace camaraderie
- ✓ You possess an eagerness to learn new skills
- ✓ The thought of an office job is unappealing
- ✓ You enjoy variety in your job
- ✓ Flexible work schedules are important
- ✓ You're a problem solver
- ✓ A no-cost education sounds like a deal!



**"This really is not leaving any kids behind."**

ELIZABETH VIGIL  
Principal, Rosemont High School

Josh Fontaine, an apprentice with Local 447, says that while he dreamed of a being a basketball player, he has no regrets about becoming a plumber.  
PHOTO BY MELISSA UROFF



**“The apprenticeship has been really good to me. It’s helped me buy a house for my family.”**

**JOSH FONTAINE**  
*Apprentice Plumber,  
Local 447*

# Earning While He Learns

**Apprentice bought a house and started a family while learning to be a plumber**

**BY COREY RODDA**

**A**t 22 years old, Josh Fontaine earns \$36 an hour. He didn’t go to college to get his job, and in fact, he’s still only a trainee: Fontaine is learning to be a plumber in the Local 447 apprentice program.

Fontaine, who once dreamed of a professional basketball career, was drawn to the apprenticeship program because he’s always wanted a job with variety that didn’t involve spending hours in a cubicle. He was about to start studying at Folsom Lake College when he was told he was accepted into the apprenticeship program.

“I was 18 when I entered the apprenticeship program and I’ve been making good money since high school,” Fontaine says. “You work as an apprentice for five years and as long as you attend school and work all of your hours, you get a raise every 6 months. I started out earning \$16.71.”

Thanks to his apprenticeship earnings, Josh owns a 1,200-square-foot tract home in Diamond Springs that he purchased at 21 years old. He has been married to his high school sweetheart, Valeria, for three years and is a proud father to Tucker, his 2-year-old son, and has another little one on the way.

Through his Plumbers & Pipefitters Union, he has a retirement plan and medical, dental and vision insurance. If Fontaine works for the next 30 years, he will be able to retire with a pension at 58 years old.

The work is more than physical — it’s mental, too. Today’s tradespeople need to know higher level math and how to use sophisticated computer-aided drafting (CAD) tools.

“For the Local 447, we have a math entrance exam. There’s a lot of trigonometry, you need to lay things out and measure correctly,” says Aaron Stockwell, business manager with the Plumbers & Pipefitters Union Local 447. “A lot of brainpower goes into putting these systems in.”

Fontaine has learned how to calculate slope to determine the amount of piping he needs to install and how to calculate the pressure on pipes before they are buried in the ground or put behind sheetrock.

“I enjoy getting up to work each day, and my work gives me a sense of accomplishment each time that I learn something new,” he says.

Fontaine has no regrets about his career path. “The apprenticeship has been really good to me. It’s helped me buy a house for my family. I have one child and another on the way, and I feel comfortable with everything,” he says. “It’s a good way to earn a living.”

## HOW DO APPRENTICESHIPS WORK?

**1**

### **Qualify**

- Must have a high school diploma or equivalency
- Take and pass an entry exam test

**2**

### **Choose a Pre-apprenticeship**

- Identify contractors that offer a trial period on their team (unions can help identify contractors needed apprentices)

**3**

### **Education**

- Learn your trade in school and on job sites

**4**

### **Earn While You Learn!**

- Begin earning up to 40% of your journeyman wages, as well as medical benefits and contributions into your pension right away!
- Take 5 years to develop expertise

**5**

### **Become a Journeyman**

- Launch a rewarding career (with opportunities to complete bachelor’s degree or start your own business)
- Pay dues that help the next generation of apprentices get training



At right, Jorge Gomez is proud that his oldest son, Marco Gomez, will be the first in their family to graduate from college at UC Davis.  
PHOTO BY MELISSA UROFF

**"I feel like a dream came true."**

JORGE GOMEZ  
Journeyman Sheet Metal Worker,  
Local 104

## THE BENEFITS OF BECOMING A JOURNEYMAN

- **No-cost education** that actually pays apprentices while they are learning
- **Health coverage** for the employee and his or her family
- **Vacation**, so an employee doesn't lose wages while they take time off
- **401K** with employer match
- **Pension** plan
- **Good wages** that can support a family.

The total compensation (including benefits) for new journeymen in the local unions is:

**Sheet Metal Worker:** \$79/hr  
**Plumber:** \$73/hr  
**Electrician:** \$68/hr

These benefits make the difference in whether a family can afford to purchase a car, home, or send their children to college without taking out loans. The higher wages journeymen earn relieve families of financial stresses, so they are able to provide opportunities for their children and make a stable plan for their future.

# All For His Family

Father's second career as a journeyman pays off

BY KATE GONZALES

**W**hen Jorge Gomez' oldest son, Marco, graduates from the University of California, Davis next year, he will be the first in his family to earn a college degree. Gomez, who immigrated from Mexico when he was 17, worked hard to provide for his two sons. He says he's proud that they have the opportunity to get a good education.

"I feel pretty good," says Gomez. "I feel like a dream came true."

This dream was made possible when Gomez became an apprentice sheet metal worker.

A decade ago, Gomez was making a decent living in roofing, but he didn't have the benefits like health coverage and retirement savings that union jobs are known for. Then his brother-in-law told him about apprenticeship opportunities. A father to two young boys at the time, he was drawn to the Northern California Valley Sheet Metal Workers' Training Center by the promise of higher wages and benefits for his family.

"I didn't have anything when I was roofing," he remembers. "I was making pretty good money ... but it does not compare with the money [and benefits] right now."

As a sheet metal apprentice, Gomez worked for Air Systems of Sacramento. In the five-year program he received hands-on training

and took courses to learn duct design, welding and other valuable skills, including communication.

"I came [to the U.S.] when I was 17 years old, so my English is not really good," he says. "It was a little hard for me in the apprenticeship. ... But I have been working with pretty good people. They support me and they try to understand me."

While completing his apprenticeship, Gomez worked eight hours a day, stopped off at home to spend time with his sons, then attended classes that went into the night. It was hard work, but today Gomez is a journeyman working for a company in Fremont. He says the investment he made definitely paid off.

"I made the right choice to go into the program and to the union," he says.

That decision has provided security for Jorge's future and family, and modeled the value of hard work for his sons.

"I'm really proud of him," Marco says, adding that his father overcame language and education barriers to complete the program. "He's always been working hard ... I'm really happy he'll be able to retire comfortably, after decades of hard manual labor."

# Work is Waiting

Once a journeyman himself, CEO shares why his business depends on skilled workers

BY AMANDA CARAWAY

Even the CEO of one of the most successful and well-respected electrical contractors in Northern California has to know how to wire conduit.

Frank Schetter began his career as an apprentice with the International Brotherhood of Electrical Workers (IBEW) in 1970. Today, he's the CEO of Schetter Electric, which has wired buildings including the CALSTRS headquarters, the Roseville Galleria expansion and the rec center at Sacramento State.

But it wouldn't have been possible without an apprenticeship, and Schetter maintains it's the best way to join the industry.

"Apprentices work for a variety of partner companies with different specialties to gain a broad skill set," he says. "In addition to learning industry basics like installation, apprentices learn all the new technologies such as solar energy and wind generation."

Like a college degree, the apprenticeship program gives people the necessary building blocks to be successful in an industry. Apprentices begin by learning safety basics. They must complete OSHA (Occupational Safety and Health Administration) training before they can work on a construction site.

Schetter Electric depends on having well-trained workers who are prepared for a variety of job sites, whether they are hospitals, parking structures or art museums.

"We have full confidence that we can send graduates of the program out on any job and they can handle the electrical work that's

placed in front of them," Schetter says. "That makes me proud to be a part of this program."

Once apprentices graduate from the program, there are a lot of opportunities for career growth as they gain more experience. They begin working as a journeyman and can move up through the ranks to become a foreman and maybe even start a contracting business of their own.

Because the work is on-site and can't be outsourced, Schetter Electric is always in need of large crews of workers for its jobs.

"There's a shortage of workers for construction sites throughout northern California, which means there's a lot of work waiting for graduates," he says.

Starting pay for apprentices is between \$12-\$13 per hour and they receive a raise every six months as they move through the program. Once they graduate, they can be hired as a journeyman and earn up to \$70 per hour with full health and retirement benefits.

Schetter Electric has been hiring apprentices for more than 40 years, and the company plans to continue doing so.

"We need more smart apprentices with an aptitude to learn who will take pride in their work," he says.



Frank Schetter started his career as an apprentice. Now he's the CEO of Schetter Electric.  
PHOTO BY MELISSA UROFF

**"There's a shortage of workers for construction sites throughout northern California, which means there's a lot of work waiting for graduates."**

FRANK SCHETTER, CEO OF SCHETTER ELECTRIC AND JOURNEYMAN ELECTRICIAN

## ENDLESS OPTIONS

With an education in a skilled trade, there's no limit to where you can go. Journeymen can work for various public and private sector employers — they can even start their own contracting business. With additional certifications and education, having a journeyman's license can be a foundation for a career as an:

- Architect
- Building Inspector
- CAD/BIM Operator
- Civil Engineer
- Construction Manager
- Contract Administrator
- Electric Meter Installer
- Electrical Designer
- Facilities Management
- Field Engineer
- Fire Protection Engineer
- Foreman
- HVAC Controls Engineer
- Land Surveyor
- Loss Prevention Manager
- Mechanical Coordinator
- Mechanical Engineer
- Planner
- Purchasing Coordinator
- Roofer
- Safety Coordinator
- Safety Director
- Scheduler
- Structural Engineer
- Welder

# Skilled Workers, Healthy Sacramento

## APPRENTICESHIPS BENEFIT:

BY MICHELLE CARL

### SKILLED TRADES WORKERS



#### They get:

- Skills that are in demand
- Access to health insurance and pension
- Free education
- Higher wages

### EMPLOYERS



#### They get:

- Reduced worker's compensation costs (safer workers)
- Pipeline for new skilled workers
- Workers trained to industry specifications
- Less need to import skilled workers

### WHOLE COMMUNITY

#### We all get:

- **Local spending:** Skilled workers will pay higher income taxes on their higher wages, as well as have more purchasing power in the local community.
- **Safety:** Skilled workers design and maintain our infrastructure using federal and state safety standards, ensuring bridges, buildings and other public structures are safe for all of us.
- **Infrastructure:** Skilled workers are needed to pave our roads, construct our buildings, operate our power grid and keep our sewers running — things we all need in our daily lives.
- **Economic growth:** Having a skilled workforce keeps America competitive globally and promotes a system that favors economic growth. We can't build a better America without people who can build!

### SKILLED TRADES AT WORK: THE GOLDEN 1 CENTER

Major public-private projects benefit from having a local, skilled workforce. Developers can set goals to keep workers local and provide educational opportunities for apprentices. Construction of the \$557 million Golden 1 Center project took:

- **3,213 journeymen** (sheet-metal installers, electricians, plumbers and other construction workers)
- **1.3 million work hours**
- **655 apprentices**, 91 of which were from "high-need" backgrounds (veterans, formerly incarcerated, economically disadvantaged)

# Your Next Step is Waiting

Are you considering a career in the trades? Explore these unions in the area and find out if their apprenticeship programs are right for you:



## ► Plumbers & Pipefitters Local 447

[www.ualocal447.org](http://www.ualocal447.org)  
916-383-1102

This union's training center in Sacramento offers journeyman and five-year apprentice training in **plumbing, pipe fitting and HVAC service** as well as advanced certifications in **welding, industrial rigging, medical gas installation, crane signaling and foreman supervision**. Applicants must be 18 years or older, have a high school diploma or G.E.D and first pass an industry entrance examination.

## ► International Brotherhood of Electrical Workers Local 340

[ibewlocal340.org](http://ibewlocal340.org)  
916-927-0985

This union offers five-year **Inside Wireman** or three-year **Sound and Communications Installer** apprenticeship programs. Applicants must be at least 18 years or older, have a high school diploma, G.E.D. certificate or college degree and pass both a written aptitude test and oral interview.

## ► Sheet Metal Workers Local 104

[www.smw104.org](http://www.smw104.org)  
916-922-9381

The Northern California Valley Sheet Metal Workers' Training Center provides five-year **apprenticeship programs**. You must be at least 18 years of age, have a high school diploma, G.E.D or equivalency certificate, and an ASVAB AFQT score of 40 or higher.

Special thanks to the partners who are making the Engineering, Construction, & Design Academy at Rosemont High School possible:

- Associated Plumbing and Mechanical Contractors
- National Electric Contractors Association
- Northern California Mechanical Contractors Association
- Sheet Metal & Air Conditioning Contractors National Association
- IBEW Local 340
- SMW Local 104
- UA Local 447

## INVEST IN OUR FUTURE!

Does your business depend on a new generation of workers who are Smart & Tough Enough? The ECD Academy at Rosemont High School in Sacramento needs \$350,000 to turn classrooms into an engineering and design center and to transform shop spaces into mechanical and construction labs. Invest in our kids! Invest in our community!

**Donate money and/or equipment by contacting Claire Donnenwirth at the nonprofit MEP Career Pathways Academies: 916-475-1226.**