INSIDER

US MARKETS CLOSED   In the news

▼ **Dow Jones** +1.58%   ▼ **Nasdaq** +1.09%   ▼ **S&P 500** +1.2%   ▲ **META** -0.12%   ▲ **TSLA** -0.2
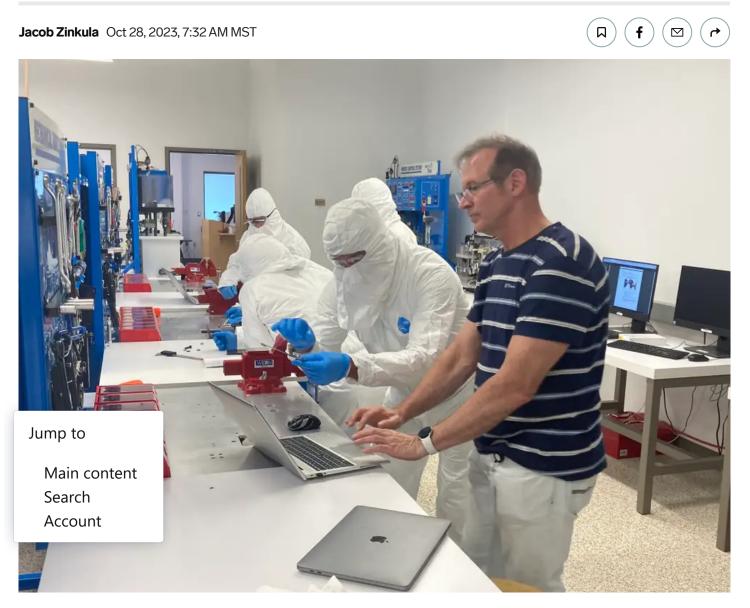
HOME > ECONOMY

I attended a 10-day crash course on how to be a semiconductor technician. It has a 300-person waitlist and is being called the job of the future — but the protective 'bunny suit' is a drawback.

Jacob Zinkula Oct 28, 2023, 7:32 AM MST

Jump to

Main content
Search
Account

Quick Start professor Dan Dangelo with a student   Jacob Zinkula

I attended three days of a semiconductor industry training program in Phoenix, Arizona.

The students enrolled in the program for different reasons but many hoped to land a career in the industry.

Program graduates have had mixed success with landing a job after the program.

INSIDER **TODAY**   NEW LOOK

Sign up to get the inside scoop on today's biggest stories in markets, tech, and business — delivered daily. **Read preview**

| Email address
Enter your email | Sign up |

By clicking "Sign Up", you accept our Terms of Service and Privacy Policy. You can opt-out at any time.

In Phoenix, Arizona, residents are signing up in droves to learn about semiconductor chips.

Last year, three community colleges in the state's Maricopa County launched the Quick Start program, a 10-day crash course on how to be a semiconductor processing technician. The program is the product of a partnership between the schools and major semiconductor companies — the latter have raised alarms about a lack of skilled workers to staff the tens of thousands of industry jobs to be created in the US over the next decade. Many of are set to arrive in Arizona, the nation's leader in ductor investment, where companies are spending billions facture the chips that power everything from iPhones to washing machines to military equipment.

While the industry is expected to hire for a wide range of roles, including engineers and computer scientists, entry-level semiconductor technicians require less education and work experience. Technicians, whose pay starts at between $20 and $25 per hour, according to the program's website, aid the manufacturing process by operating, inspecting, and troubleshooting various equipment.

Since kicking off in July of last year, over 3,000 people have passed the program's online pre-test, which was temporarily closed in March due to excess demand before being reopened in September. As of October, nearly 900 students have enrolled in the program, over 700 have successfully completed it, and roughly 300 are on a waitlist. Nearly two-thirds of students have been people of color, and half have been first-generation college students.

I visited Quick Start's Mesa Community College program for three days in September and observed classes to learn why people enrolled, what they learn in the classes, and whether the program is truly a pipeline to employment in the semiconductor industry.

Quick Start students enroll in the program for different reasons

Jump to

Main content
Search
Account

A Quick Start program class Jacob Zinkula

Quick Start student Collin Gardner, 22, told Insider he learned about the opportunity from a YouTube ad. He had been working at Taco Bell for the past three years, and after earning his bachelor's in psychology in May, he said he struggled to find a job in the field because most required a Master's degree.

"I applied because I thought it was a simple, inexpensive certification that would get me a job somewhat immediately working in the industry, hoping that I would enjoy the work and get at least better pay than Taco Bell," he said.

Paul Rojas, who works in the telecommunications industry, said he has no plans to pursue a technician job, but wants to be prepared for potential opportunities the industry might provide someday.

"I wanted to take this course to learn about the industry since new manufacturing plants and new jobs are coming to Arizona," Rojas, 38, said. "I also just enjoy learning about new things, and this is cool and interesting."

Jump to

Main content
Search
Account

ober, 65% of Quick Start students have been people of % have been women, 44% have been between 18 and 29 , and 50% have been first-generation college students, g to program data.

Quick Start provides courses at different times of the day to accommodate individuals who work full-time — mine was scheduled from 4:30 p.m. to 8:30 p.m. each day. The class included about 10 students and a professor, Dan Dangelo, who also works as an engineer at Intel.

In addition to a $15 registration fee, the tuition for the course is $291. However the tuition isn't paid up front, and any Arizona resident who successfully passes the course has their tuition fully covered by grant funding.

Classes were a mixture of lectures and labs — with "bunny suits"

students Jacob Zinkula

Jump to

Main content
Search
Account

At the start of classes, students were shown videos to help introduce them to the semiconductor industry.

The classes included a mix of lectures and labs. For one lab assignment, students put on "bunny suits" — garments used to minimize contaminants in the semiconductor industry — and practiced troubleshooting equipment with various tools in a simulation chip factory.

While bunny suits might look fun to wear, they can get hot and uncomfortable, particularly for industry workers who don them for hours at a time. A program representative told me the suit is one of the top reasons some students ultimately decide the industry isn't for them.

Over the course of the two weeks, the students are introduced to topics that include electrical theory, circuits, schematics, hand tools, safety, clean room protocols, model-based problem solving, lean manufacturing, and vacuum technology.

While the course material might seem quite complicated, 93% of students who completed the full course as of June passed the final exam, according to program data. These students received a semiconductor pre-apprentice credential, which some have used to land a job in the industry.

nts have had mixed success when it comes ing a career

Quick Start students work on a lab assignment in September Jacob Zinkula

Throughout the classes, the professor regularly advised students to remember certain pieces of information for any future interviews. Quick Start students are promised the opportunity to interview with semiconductor companies through the program's occasional job fairs.

Of the 240 former Quick Start students who filled out an employment outcome form as of June, 31% said they had been "hired in field," according to program data. Fifty-eight percent were still looking for employment, and 8% were not looking for work.

Over the next several years, the semiconductor jobs boom is expected to hit Arizona and provide additional pathways for Quick Start students.

near term, a slowdown in the demand for chips has led mpanies in the industry to lay off workers or enact hiring

Jump to

Main content
Search
Account

Leah Palmer, executive director for the Arizona Advanced Manufacturing Institute at Mesa Community College, told Insider that this has made it difficult for many Quick Start graduates to find employment in the industry.

"We're going to have to slow down our pipeline so that we're not putting out more people with absolutely no possibility of employment," Palmer said.

A few weeks after Gardner's Quick Start class ended, Insider followed up with him to learn what his plan was moving forward. He's grown more pessimistic about his chances of landing a job in the semiconductor industry.

"I'll keep looking, but it seems like I would have to get an associate's in electrical engineering or something similar to have much of a chance of getting a job in the industry," he said. "I did take this class thinking it would be more of a straight shot into a job, so I'm a little disappointed in that regard."

Read next

ECONOMY

TSMC is stalling an agreement that would make its Phoenix plant safer and more efficient, an Arizona union says

Jump to

Main content
Search
Account

Economy   Politics   Intel   More…