

A Unique Solution to Tackle the Shortage of CNC Machinists



California
Community
Colleges



Presented by:

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The Uniquely Abled Project is exactly as it sounds – a program for uniquely abled individuals, who have huge potential and need to be given the chance to succeed in a meaningful career.

Agenda

- ▶ College of the Canyons (COC)
- ▶ Tooling U-SME (TU-SME)
- ▶ About Uniquely Abled Academy (UAA)
 - Business Case Study
- ▶ Program Details
 - COC | CNC Machining Curriculum and Pathway
 - Required Steps
 - Candidate Profile
 - What it takes for success
- ▶ Impact



The Uniquely Abled Project





In the spring of 2018, College of the Canyons, in Santa Clarita, California, was one of only two colleges to get on board with the Uniquely Abled Project (UAP) program.



The UAP provided an implementation guideline called The **Uniquely Abled Academy** (UAA) for structure, and a career pathway for the program.

College of the Canyons

- ▶ Founded in 1969
- ▶ Community College located in Santa Clarita, California
- ▶ Provides Pre-Apprenticeship, Fast-Track, CNC machinist training
- ▶ Training is delivered between classroom and hands-on at the Center for Applied Competitive Technologies (CATC) and (COC) CNC fabrication lab
- ▶ Competency-based programming with demonstration of skill through online tests and machining actual parts
- ▶ The Fast-Track CNC program placement rate is consistently over 85 %



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Tooling U-SME

- ▶ Built on over 80-years of experience
- ▶ Delivers competency-based online learning and development solutions to the manufacturing community
- ▶ Works with more than half of all Fortune 500[®] manufacturing companies nationwide
- ▶ Works with over 700 educational institutions nationwide
- ▶ Partners with COC to provide online training curriculum for the Uniquely Abled Academy hybrid program.



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Tooling U-SME



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Tooling U-SME offers more than 500 online classes in manufacturing that have been reviewed and validated by industry experts.

CNC Machining module samples (# of modules):

- Safety (17)
- Shop math / blueprint reading (17)
- Manual machining (9)
- CNC machining (17)
- Inspection (15)
- Workholding (8) **TOTAL = 83**

Benefits of Hybrid Learning



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Enhance Flexibility for students

Enhance Flexibility for Instructors

Increase time for Hands-On Training

Provides Pre & Post Assessment Data

Preparation for NIMS Credentials

Integrates Technology in Learning Process



About Uniquely Abled Academy



The Uniquely Abled Project



The Uniquely Abled Academy provides an intensive career preparation program for job seekers with high-functioning autism looking for an opportunity to start a new career as a Computer Numerically Controlled (CNC) machinist

Business Case Study



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▶ Demand for CNC Machinists:

The Bureau of Labor Statistics expects demand for this role to expand by 16 percent through 2026.

▶ Discovery: Production meets Producer

While doing a routine business analysis, Dr. Ivan Rosenberg recognized that many of the sought-after characteristics of CNC machinists matched young adults with high-functioning autism

▶ Development

Knowing that parents of autistic children are often dedicated to finding ways to help their children be independent, Dr. Rosenberg came up with a large-scale solution, which he named the Uniquely Abled Project (UAP).



Business Case Study



The Uniquely Abled Project



▶ Filling a need

Graduates becoming employees are no longer on the government payroll and are filling a real need for manufacturing jobs while increasing the employment rate in a community

▶ No Cost to Trainees

Sponsorships, such as the Department of Rehabilitation and Goodwill Industries, pay for the program alleviating barriers to entry for students and parents

▶ New Business

The UAA program is beneficial to a college by opening up new employees for them to service in other areas



Program Details



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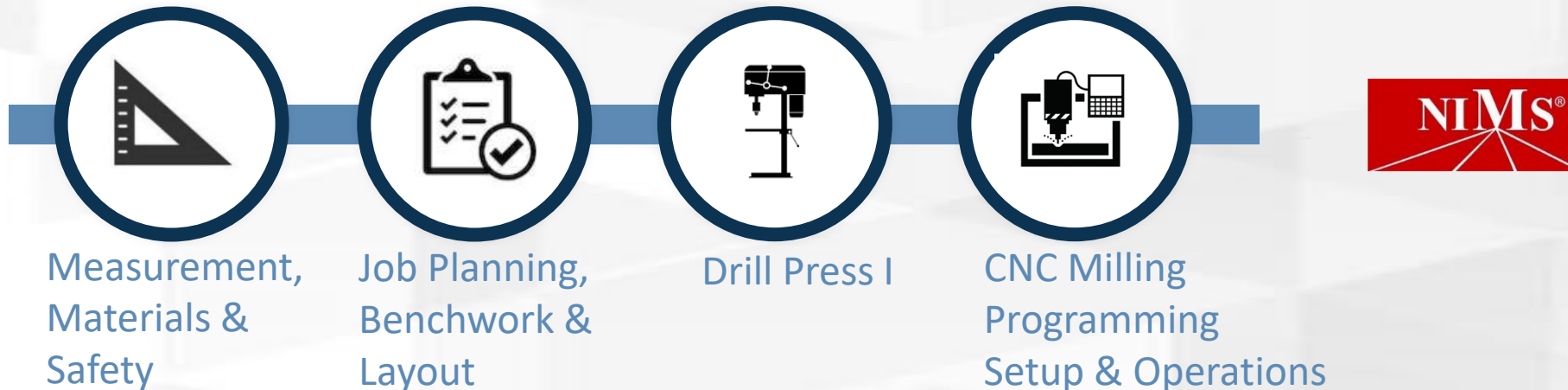
An intense twelve weeks of over 300 hours of CNC training focused on developing entry-level Pre Apprenticeship CNC machinists

- 1. Manufacturing processes and safety**
- 2. Shop math and blueprint reading**
- 3. Precision Measuring Instruments for Inspection**
- 4. Manual machining**
- 5. Tool selection and geometry**
- 6. CNC setup and operation**
- 7. Fixtures and work holding**
- 8. CNC basic programming**
- 9. Understanding axis and programming (loops, cycles, routines)**
- 10. G Codes, M Codes, Feed Rates**



Program Details

- ▶ 300+ hours | 12 weeks
- ▶ Fast-Track CNC program | Emulates employment
- ▶ Up to 4 Industry Recognized Credentials | NIMS Level I



- ▶ 83 online modules

Program Details

At the end of the program, graduates come out with a full package of credentials and benefits including:

- ▶ ACT WorkKeys Certificate
- ▶ College Certificate of Completion
- ▶ Polished Resume
- ▶ Products they have manufactured
- ▶ Increased professional skills
- ▶ Interview experience
- ▶ Scheduled Job Interviews



CNC Machinist Career Pathway



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Entry-level

- Operator
- Inspector
- Deburr Technician

Leadership

- Cell Leader
- Team Leader
- Supervisor

Management

- Manager
- Director
- Vice President
- General Mgr
- President

Career path progression is determined by work ethic, attitude, and a life-long learning mindset



What to Do – Required Services



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- ▶ Recruit candidates that match the unique abilities for specific B2B careers (i.e. CNC machinist)
- ▶ Confirm financial and family support
- ▶ Provide technical skills and job readiness training
- ▶ Conduct workshops for instructors and potential employers about how to communicate and manage these uniquely abled individuals
- ▶ Assist job search, placement and post-hire support

UAA Candidate Profile

- ▶ Attendance and desire
- ▶ 18-years or older
- ▶ High school graduate or GED
- ▶ ACT WorkKeys pre-test
- ▶ Secure funding
- ▶ Transportation
- ▶ Ability to work M-F, 8-hours a day
- ▶ Comfortable in training environment
- ▶ A positive attitude



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Steps for Success

It's a tremendous challenge to find—and keep—candidates who possess the particular combination of skills and characteristics needed for CNC. In addition to having good programming skills, the best candidates must exhibit strong focus, attention to detail, and discipline to perform sometimes repetitive tasks alone, safely, and without distraction.



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Steps for Success



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Exploring their Environment

Full disclosure of the environment was key – not only as a safety factor, but for the success of the trainee.

“There are loud noises, strong smells, and big machines. We do this because we don’t want to waste anyone’s time trying to adjust. The effort is huge on their part, and we are there to support them all along the way.”

The Stereotype



Today’s Reality



Steps for Success



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Focused Job Fair

Local and regional manufacturers come together and have 15 minute meet and greets with the students. Graduates are able to meet in a private setting for interviews and companies follow-up within a few weeks with invitations to work.



LUSK QUALITY MACHINE PRODUCTS



The Impact



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- ▶ 95+ percent of employees hired in the program are still working in a manufacturing position, most with their original hiring company
- ▶ Helps meet 7% requirement for those doing business with the government
- ▶ Increases morale and productivity in the workplace
- ▶ Impacts local economy by reducing government payroll and increasing employment rate
- ▶ Parents can breathe easier knowing that their child is on a career pathway towards a solid future

From the Employers

Björn N.P. Paulsson, CEO & President
Paulsson, Inc.

“I just hired two CNC operators from The Uniquely Abled Academy. We now have five new Haas machines and they are running the machines very well. They have already become an asset to the company and I could not be happier.”



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From the Employers

Brian Schlofelt, President
Pacific Metal Stampings

“Solid workers, staying on task, eager to take on more knowledge and try anything you throw at them. I would definitely hire again, it would be my first choice.”



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From the Employers

Randy Lusk, CEO

Lusk Quality

“They are so appreciative of any input and any opportunity to learn something new. They grasp things much faster than the average student.”



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From the Employers

Susan Solebello, Human Resource Generalist
Mulgrew Aircraft Components, Inc.

“This is working out so well. We are going to start cross training on a more advanced machines.”



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From the Employers

Alain Belisle, CEO
Intelitek Engineering

“Predominate traits – very focused, very dedicated, and attention to detail. We have clients that have high accuracy requirements, which makes the UAA graduates perfect candidates for that type of work.”



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QUESTIONS?



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