



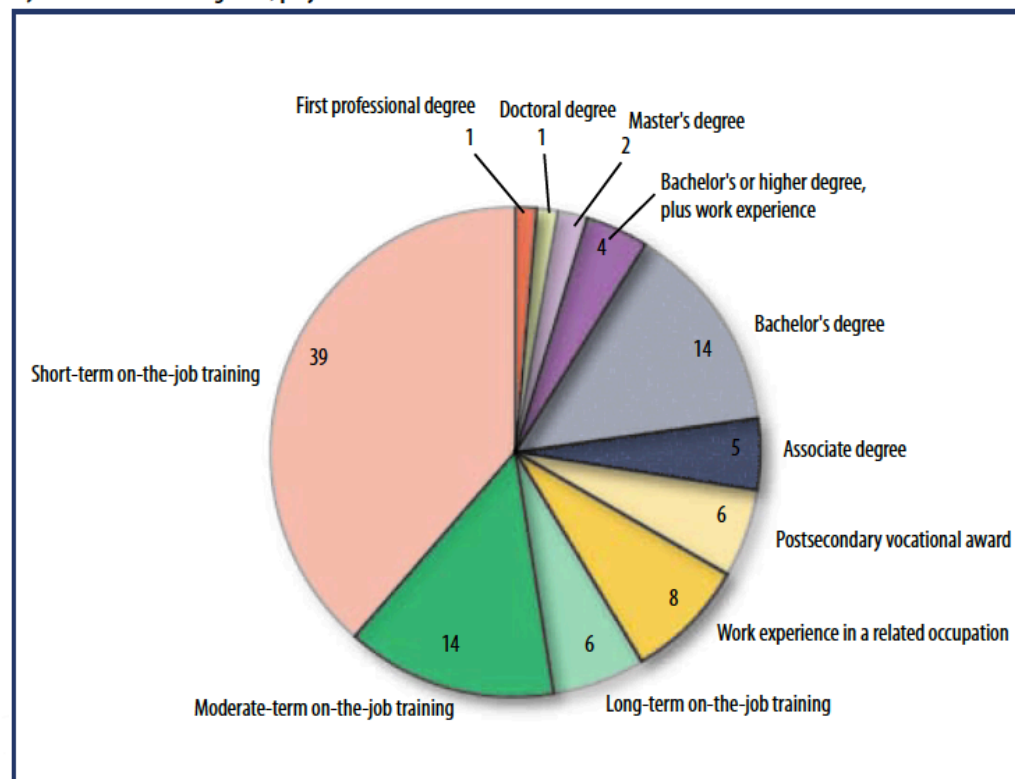
# **Building A Skilled Workforce**

**Union Registered Apprenticeship Programs since  
1937**

# Gold Collar “STEM” Jobs/Careers

- BLS estimates that nearly half (45%) of all job openings in the next ten years (**21 million openings**) will require middle level skill. (STEM technicians that are high skill, high wage and high demand in the workforce)
- Many potential STEM technicians may be in the **middle quartiles** of math and science achievement. These students are interested in math and science (applied) and are “hands on” or “**contextual/applied**” learners

Percent distribution of job openings due to growth and replacement needs  
by education or training level, projected 2008–18



Most job openings over the projections decade will be in occupations that require short-term on-the-job training. Occupations requiring moderate-term on-the-job training and those requiring a bachelor's degree are also expected to have a large share of the projected job openings.

Source: Occupational Outlook Quarterly  
US. Department of Labor  
U.S.Bureau of Labor Statistics  
Winter 2009-2010

## Perceptions and Realities are way out of balance

Only 22% of our graduates will need a bachelors degree or higher.

Additionally, 5% of high school graduates will need an Associates Degree.

Our Current Educational Policies are inconsistent with this data

If our goal is to send 100% of our students to college, we are not serving all of our students realistically

Data from a College Entrance Exam and sending 100% of our graduates to college should not be our measurement of school success

# CTE Pathways That Educate/Train Americans For “Gold Collar” Jobs/Careers

- Associates Degree (AAS)
- Post Secondary Certificates
- Industry Based Certifications
- **Apprenticeships (todays topic)**
- All the above are examples of employer-based training (employer tuition refund programs are plentiful)
- At least some postsecondary education or training is becoming the entry-level requirement for many “gold collar” jobs.



# Manufacturing Jobs

- 1 million new manufacturing jobs will open up in the next 10 years (PriceWaterhouseCooper)
- 600,000 current manufacturing jobs open today around the U.S. (BLS)
- 30,000 new manufacturing jobs will be created each year in Illinois for the next ten years (Illinois Manufacturing Association)

# AMERICA'S

THE GROWING CRISIS FOR SKILLED LABOR

# SKILLS GAP

AVERAGE AGE:

**56**

YEARS UNTIL  
RETIREMENT:

**5-15**



## 10 million

**NEW SKILLED WORKERS NEEDED BY 2020**

**SKILLED WORKER:** A worker who has a special skill, knowledge, or ability in technical work.  
(ie. Factory worker, bricklayer, electrician etc.)

## 600,000

**SKILLED JOBS ARE GOING UNFILLED**

## 83%

OF COMPANIES REPORT  
A MODERATE TO SERIOUS  
SHORTAGE OF SKILLED  
WORKERS



## 69%

EXPECT THE SHORTAGE  
TO GROW WORSE IN  
THE NEXT 3-5 YEARS



# STEM Employment/Industries

- Process Plants (Chemical, Oil, Gas etc.)
- Manufacturing (across the spectrum)
- Trades (Electricians, Boilermakers, Carpenters, Pipefitters, Welders, Machinists, HVAC etc.)
- Utilities (Nuclear, Coal, Gas, Renewables)
- Commercial Buildings ( Hospitals, High Rises, Apartment Buildings, Physical Plants etc.)

# What Is Registered Apprenticeship

- **It's a job/career** :Includes at least 2000 hours of on-the-job learning from a mentor.
- **It's an education**: Includes at least 144 hours of technical and/or classroom training per year.
- **It's a credential**: Receive a nationally recognized and industry valued credential.
- **It's industry driven**: Designed to meet industry's demand for highly skilled occupations

# Registered Apprenticeship Advantages

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- Employer Benefits
- Apprentice Benefits
- Workforce Development Benefits
- Community Benefits
- National Benefits



# Employer Benefits

Earn While You Learn

Highly skilled employees

- Reduced turnover rates
- High productivity
- Lower recruitment investment
- More diverse workforce
- Creation of career pathways

# Apprentice Benefits

- Nationally recognized
- Improved skills and competencies
- Higher wages as skills increase
- Career advancement
- Continuing training at local union training centers
- Excellent benefit packages (including pension)
- Job flexibility

# Workforce Development/Community/ National Advantages

- Align with workforce system goals and performance outcomes
- Industry-driven with 250,000 sponsors nationwide
- Nearly 400,000 apprentices nationwide
- Wages earned spent in local communities
- Projects built with skilled labor improve quality
- Veterans may use GI bill for OJT (monthly VA benefits along with regular pay)

# Are You Ready For An Apprenticeship????

- A rewarding but demanding choice
- Requires determination, commitment, attitude and physical conditioning to succeed
- Apprenticeship graduates average \$45,000 to \$60,000 per year depending on career and region of country
- The ability to “learn and earn” (no college debt)
- Develop a skillset that is in demand by high tech industries
- A journey level worker receives excellent wages and benefits

# Typical Apprenticeship Requirements

- High school diploma or G.E.D certificate
- Birth certificate (authorization to work in USA)
- Pass pre-employment aptitude testing (math/reading/writing/charts/graphs/assembly etc.)
- Pass alcohol/drug screen (remain fit for duty during training/employment)
- 18 years of age upon starting
- Valid drivers license and clean driving record (good transportation)
- If military record, a DD214 is required
- Good health and physically able to perform all phases of work
- Previous education and training may be able to be applied in the selected apprenticeship program (supply written work history/education transcripts)



# Illinois State Apprenticeship Committee (ISAC) TRADES

- Ralph Affrunti, Chicago Building Trades Council  
Michael Angelo, IBEW 461 JATC  
Al Bass, Ironworkers Local 1  
Ed Bogdan, DC #14 Painters/Tapers JATC  
Craig Triplett, Carpenter Training Center  
John Flynn, BAC District Council Training  
Mark Greenawalt, Local 65 Plumbers & Pipefitters  
Marty Headtke, Roofers/Waterprofers Local 11  
Russell Gschwind, Ironworkers Local 63  
Ken O'Donnell, Glaziers, Local 27  
Bill Breheny, Ceramic Tile & Terrazzo BAC  
Mark Kara, IUOE Local 150  
Maurice King, IBEW Local 134 Chicago  
John Leen, Pipefitter Local 597

# ISAC Cont.

- Stephen J. Lefaver, Painters Dist. Council 30 JATC  
David Laninga, Tuckpointers, Local 21  
Dennis Malec, IBEW Local 150  
John Manley, Plasterers Local 5  
Patrick McGreal, Local 281 Sprinkler Fitters  
Dan O'Donnell, Machinery Movers, Riggers & Machinery Erectors Local 136  
Anthony Rainey, UAW  
Dan Reda, IUOE Local 150  
Bob Schwartz, Boilermakers Local 1  
Michael Skraba, Sheet Metal Workers  
Martin Turek, IUOE Local 150  
Terry Uhr, Quad City Painters  
Ray Urbonas, Teamsters JC 25, Training  
Don Walker, Bricklayers local 21  
John Warren, Jr, IBEW Local 176  
John Yock, Plumbers, Local 130

# Local Union Websites

- Mechanics Local 701, Countryside, IL [www.mech701.org](http://www.mech701.org)
- IBEW Local 176, Joliet, IL [www.ibewlocal176.org](http://www.ibewlocal176.org)
- Carpenters Training Center, Elk Grove Village, IL [www.chicap.org](http://www.chicap.org)
- Roofers/Waterproofing Local 11, Indian Head Park, IL [www.chicagoroofers.org](http://www.chicagoroofers.org)
- Operating Engineers Local 150, Wilmington, IL [www.asiplocal150.org](http://www.asiplocal150.org)
- Craft Laborers, Chicago, IL [www.chicagolaborers.org](http://www.chicagolaborers.org)
- Heat/Frost Insulators Local 17, Tinley park, IL
- Pipefitters Local 597, Mokena, IL [www.pftf597.org](http://www.pftf597.org)
- Plumbers Local 130, Joliet, IL [www.jac130.org](http://www.jac130.org)
- Boilermakers Local 1, Chicago/Oak Lawn, IL [www.bnapi.com](http://www.bnapi.com)
- Bricklayers Training Center, Addison, IL [www.bac2school.org](http://www.bac2school.org)

# What Employers Want You to Know



# Mike Rowe on Skilled Trades

