

EAB Northwestern UNIVERSITY OF VIRGINIA

How to Build an In-House Facilities Talent Development Program

Understanding the Urgency and Exploring the Programs at Northwestern University and the University of Virginia

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Where's the Love?

Differing Opinions Among Senior Leaders About Their Staff

"We're trying to run a 21st-century university—but half of our staff are operating as if they're working in the 20th century, and the other half as if they're in the 19th century."

Chief Business Officer
Public Flagship University

"Here's the most important thing people have to understand about higher ed. The university is a factory, and the thing it's designed to produce is free time for faculty."

Provost
Private Research University

"Higher ed Facilities is a family affair. I've worked with some of these people for over 30 years. It's a tight knit community, and everyone knows everyone else has their backs."

Senior Facilities Officer
Public Regional Institution

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The Graying of the Trades

Average Age of US Labor Force

US Industries	43
Facilities Management	49

Age Distribution of Caltech FM¹ Employees

<29	21
30-39	48
40-49	71
50-59	132
60-69	78
70+	9

61% over 50 years old

Age Distribution of Facilities Workers, US Average

Over 55	18%
45-55	35%
Under 45	47%

51% of Texas Tech's Facilities division over 50 years old

35% of North Carolina State University's Facilities staff eligible for retirement in next five years

Source: "America's Skilled Trades Dilemma," Forbes; "Are millennials the future of facilities management?" J.J. Colucci, Pasadena, CA; "The Graying of the Campus-Facilities Work Force," Chronicle, Texas Tech University, Lubbock, TX; EAB interviews and analysis.

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A Destination Job No More

New Generations Entering Trades Insufficient to Replace Retirees

66% of Generation Z has little to no interest in construction careers

44% of parents think construction careers will negatively impact their child's financial goals

14% decrease in vocational education credits taken by high school graduates between 2000 and 2009

1:5 One new tradesperson entering industry for every five retiring

Source: Go Build Academy, <http://www.gobuildacademy.com>; "Really Dark: The U.S. Job Market and Student's Academic and Career Paths, Necessitate Enhanced Vocational Education in High Schools," AEA, <http://www.aea.org/press-releases/2018/08/08/2018-08-08-01>; "The Graying of Higher Education: Creating a Crisis in Construction Industry," Memphis Daily News, <http://www.memphisdailynews.com/news/2015/03/march-15-2015-03-15-01>; <http://www.construction.com/resources/special/2013/03/03-15-2013-03-15-01>; EAB interviews and analysis.

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Higher Ed Faces Steeper Climb

Resource Limitations and Unique Plant Needs Intensify Hiring Challenges

Salary Limitations
Lean budgets and funding model prevent higher ed institutions from offering pay competitive with private sector

Diverse Building Systems
Higher ed institutions possess both legacy and state-of-the-art systems that require different skillsets to maintain

Varied Space Needs
Higher ed institutions have diverse physical plants and spaces (e.g., research labs, residence halls, athletic facilities) with distinct maintenance needs

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Renewed Focus on a Long-Standing Solution

Apprenticeship Programs Have Proven ROI, Multiple Workforce Benefits

Recent Bipartisan Support for Expanding Apprenticeships Across Industries...

...Reflects High Program Returns for Participants and Employers

INSIDE
Expanding Apprenticeships Across More Jobs

THE
Obama Administration Awards \$50 Million in Apprenticeship Grants

TIME
Trump Announces \$200 Million in Apprenticeship Funding

1.5x

Return on Investment

- Enhance recruitment
- Reduce turnover and increase productivity relative to non-apprentice candidates
- Augment soft skills
- Improve workforce engagement

Source: Bahler K. "Trump Announces \$200 Million in Apprenticeship Funding." Time, June 15, 2017; Department of Commerce. "The Benefits and Costs of Apprenticeships: A National Synthesis." November 16, 2016; Harold N. "Obama Administration Awards \$50 Million in Apprenticeship Grants." The Hill, October 21, 2016; Smith A. "Apprenticeships: A Solution to Skills Shortage." Inside Higher Ed, December 1, 2012. EAB interviews and analysis.

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Separating Apprenticeship Facts From Fiction

Common Myths and Realities of Apprenticeship Programs in Higher Education

Myth	Reality	Example
#1: "The process for starting apprenticeship programs is too bureaucratic and complicated."	The Department of Labor can provide hands-on support to expedite program development.	The University of Georgia launched program in six months with support of DoL. ¹
#2: "We can't afford to start an apprenticeship program."	Apprenticeships are cost-effective workforce solutions for most institutions. Apprentices earn lower-than-market wages, and non-salary costs are marginal.	The University of Massachusetts Amherst estimates that their non-salary program costs are about \$5k-\$15k per apprentice per year.
#3: "Apprentices will leave for higher-paying jobs after obtaining their credentials."	Apprentices typically have high retention rates and demonstrate strong institutional loyalty.	80% of the University of Virginia's apprenticeship graduates still employed at institution, or remained through retirement.
#4: "We don't have local unions or community colleges to provide required related instruction."	In addition to unions and voc-tech schools, online and non-traditional partners can provide related instruction.	The University of Georgia uses online training modules for carpentry instruction in lieu of available face-to-face programs.
#5: "Our shops are too small to host programs."	Institutions can launch apprenticeship programs with as few as one participant.	The College of William and Mary launched a program in one shop with only one apprentice.
#6: "Apprenticeship programs are only run by unions."	Higher education institutions have sponsored programs for decades.	The University of Arkansas has run an apprenticeship program since the early 1970s.

Source: College of William and Mary, Williamsburg, VA; University of Arkansas, Fayetteville, AR; University of Georgia, Athens, GA; University of Massachusetts Amherst, Amherst, MA; University of Virginia, Charlottesville, VA. EAB interviews and analysis.

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Two EAB Resources Available Now

Apprenticeship Myths Infographic
Copies Available to Take Home Today

Full-Length Toolkit
Available to Facilities Forum Members

- Step-by-step guide to launching an in-house talent development program (apprenticeship, formalized upskilling, and pre-apprenticeship programs)
- Includes seven detailed case studies of talent development programs in higher ed

Source: EAB interviews and analysis.

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Targeting Nontraditional Pipelines

Pre-Apprenticeships Grow Talent Pool While Advancing Diversity in Shops

Pre-Apprenticeships Provide Foundational Skills to Access Trades Careers Training Programs

Source: EAB interviews and analysis.

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Northwestern

Northwestern University

Pioneering Pre-Apprenticeship Program to Grow Labor Pipeline and Hire a More Diverse Talent Pool

CASE STUDY

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Northwestern University at a Glance

- Private, research-intensive university located in Evanston, Illinois
- Full-time student population: 21,823
- Total campus size: 231 square acres
- Facilities portfolio: 17 million GSF
- Facilities management union status: All staff are unionized, but Evanston Trades Program has no relationship with union
- Program founded in 2015 in partnership with the City of Evanston

Source: Northwestern University, Evanston, IL.

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Program Background Northwestern ¹³



Evanston Trades Program: Joint Partnership with the City of Evanston


- Jointly administered by Northwestern University and the city of Evanston, Illinois
- Trains and hires racially diverse and/or female candidates not well represented in current applicant pools
- Designed in 2015 by the city's Youth and Young Adult Division manager and the senior facilities officer at Northwestern
- Targets workers who can commit to the job but lack technical or professional skills necessary to enter the skilled trades

Youth and Young Adult Division and Workforce Development Program maintain involvement through candidate selection

Northwestern taps into City of Evanston's employee assistance programs to access recruits

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Selection Process Northwestern ¹⁴



- Potential Recruits Apply**
 - Applicants first fill out an application
 - Applicants first screened for basic professional competencies (e.g., willingness to learn and courteous attitude)
 - Also screened for a minimum level of technical competencies (depending on the trade involved); for example, a carpentry trainee may need to know some basic math
- Trades Program Council Selects Candidates**
 - Evanston Trades Program Council consists of city of Evanston and Northwestern reps
 - Evanston reps come from the Youth and Young Adult Division and Workforce Development programs
 - Northwestern reps include the senior Facilities officer, the Facilities HR officer, shops representatives, and staff from Northwestern's Community Relations department
 - Council completes first round of selections
- Northwestern Conducts Final Interviews**
 - Northwestern staff interview final round of recruits
 - Select four to six applicants to admit to year-long program

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Program Structure Northwestern ¹⁵

Northwestern Iterates Program to Its Current Form

Year 1

Focused Trade Options

- Trainees given choice between **carpentry** and **paint** shops (areas of greatest need for Northwestern)
- At program's conclusion, created new entry-level role of helper to four of the six graduates in at
- Graduates start at bottom of union's hierarchy ladder so that they can receive pay (despite not having a skill set commensurate with existing union job descriptions)
- Graduates report desire for greater exposure to different trades

Year 2

Three-Month Rotations

- Trainees spend three to four months rotating through different trades
- Spend time in **plumbing, electrical, engineering, and central plant**
- At end of year, program's board determined which trainees would be hired in which shops; decide to hire all six trainees into one of the trades
- Graduates provide feedback asking for more time in "home" shop to build up skills

Year 3


More Targeted Training

- The latest iteration of program fronts shorter, one-month rotations in specific trades
- Trainees then select home shop and spend remainder of year there
- They also receive nontechnical skills training (e.g., basic work skills and financial literacy, offered in partnership with local bank)
- Trainees evaluated on technical and nontechnical skills

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Program Structure (cont.) Northwestern ¹⁵

Daily Supervisory Team




Shop Head

Manages instruction, tracks progress on competencies, and coordinates training activities; they serve as trainee's supervisor and assign mentors



Mentor

Rotating journeyworkers who provide observation and shadowing opportunities to trainees¹; must be technically competent and demonstrate investment in trainee's growth



HR Liaisons

Facilities HR staff handle day-to-day administration; also responsible for ensuring staff have appropriate resources in place at program launch (e.g., iPads, tools, uniforms)

¹ As trainees qualify to perform tasks, a more senior staff member will provide guidance and supervision. ©2019 by EAB. All Rights Reserved. eab.com Source: Northwestern University, Evanston, IL

Cost and Financing Northwestern ¹⁷

Program Costs

Program is funded centrally via Northwestern's Office of Neighborhood and Community Relations

Salary

Trainees are one-year contract employees of the university and receive standard benefits

Transition to Full-Time Status

- If the trainee is hired, his or her salary and benefits are covered by the Facilities budget—meaning current vacancies partially dictate how many trainees are hired
- Since trainees graduate with only one year of training, they are eligible only for entry-level positions; by comparison, most vacancies are for upper-level positions
- Surplus budget dollars can be used to create new entry-level positions for the graduates

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Outcomes Northwestern ¹⁸

Program Goals

- Improve the university's relationship with the city of Evanston
- Provide Evanston's underserved residents with job training
- Supply the Facilities department with committed, diverse staff

83%

Percentage of first two cohorts hired into full-time positions; 100% of trainees found post-graduation job placements

"This is a people project. The staff that joined us after this program are some of our strongest staff."

Christina Sanborn, Associate VP of Facilities Management

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University of Virginia

A Long-Established Facilities Management Apprenticeship Program in Higher Education

CASE STUDY **2**

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University of Virginia at a Glance



- Public, research-intensive university located in Charlottesville, Virginia
- Full-time student population: 27,400
- Total campus size: 1,682 square acres
- Facilities portfolio: 17 million GSF
- Facilities management union status: Not unionized
- Facilities management apprenticeship program founded in 1982
- Trains apprentices in the electrical, HVAC, plumbing, carpentry, masonry, and plastering trades
- Program registered with Virginia's Department of Labor and Industry's Registered Apprenticeship Office

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Marketing and Recruitment



Partnerships with Local High Schools

UVA arranges annual session at local middle schools and high schools where current apprentice discusses his or her experience and answers questions; session also emphasizes application tips, such as how to prepare for an interview and how to answer the free-response questions on the application

Multi-Channel Advertisements

UVA also markets its program by posting information at local job fairs, community workshops, and Girls Day¹; UVA also publishes ads on the radio and in local newspapers

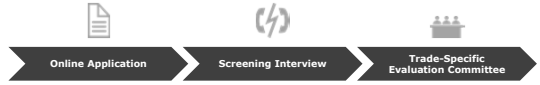
Robust Online Presence

UVA maintains program-specific webpage that clearly communicates deadlines, spotlights current apprentices, emphasizes participant benefits, and includes robust FAQ page. Also maintain social media handles (Twitter, Instagram, Facebook)²
URL: apprenticeship_fm.virginia.edu

1) Annual event hosted by UVA's Facilities Management catering to middle and high school girls.
2) UVA organizes apprenticeship takeovers of handles to share best-hand accounts and experiences.

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Apprenticeship Selection Process



- Applicants first fill out an online application
- Applicants must possess GED/high school diploma but UVA removed age requirement¹
- Must submit three references, cover letter, and resume
- UVA typically receives hundreds of applications for **15 to 18 slots**


- All candidates who submit complete application receive a **phone screen**. Recruiters in UVA's HR department complete the interview using standardized questions.
- Viable candidates are passed on for further evaluation and in-person interviews.

- Each candidate is interviewed by two groups: a **standardized search committee** and **trade-specific evaluation committee**
- Search committee includes a representative from each trade
- Trade-specific evaluation committee includes only trades representatives at different levels, including one current apprentice
- All candidates are assessed and offered a position based on his/her ability to meet hiring criteria

1) Previously, UVA required that applicants be 18 years of age or older. More recent interpretation of Virginia's labor laws led leaders to eliminate this stipulation without violating current rules.

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Program Structure



Overview of Apprenticeship Program

- Program is **4 years long**
- Apprentices work a regular **8-hour work day** (with occasional overtime)
- They also attend classes one night a week, depending on the program, apprentices complete **six to eight** classes by the time they graduate

Key Program Details

ADMINISTRATIVE SIMPLICITY

- All apprentices start at same time in July; complete onboarding (including safety and health training) in the first two weeks
- This start date aligns program with technical schools' academic calendars
- Cohort structure helps streamline paperwork and build camaraderie


TIERED SUPERVISION STRUCTURE

- Each apprentice has a **mentor**, who remains the same for all four years of the program; mentor can be at any level or area of organization
- Apprentices also report to an **on-the-job trainer**, which changes depending on where they are assigned to work; each trainer is at a journeyworker level
- Both trainer and apprentice report to the same **supervisor**, typically a frontline supervisor in the apprentice's current trade rotation


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Program Structure (cont.)


Assessments Completed on Monthly Basis




Monthly pull-up between apprentice, current trainer, and supervisor; to prepare, apprentice first submits written report to supervisor of what he/she has learned across the month.



During meeting, group **debriefs on what apprentice has learned**; apprentice can ask questions and suggest new skills to learn.



Meeting notes and written report submitted to program managers. Results used to either recommend continuation in program (typical outcome) or, in rare exceptions, remedial instruction.



One-on-One Check-Ins with Program Manager

Each apprentice meets routinely (approximately each month) with program manager to assess progress and share opportunities for program improvements.

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Costs, Salary, and Benefits

Program Costs

- Program is primarily funded by the billable work apprentices complete; although apprentices have a lower rate than seasoned employees, this source covers most program costs.
- Staff credit program's overall financial health to the support of Facilities leaders, who are committed to growing the program and have always been willing to cover funding gaps with money from department budget.

Salary

- All apprentices are UVA employees from the first day of the program.
- Their salary increases each year and by graduation they earn a salary equivalent to an inexperienced journeyworker.
- The only program time apprentices are not paid for is classroom hours.
- Apart from commuting to the university and technical schools, no costs are borne by the apprentices.

Benefits

- UVA covers all expenses, including books, tuition, tools, and equipment (e.g., safety-toed shoes and winter boots, prescription safety glasses, winter weather gear, etc.); items are distributed to apprentices on their first day.
- As university employees, apprentices receive education benefits once probationary period ends; they receive \$2,000 to \$4,000 per year to take other classes or certifications offered by the university.
- Department also offers free "soft skills" courses through Talent Development, including some that deal specifically with facilities-related jobs.

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Source: University of Virginia, Charlottesville, VA

Outcomes

Retention

80%
of graduates continue on as UVA employees

Engagement

10%
of workforce at any given time consists of program graduates

Growth

25%
of retained program graduates attain management title

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Source: University of Virginia, Charlottesville, VA