

Modified DACUM Research Chart Building Maintenance Trades Technician CIP 46.0401

DACUM Panel

Representing 286 years of experience in the building maintenance field

Kenny Adams, Owner
Adams Contracting, Corry, PA

Rod Curtis, Owner
Corry Kitchen and Bath, Corry, PA

Mike Munsee, Director of Buildings & Grounds
Corry Area School District, Corry, PA

Dennis O'Toole, Maintenance Foreman
Warren County School District, Warren, PA

Del VonVolkenburg, Facility Manager
Erie County Technical School, Erie, PA

Scott Webb, Facility Maintenance Instructor
Erie County Technical School, Erie, PA

Tom Willis, Owner
Willis Appliance and Electrical, Corry, PA

Facilitator and Observers

Jan Kennerknecht, DACUM Facilitator
Kennerknecht Consulting, Edinboro, PA

Susan Barra, Supervisor of Vocational Education, Corry Area
School District CTE Center, Corry, PA

Mike Daniels, Co-op Coordinator, Corry Area School District
Career & Technical Education Center, Corry, PA

Brock Jacquith, Building Maintenance Trades Teacher
Corry Area School District CTE Center, Corry, PA

Robert Smith, Co-op/TANF Instructor
Warren County School District, Warren, PA



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Worker Behaviors

Motivated
Team player
Professional
Positive attitude
Performs as expected
Supportive to other workers
Honest
On time
Has good hygiene
Good attitude toward learning
Drug free
Willing to ask questions
Collaborates
Situationally aware
Accepts current job expectations
Knows limitations
Shows initiative
Ambitious
Attention to detail
Busy, doesn't stand around, looks for next task
Intuitive
Responsible
Provides feedback
Learns from constructive criticism
Appreciates employment, customers, other team workers
Open to mentorship
Customer-friendly, service-oriented

General Knowledge

Use of skill saws, drills (hand tools)
General workplace safety/accident prevention
Safe use of tools
Battery operated tools
Recognizes cost of tools
Tool maintenance
Knowledge of work ethics
Knowledge of what is expected of workers (what to have ready, when to report)
Knowledge of parts
Tool identification
Ratios
Reading a tape measure
Basic math
Reading ability

Skills

Communication skills
Interpersonal skills
Soft skills
Problem solving skills
Leadership skills

Trends

Inflation
Employee shortages
Green technology and materials
Social sensitivities (i.e., LGBTQ)
ADA compliance
Mental health
National divide between politics and COVID-19
Aging-specific home modifications (ADA)
New technology
Smart buildings
Backup power generators
Solar energy
Indoor air quality
Sanitation
Energy conservation
Fixtures are less repairable
Unavailable parts
Longer lead times

Future Directions

More industry participation with trade schools
Collaboration between industry and schools (i.e., Ford offering college ACE program to sponsor tuition for college programs)
Paying entry-level employees sign-on bonuses
Apprenticeship programs will be available for all career paths in this field. - Pipefitters, Steamfitters, Plumbing, Carpentry, etc., tuition reimbursement, more will become available.
Increase in automation

Concerns

Prices of material
Supply chain problems
Skilled employees
Adapting to COVID
Employee shortage
Communication skills with co-workers/customers
Meeting customer expectations

Scheduling
COVID and politics
Estimating pricing accuracy
Labor rates
Phones
Soft skills
Work Ethics

Certifications Recommended

Certifications for High School Students:

OSHA 10
American Ladder Institute (4 certifications online)
Forklift Safety
Discussion of Lead and Asbestos Safety
(awareness)

Certifications for Adult Employees:

Adult education completion certificates
Wastewater certification (i.e., DEP)
Drinking water certification
Completion of staff development trainings
Lead Safety certification (state program)
Asbestos hazard
Pesticide (Dept. of Agriculture)
Radon detection, Lead in Water

Other Recommendations for Program

Consider teaching about water-proof membrane for tile work.
Use sand and lime with water for concrete work projects.
Include a lesson on metal clad cable.
Talk about residential Romex, motor controls. These may be learned in post-secondary programs.
The mezzanine you have is important for adding workstations and space for instruction/practice.

Industry Advice for Students

Kenny Adams, “Be respectful to everyone. You never know where a job opportunity is going to come up.”

Rod Curtis, “Be knowledgeable with computers and technology in the field. Workshops are helpful. Focus on learning the tricks of the trade.”

Brock Jacquith, “Pay attention and work hard.”

Mike Munsee, “You are going to run our country. You are our future. Take advantage of the education you receive here.”

Dennis O’Toole, “Never quit learning. Keep up with your trade. Read magazines like Electrical Construction & Maintenance (EC&M). Stay up to date with changes. Take classes at night school, travel and don’t be resistant to new technology.”

Robert Smith, “Under promise and over deliver.”

Del VonVolkenburg, “Take advantage of the opportunities that are presented to you.”

Scott Webb, “Even if you are not confident, don’t be afraid to try.”

Tom Willis, “Be honest. Do what you say you’re going to do. Have good ethics.”

Job Titles and Future Opportunities for Graduates of the Building Maintenance Trades Program

(Some will require further education and experience)

Building Maintenance Trades Technician	Roofer
Tool Crib Attendant	Estimator
Building Custodian	Mason
Parts Technician	Trim Specialist
Plumbing/Electrical Warehouse Worker	Finish Carpenter
Laborer	Landscape Designer
Custom Tile Worker	Architectural Designer
Countertop Fabricator/Installer	Interior Designer
Glass Repairer/Installer	Project Manager
Apprentice	Business Owner
Carpenter	Architect
Electrician	Building Engineer
Plumber	Director of Buildings and Grounds
Steamfitter	Post-Secondary Student
Machine Maintenance/Repair Worker	General Contractor
Entry-level Maintenance Worker	Facility Manager
PennDOT Worker	Post-Secondary Instructor
Drywall Installer/Finisher	CTE Teacher
Framer	Purchaser

Acronyms

ACE – Automotive Career Exploration
ADA – Americans with Disabilities Act
AFCI - Arc Fault Circuit Interrupter
BPM – Building Property Maintenance
BTU – British Thermal Unit
COVID - Coronavirus Disease
CTE – Career and Technical Education
DACUM – Developing a Curriculum
DEP – Department of Environmental Protection
EIFS - Exterior Insulation Finishing System
GFCI - Ground Fault Circuit Interrupter
IAQ – Indoor Air Quality
LED – Light Emitting Diode
LGBTQ - Lesbian, Gay, Bisexual, Transgender and Queer or Questioning
NEC – National Electrical Code
OSHA – Occupational Safety and Health Administration
PennDOT – Pennsylvania Department of Transportation
PEX - Cross-linked Polyethylene
PPE – Personal Protection Equipment
PVC - Polyvinyl Chloride

**See attached Pennsylvania Program of Study Task Grid for additional tasks added by local industry experts. The Corry Area School District Career & Technical Education Center would like to thank this dedicated panel of building maintenance professionals for providing their expertise. All input will be analyzed for program improvement.*