Developing Wisconsin’s Future Construction Workforce

Moving forward with concrete results
Partnership

- Highway Technician Certification Program
  - WisDOT Quality Management Program
  - Gateway Technical College

- University of Wisconsin-Platteville
  - Engineering Department
  - Department of Industrial Studies
Highway Technician Certification Program
Highway Technician Certification Program

Portland Cement Concrete Technician (PCCTEC-I)

• 20 hours of classroom/laboratory attendance
  • discuss fundamentals of concrete
  • concrete paving
  • random sampling
  • sampling and testing of freshly mixed concrete
    • Temperature
    • Slump
    • Air (Type B/SAM)
  • air pressure meter calibration
  • casting and curing concrete cylinders/beams
  • latest QMP specifications

• My Role – Board of Directors, collaborator, instructor
Strategic Planning

Members Experiencing Shortage of Workforce
• We need more people in our industry!

What can I do?
• Get more people certified
• Share our knowledge
• Spread the word
• Information Distribution
• Promote our Programs
• Be a Connector

Jobs in construction-related fields are projected to increase by 11% from 2018 to 2028, according to the U.S. Bureau of Labor Statistics. But skilled workers are hard to come by.
HTCP Implementation & Partnerships

UW-Platteville Civil Engineering Materials Class 3030

• Began Fall 2018
• Fundamentals taught throughout semester
• Student can choose to get certified with a 1-day lab/exam
  • One day crash course (Saturday) for lab and WisDOT Portion
  • Students take exam given to all certified personnel
  • WCPA offers Scholarships to students
    • Invite recipients to our Annual WCPA Concrete Conference
    • Announce them to our members and attendees
• Goal: Help alleviate our workforce development challenges with certified boots on the ground
  • Makes student marketable, knowledgeable, and desirable
Partnerships Stats

UW-Platteville Civil Engineering Materials Class 3030

• Fall 2018
  • 9 students registered for PCCTEC-I Certification
    • 9 students gained their certification
    • WCPA awarded 4 scholarships for this group of students
      • 1 student placed with a consultant
  
• Spring 2019
  • 7 students registered for PCCTEC-I Certification
    • 7 students gained their certification
    • WCPA awarded 4 scholarships for this group of students
      • 1 student placed with a consultant

• Fall 2019
  • 4 students registered for PCCTEC-I Certification
    • WCPA awarded 4 scholarships for this group of students

“Thanks again for your extra hard work in making this happen. I believe this is a great benefit to our students and our program. We should keep this program going forward and make it even better! Acknowledgement also belongs to WCPA.” – Danny X. Xiao, Ph.D., PE., ENV SP
UW-Platteville Industrial Studies

Developing Wisconsin’s Future Construction Workforce - Iowa Concrete Paving Association 2020
Thinking outside the BOX!

Department of Industrial Studies
- Building Construction Management
- Building Construction Safety Management
- Horizontal Laboratory (elective)
  - Students Paving Concrete Slabs
  - Students Slipping Curb & Gutter
  - Hands on Knowledge
  - Professors who “get it”
- My Role: Advisory Council (Comprised of 28 different companies/industry partners)
Current Statistics

Department of Industrial Studies

• Current enrollment is 250 students
  • 100 students graduated in December with 100% job placement rating

• Goal: Projected increase of single digits for enrollment (as that’s all the space they currently have)
Many industries also benefit from the expertise provided by graduates of UW-Platteville’s Industrial Studies Department.

- According to graduates, the listed top ten skills and abilities have contributed to their success at their jobs upon graduation.
- Graduates also noted having:
  - strong technical knowledge base
  - managing time and pressure
  - being flexible
  - managing change
  - organizing and managing meetings
  - decision making with multiple variables
  - negotiating and resolving conflict
  - working virtually with worldwide teams

Industrial Studies
Factors for Success

1. Problem Solving
2. Working as a team member
3. Using computers
4. Listening effectively
5. Applying technical knowledge
6. Providing leadership
7. Synthesizing data
8. Public speaking
9. Writing clearly
10. Applying math and science
What’s Happening

Department of Industrial Studies New Major approved by the Board of Regents on December 5th

• Major: Construction Management
  • Emphasis: Construction Management or Construction Safety Management

• Horizontal Laboratory Requirement

• First being offered in the fall of 2020!

• Perfect for:
  • Supervisors, foreman, managers, superintendents, projects leaders, inspectors, etc.
Goal: for UW-Platteville students to have an interactive classroom learning experience.
Road & Infrastructure Lab

Pouring Concrete-Comm. Construction Lab

Proper Equipment Operation Training—Road & Infrastructure Lab
Road & Infrastructure Lab

Daily Safety & Coordination Meetings for Labs

Preparing Subbase for Column Footings - Comm. Construction Lab
Road & Infrastructure Lab

Survey Layout for Control Points, Road, & Structures – Road & Infrastructure Lab

Compacting Roadway – Road & Infrastructure Lab
Road & Infrastructure Lab

Excavation for Structures – Road & Infrastructure Lab

Simulators – Safety Lab
Getting Noticed – Blue Book

Building for the Future

University of Wisconsin-Platteville Gives Construction and Safety Graduates the Foundation for Success

by Greg Lynch

"I visited a new neighbor's house who has 10 years of building and construction experience behind him. He said it is all about ‘safety.’ All clients, safety and general managers, talked about it as did they needed, and they wanted it as they grew in production. We realized the program to change it needed to begin to make sure our clients and their clients are educated. We had too many clients who asked us if we could show them what to do." When we had entered the program in 2016 and subsequent years in order to focus on the program, the web tool of its kind and to some extent missing one of its kind.

"No other program couples together the construction management program with the construction safety program like we do at our institution. That's part of the re-design that came from working directly with the industry, which wants professionals who already knew the business." - Greg Lynch, President, University of Wisconsin-Platteville

"Safety and construction are in the same department, but it was separate," says Allen, who has been teaching safety courses for many years. "We're trying to combine all the things that are successful in each of them together and make the programs dependent on one another with the same people in Building Construction Management, Building Construction Safety Management and Occupational Safety Management. Students in each program are required to take courses in the other to broaden their knowledge and education."
Construction Career Day

Goal: Spark interest and excitement about the construction industry

- Event where industry partners provide hands-on activities, exhibits, and contests
- Participants get a chance to experience different roles in construction and the trades
  - Heavy Highways
  - Commercial
  - Masonry
  - Carpentry
  - Industrial
  - Structural
  - Safety
  - Electrical
  - Plumbing
  - HVAC
Construction Career Day

Event Objectives

• Provide exposure to different opportunities, answer questions about the construction industry, and present what education avenues exist by:

  1. Exposing 9<sup>th</sup>-12<sup>th</sup> grade students to different professional career education options and careers through hands-on activities and demonstrations
  2. Provide high school teachers and guidance counselors with accurate information about the different paths of construction education and career opportunities
  3. Provide networking opportunities and professional connections for the high school students
  4. Giving UW-Platteville Construction Management students the opportunity to share their experiences and passion within construction.
Construction Career Day Stats

Pilot 1st Annual (Spring 2019)
- 8 High Schools Participated
- 75 Students in attendance

2nd Annual (Fall 2019)
- 15 High Schools Participated
- 165 Students in attendance
- 28 industry partners, companies

3rd Annual (Fall 2020)
- Scheduled for October 7th, 2020

• “There is such a labor shortage, and lots of high school students don’t know about the opportunities in construction,” - Gretchen Bockenhauer, lecturer
Construction Career Day

2nd Annual Construction Career Day!
Partnerships Stats

UW-Platteville Industrial Studies

• Spring 2019
  • WCPA Participated in the Construction Career Day
  • Student reached out directly to WCPA for concrete testing position

• Fall 2019
  • WCPA attended 2nd Annual Construction Career Day
  • Networked with students and WI based High Schools
  • WCPA invited to speak at High School to promote career opportunities
  • WCPA on Advisory Board and in support of new degree
  • Site Visit with students to get out and meet our members

• Upcoming
  • WCPA working with UWP to partner up like Construction Materials 3030 class on the Engineering side of campus
  • Fundamentals must be met prior to taking the Certification Course
    • currently working through the logistics on this
What questions do you have?

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