

Carl E. Harrison Jr.
Aeronautics and Engineering Building
1400 Lefton Esplanade
Kent, OH 44240
330-672-2892
Charri5@kent.edu

Professional Profile

- Associate Lecturer - Kent State University
- Districtwide K-12 STEM Coach at Brecksville – Broadview Heights Schools
- Original member of the BIOMED Science Academy STEM-M school startup team
- Implemented and coordinated the Project Lead the Way (PLTW) engineering program
- Mathematics and Engineering Teacher at Crestwood High School, Mantua, OH – 5 years
- Created a stand-alone middle school pre-engineering curriculum to prepare for the high school PLTW
- Created an engineering course for Upward Bound Math-Sciences program at the University of Akron
- 2009 Cooperating teacher for a University of Akron student teacher
- Participant in several University of Akron summer STEM academies
- Coach for JETS/TEAM engineering competition - 4 years
- Participant in the Ohio DOE tech-prep articulation agreement conference at the University of Akron

Education

- State of Ohio Administrative Certificate
Cleveland State University Inspired Leaders Program – September 2015
- Master of Science – Secondary Education with Licensure - Mathematics, GPA = 3.8 / 4.0 The University of Akron, Akron OH - May 2006
- Bachelor of Science -- Mechanical Engineering
University of Wisconsin - Milwaukee, WI - December 1993

Professional Highlights

Associate Lecturer:

Kent State University Fall 2022 to Present

- All duties of a full-time non-tenure track teaching professor
- Instructor for CAD, CAM, Machine Design, Senior Capstone, Thermodynamics, Quality and Introduction to Engineering
- Upward Bound and Summer Engineering Camp Instructor
- VEX Robotics Club advisor
- Student Retention and Recruiting Committee Member

Part time CAD Instructor:

Kent State University Fall 2021 to Spring 2022

- Teaching Introduction to CAD and
- Creating and Developing Advanced CAD course

Mathematics Teacher:

Stow Munroe Falls High School – 2020/2022

- Permanent Substitute for Statistics, College Math and Algebra II

District STEM Coach

Brecksville-Broadview Heights City School, Brecksville, OH - 2018 to 2020

- Integrating STEM into the curriculum for grades K-12

Engineering Teacher:

BIOMED Science Academy, Rootstown, OH - 2012 to 2018

- Startup member of BIOMED Science Academy STEM-M School team

- responsible for establishing the vision, core values, school culture, curriculum, scheduling, discipline and all school policies.
- Responsible for all aspects of implementing, coordinating and teaching the Engineering Program

Mathematics and Engineering Teacher:

Crestwood High School, Mantua, OH - 2006 to 2012

- Responsible for initiation, implementing, coordinating and teaching the Project Lead the Way Engineering Program
- Designed a stand-alone middle school pre-engineering curriculum to complement and feed into the high school PLTW program.

Additional Education Highlights:

- Designed the pre-engineering curriculum for the Upward Bound math-sciences program at the University of Akron. The Upward Bound program focuses on disadvantaged students that will be the first in their family to go to college.
- Advising teacher for the Ohio Computer Super Center STEM program that centered on mathematical modeling various complicated systems for advanced high school students
- Instructor for middle school STEM program at the University of Akron that focused on problem solving using math and science to solve real world engineering problems.

Other Professional Highlights:

- Designed and managed company safety and performance programs for 100-person facility including material preparation, educational content, evaluation, employee training and company presentations.
- Marketing and sales of 2-3 major engineering accounts annually.
- Managed Individual customer accounts of up to \$200,000 annually, and up to \$500,000 annually in Northern Ohio.
- Evaluated and designed water treatment programs for boilers, cooling towers, closed loops, wastewater and high purity/high temperature process water applications.
- Designed equipment applications including RO machines, ion exchange, heat exchangers, (air to air / water to air / water to water) cooling towers and filtration.
- Evaluated, Surveyed and redesigned manufacturing processes and plant utilities for efficiency and cost reductions.
- Worked with Environmental Engineers on EPA/city/state environmental compliance issues. (ISO 14000, ISO 9000, ISO9001)
- Training engineers, coworkers and customers in theory and practical applications

Other Professional Work Experience:

Work Experience:

Country Pure Foods, Akron OH; Production Manager/Engineer - 2003 - 2004

Crown Engineering, Dayton OH; Water Management Engineer - 1998-2003

Contractors Heating & Supply, Denver, CO; Purchasing/Sales Agent - 1996 - 1997

British Universities North American Club, London, UK; Work Study Program - 1994

Peck Foods Corp., Milwaukee, WI; Engineering Intern - 1990-1991