

Cohen Hossain

☎ (270) 555-4186 ✉ cohen.hossain@example.com 💻 linkedin.com/example/cohenhossain 📍 Bowling Green, KY 42101

SUMMARY

Engineering technology educator and applied design practitioner with eight years of higher education teaching and industry experience across sustainable building systems, construction technology, digital fabrication, and **project based learning**. Holds a **Master of Science** in Engineering Technology and guides learners through need identification, research, prototyping, performance testing, fabrication, and production. Develops laboratory centered curriculum covering construction methods, **sustainable building design**, materials, woodworking, metal processing, and CNC workflows. Supervises student employees, mentors project teams, coordinates **community partner projects**, and connects academic learning with career readiness. Industry practice includes constructible design packages, material selection, prototype evaluation, technical documentation, and fabrication coordination. Brings practical insight, patient mentorship, and active professional development that can support applied learning, curriculum renewal, and student achievement.

EXPERIENCE

Lecturer, Engineering Technology

August 2022 - Present

Western Plains Technical University

Bowling Green, KY

Leads undergraduate **engineering technology** instruction through laboratory courses, design projects, student supervision, and community based applied learning. Connects **construction methods**, sustainable building systems, fabrication, safety, assessment, and career preparation within an evolving curriculum.

- Built construction and sustainable building labs around iterative design projects and documented engineering decisions.
- Guided teams from need definition through research, prototypes, testing, revision, and finished production.
- Created woodworking, **metal processing**, **automated equipment**, and CNC labs with equipment specific safety instruction.
- Supervised student employees through work learning goals, technical coaching, progress reviews, and career preparation.
- Refreshed assessments and course content around **sustainable design**, **digital fabrication**, and project based pedagogy.
- Coordinated community design projects, translating client needs into prototypes, evaluations, and documented deliverables.

Engineering Technology Project Specialist

June 2020 - July 2022

Cumberland Design Collaborative

Lexington, KY

Supported commercial and community design work through constructible documentation, prototype development, material decisions, fabrication coordination, and client communication. Connected sustainable design intent with shop capability, testing evidence, and practical production requirements.

- Developed constructible packages linking material choices, **fabrication** limits, and **sustainable design** requirements.
- Built physical prototypes that resolved fit and assembly questions before final fabrication reviews.
- Prepared CNC ready files and coordinated manual and automated fabrication with shop personnel.
- Reviewed details with architects, engineers, fabricators, and clients, improving practical buildability decisions.
- Created technical demonstrations and onboarding **materials** that supported safe, repeatable shop setup.
- Presented drawings, prototypes, and test evidence that clarified tradeoffs during client design reviews.

Design and Fabrication Technologist

July 2018 - May 2020

River City Fabrication Studio

Louisville, KY

Translated architectural, exhibit, and community design concepts into tested prototypes and finished assemblies. Managed shop documentation, equipment preparation, material sequencing, and design feedback across development and production stages.

- Converted early concepts into shop ready prototypes and finished assemblies for community projects.
- Prepared **woodworking** and metal processing jobs for **industrial CNC** routing and cutting.
- Tested joints, dimensions, materials, and finishes against requirements before production release.
- Produced drawings, cut lists, setup notes, and fabrication records for consistent shop handoff.
- Sequenced materials and production tasks around design intent, equipment capability, and **construction methods**.
- Presented prototype findings to project leads and incorporated feedback into later iterations.

Applied Design Lab Instructor

September 2016 - June 2018

Midstate Makerspace

Elizabethtown, KY

Taught supervised workshops in design, prototyping, woodworking, and digital fabrication for adult and college age learners. Built repeatable instruction around safe tool use, project documentation, testing, reflection, and independent problem solving.

- Taught small group workshops covering introductory design, prototyping, woodworking, and **digital fabrication**.
- Demonstrated safe power tool and CNC setup before supervised independent learner practice.
- Structured briefs requiring research, prototypes, performance tests, refinements, and finished artifacts.
- Maintained lesson plans, equipment checklists, sample projects, and assessment rubrics for recurring workshops.

- Coached material selection and fabrication troubleshooting through questions, demonstrations, and guided practice.
- Organized project reviews where learners explained rationale, testing evidence, and fabrication decisions.

PROJECTS

Community Solar Pavilion 📅 2024

Led a student design study for a small sustainable structure, linking material research, prototype testing, fabrication planning, and client focused presentation.

CNC Furniture Prototype Series 📅 2022

Developed a furniture prototype series using digital fabrication, material testing, assembly reviews, and production documentation for repeatable shop execution.

LEADERSHIP & AWARDS

- Received faculty recognition for laboratory centered teaching and student project mentorship at Western Plains Technical University.
- Earned departmental recognition for curriculum renewal connecting sustainable building practice with digital fabrication instruction.
- Led community design collaborations that gave students client experience, documented outcomes, and practical career preparation.

EDUCATION

Master of Science in Engineering Technology

2018

Murray State University GPA: 4.0

Murray, KY

Coursework: Sustainable design, construction technology, digital fabrication, engineering materials

Bachelor of Science in Engineering Technology

2016

Western Kentucky University GPA: 4.0

Bowling Green, KY

Coursework: Engineering design, construction methods, materials science, computer aided design

CERTIFICATIONS

- Autodesk Certified User, AutoCAD 📅 2026
- OSHA 30 Hour Construction Safety 📅 2025

TECHNICAL SKILLS

- **Sustainable Building:** Sustainable Design, Sustainable Building Design, Material Selection
- **Construction Technology:** Construction Methods, Constructible Documentation, Buildability Reviews
- **Design Education:** Project Based Learning, Applied Learning, General Education
- **Fabrication Equipment:** Woodworking Tools, Metal Processing Tools, Power Equipment
- **CNC Systems:** Industrial CNC Machines, CNC Routing, CNC Cutting
- **Prototype Development:** Physical Prototypes, Prototype Testing, Design Iteration
- **Curriculum Practice:** Curriculum Development, Course Content, Assessment Rubrics
- **Student Development:** Student Mentoring, Work Learning, Career Readiness
- **Safety Standards:** OSHA 30 Hour, Equipment Safety, Shop Safety
- **Design Software:** AutoCAD, CNC Ready Files, Technical Drawings
- **Project Delivery:** Client Projects, Design Reviews, Production Documentation

SKILLS

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|---------------------------|--------------------------|---------------------------|------------------------|
| • Sustainable Design | • Student Mentoring | • CNC Machines | • Student Supervision |
| • Construction Technology | • Curriculum Development | • Digital Fabrication | • Design Research |
| • Applied Design | • Woodworking | • Prototype Testing | • Fabrication Planning |
| • Project Based Learning | • Metal Processing | • Technical Documentation | |

PROFESSIONAL AFFILIATIONS

- Professional engagement centers on sustainable design, construction technology, digital fabrication, and applied engineering education.
- Community partner projects connect student learning with client needs, service, technical documentation, and finished products.

LANGUAGES

- English (Native)
- Bengali (Proficient)

ADDITIONAL INFORMATION

Work Status : Authorized to work in United States. No sponsorship required.

REFERENCES

AVAILABLE ON REQUEST