LEARNING PATHWAYS

ENGINEERING

Innovation Invitational 2024

Overview
- **STEM Workforce Development**
  - **Afterschool**
  - **Talent Pipelines**
  - **Why STEM?**
- **Engineering Pathways Project**
- **Community Connections - Michelle Arehart KCLC**
- **Discussion**

Beyond School Bells
nebraska children

STEM Talent Pipelines

Hands-On Programming + **Job or Career Exposure** = **Occupational Identity Development**

NE STEM occupations projected to grow 6% faster than growth projected for non-STEM occupations

Rural students less aware of opportinties NE offers

STEM Occupational Identity: Student's **vision** of their future selves in the workforce, including **what they like** to do, **what they believe** they are skilled at, and, importantly, **where they feel they belong.**

MGM Year 5 and Beyond...

Afterschool STEM learning spaces are a proven and effective means of developing hands-on and career-connected learning that promotes STEM career pathways.

STEM Identity Cultivation

OST STEM has proved to be effective in creating STEM occupational identity, which is an effective motivator for entering STEM career pathways.

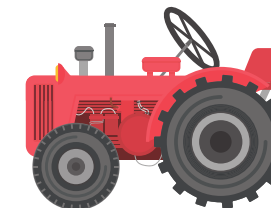# Basic Structure

College Mentors

HS Programming Leaders

EL Engineering Programming

MS Engineering Programming

Family Engagement

Local Business & Industry
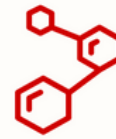
Educational Opportunities

UNL

Engineering Majors

AGRICULTURAL ENGINEERING	ARCHITECTURAL ENGINEERING	BIOLOGICAL SYSTEMS ENGINEERING	CHEMICAL ENGINEERING
CIVIL ENGINEERING	COMPUTER ENGINEERING (School of Computing)	COMPUTER ENGINEERING (ECE)	COMPUTER SCIENCE
CONSTRUCTION ENGINEERING	CONSTRUCTION MANAGEMENT	DATA SCIENCE	ELECTRICAL ENGINEERING
ENVIRONMENTAL ENGINEERING	MECHANICAL ENGINEERING	SOFTWARE ENGINEERING	ENGINEERING MINORS

Engineering

Architectural Engineering
- B.S. Degree Program

Civil Engineering
- B.S. Degree Program

Computer Engineering
- B.S. Degree Program

Construction Engineering
- B.S. Degree Program

Construction Management
- B.S. Degree Program

Electrical Engineering
- B.S. Degree Program

Environmental Engineering
- B.S. Degree Program

Associate of Applied Science at Community College

Southeast COMMUNITY COLLEGE   Academics | Admissions | Paying for SC

MANUFACTURING ENGINEERING TECHNOLOGY

← **UNO**

Scholarship Opportunities!!

Peter Kiewit Foundation Engineering Academy

Engineering Pathway Project

Engineering Opportunity Awareness

Increase awareness in rural areas of educational and career opportunities in state's urban centers

Community Workforce Development Collaboration

Afterschool programs collaborate with local industry and organizations to provide meaningful experiences for students.

Project Components

Empower students through high-quality programming

Engineering Family Connection

Connections with business, industry, and community

Discussion

Questions?

What resources or supports would you need to build a talent pieline in your community?

Who'd like to share about a business or industry partnership in their community that has been very beneficial to the informal learning space?

THANK YOU!

INNOVATION INVITATIONAL 2024

Alison O'Toole, PhD

aotoole@nebraskachildren.org

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