CENTER STREET
TECHNOLOGIES

Center Street Technologies is hiring for an Advanced Manufacturing Engineer Intern.

Company Overview

Join us at Center Street Technologies, where our mission is to provide technologies that keep us safe. Our customers tackle the hardest missions. Those that demand extraordinary amounts of courage, resilience and precision. They're dangerous. Critical. Sometimes they even provide an opportunity to change the world and save lives. Those are the missions we care about. As a leading technology innovation company, Center Street's team works with leading U.S. partners to bring proven performance to our customers' toughest challenges. Center Street Technologies is located in Youngstown Ohio, home of America Makes, The National Additive Manufacturing Innovation Institute.

Center Street Technologies is an Equal Opportunity/Affirmative Action Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, pregnancy, sexual orientation, gender identity, national origin, age, protected veteran status, or disability status.

Experience Level
1 – 2 years engineering experience (internship, co-op)

Seniority Level
Intern

Industry
Advanced Manufacturing, Advanced Manufacturing Process Improvements, Systems Engineering and Integration, Advanced Manufacturing Materials, R&D, Materials Development, Industry 4.0, Industrial Controls and Automation

Description

Center Street Technologies: Protecting our nation by building the *FUTURE NOW!*

Center Street Technologies is hiring for a Process Improvement Engineer Intern. The focus of the project/program will be for the advancement of the hybrid (additive and subtractive) manufacturing program. Conducting a manufacturing readiness assessment of hybrid process, determining manufacturing readiness levels of technology, organization and creation of supporting documentation for preliminary and final manufacturing readiness assessment, development of risk mitigations plans for CST process. Execution of data management plan, utilization of government developed data management software, data organization for future reuse, data linkage creation, and expansion of the common data dictionary. Implementing and maintaining adherence to NIST 800-171 cybersecurity best practices and protocol. Ongoing process improvement efforts.

Possible Responsibilities in This Role

- Complete manufacturing readiness assessment of current technology state
- Create risk mitigation strategies to elevate technology readiness levels
- Work with government agencies to develop and implement efficient data management protocols.
- Perform regular organization and analysis of data residing inside of data management framework
- Determine inefficiencies and create strategies/policies to improve manufacturing process
- Work with Center Street team and partners to generate and implement NIST 800-171 cybersecurity protocol and best practices
- Provide regular reports of operating efficiency and recommended improvements
- Help create documentation for material qualification for CST process
- Determine experimental test protocols for mechanical strength and ambient thermal properties
- Formal survey of existing materials presumed suitable for CST process
- Help create a catalog of materials serving broad range of design needs, including developmental products or unique blends filling gaps in catalog
- Develop a list of rated and ranked materials as priority candidates for process trials
- Help established process trial procedure for further testing of candidate materials
- Assist in defining process specifications for each material listed in the CST catalog
- Test coupons for all CST catalog materials
- Complete test report for test coupons, incl. data capture and archiving
- Complete statistical report of tabulated data to feed engineering design database
- Assist in creating engineering design database
- Assist in conducting feasibility study of robotics integration work for multi-axis printing
- Help with development of software algorithms for seamless transition between additive and subtractive manufacturing
- Assist in conducting a feasibility study and subsequent implementation of ambient thermal controls
- Aid in developing best fit rating and ranking of machine control electronics for test bed system
- Help with implementation of best fit sensing equipment
- Provide sensing equipment recommendations for future CST systems
- Conduct technical study identifying applicable sensor / control loops that would elevate current advanced manufacturing processes
- Create control loop test report utilizing test algorithms
- Aid in establishing a functional digital twin framework utilizing *in-situ* sensing equipment

Basic Qualifications

- Pursuing Bachelor's degree within an accredited engineering program
- Demonstrated technical and people leadership experience
- Experience in a highly collaborative and sharing environment
- Desire to work in the Advanced Manufacturing industry
- Experience with development of mitigation strategies
- Demonstrated corrective action and problem-solving skills
- Experience with design of experiments and executing material testing standards
- Experience with development of mitigation strategies
- Demonstrated corrective action and problem-solving skills

Desired Skills

- Experience in the field of manufacturing technologies
- Excellent written and oral communication skills with experience engaging and presenting in educational level meetings
- Ability to obtain Special Program Access
- Cultural Catalyst - Demonstrated ability to effectively work and lead a culture based on integrity, respect, and responsibility.
- Knowledge of data management system and how to utilize for future data reuse
- Knowledge of 3D printing of various types
- Experience with operating various AM machines
- Knowledge of engineering systems, processes, controls, and quality best practices
- Knowledge of mechanical engineering standards
- Familiar with NIST 800 – 171 protocols and policies
- Experience utilizing cloud solutions for software, storage and everyday applications
- Experience in the field of polymer science
- Experience operating various types of material testing equipment
- Knowledge of equipment manufactures and how their systems operate and differ
- Experience utilizing cloud solutions for data collection and reuse for future experiments
- Knowledge of in-situ monitoring sensors and digital twin framework
- Knowledge of various types of programming languages
- Experience with operating various types of controllers, HMIs, and PLCs