Community College Initiative Program
2020-2021
Field of Study: Applied Engineering

Applied Engineering Concentration Areas	
• **Architecture**	• **Electricity and Electronics Technology**
• **Automotive Technology or Service Mngmt**	• **Heating Ventilation and Air Conditioning**
• **Computer Aided Design**	• **Machine Repair: Automated Systems**
• **Construction Management**	• **Manufacturing Technology**
• **Electro-Mechanical Technology**	• **Mechatronics**
• **Electrical Technology**	• **Robotics**
• **Electrical Systems Maintenance**	• **Welding**

Track One **Certificate**	**Track Two** **Non-Certificate Courses**	**Track Three** **Courses and English**
Minimum Requirements		
Participants who meet the following criteria will be eligible to participate in Track One: • Students must meet minimum language requirements to enroll in credit-bearing classes. • Students must meet a minimum math requirement. • Pre-requisites may be required for specific courses.	Participants who meet the following criteria will be eligible to participate in Track Two: • Students must meet minimum language requirements to enroll in credit-bearing or workforce development classes. • Pre-requisites may be required for specific courses.	Students who have not yet met minimum requirements in English at their host campus will take a combination of English classes and content courses, as possible based on their level of proficiency and department approval.
Sample Field Concentration Courses		
Electricity and Electronic Fundamentals Electronic Documentation Electronics Materials and Fabrication Digital Fundamentals Survey of Automation Construction Planning & Control Building Construction Estimating Technical Mathematics Engineering Materials & Processes Math course	Architecture, Intro to BIM-Revit Technical Mathematics Intro to Automotive Computer Aided Drafting & Design Construction Planning and Control Electricity/Electronic Fundamentals Electronic Documentation Engineering Materials & Processes Machine Fabrication Machine Shop Metrology Intro to Robotics	English Reading and Vocabulary English Grammar English Writing English Oral Expression English Listening and Speaking College Success Skills Non-credit course Field elective

General Studies Helpful for the Field

• Oral Communication • College Writing • Project Management • Conflict Resolution

Hands-on, Practical Professional Experience Outside of the Classroom

Sample Internship Opportunities—Minimum of 75 hours
Local car dealerships, local businesses in field, campus-based labs, and when labor and/or union laws limit options in a particular field, participants will have a comprehensive and experiential learning opportunity through in-depth site visits to a variety of engineering firms and manufacturing sites and meetings with engineers, designers, and leadership

Sample Volunteer Activities that Build Professional Experience in the Field—Minimum of 100 hours
Habitat for Humanity Build Sites and ReStore Center, local car dealerships, local businesses in the field, and local organizations

Sample CCI Programming in This Field of Study
Program Site Visits: Businesses within this field of study, such as local car dealership, John Deere, Caterpiller Inc., Smith & Robertson, Chips Manufacturing, Air Products, and Kennedy Space Center
Workshops and Conferences: Manufacturing technology, machine repair, welding workshops, and International Manufacturing Technology Show
National Credential Preparation: Non-credit certificates in a variety of fields