



**Community College Initiative Program
2019-2020
Field of Study: Applied Engineering**

| Applied Engineering Concentration Areas | | |
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| <ul style="list-style-type: none"> • Architecture • Automotive Technology • Computer Aided Design • Construction Management • Electro-Mechanical Technology • Electrical Technology • Electrical Systems Maintenance • Electricity and Electronics Technology • Heating Ventilation and Air Conditioning • Machine Repair: Automated Systems • Manufacturing Technology • Mechatronics • Robotics • 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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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 | | |
| <ul style="list-style-type: none"> • 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 <i>Program Site Visits:</i> Businesses within this field of study, such as local car dealership, John Deere, Caterpillar Inc., Smith & Robertson, Chips Manufacturing, Air Products, and Kennedy Space Center <i>Workshops and Conferences:</i> Manufacturing technology, machine repair, welding workshops, and International Manufacturing Technology Show <i>National Credential Preparation:</i> Non-credit certificates in a variety of fields | | |