# ENGINEERING, MANUFACTURING AND INDUSTRIAL TECHNOLOGY MECHANICAL ENGINEERING & MANUFACTURING

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PROGRAM LOCATION LCC West Campus

SESSION OFFERED AM

AVERAGE LECTURE DAYS/WEEK 0-1 days

AVERAGE LAB DAYS/WEEK 4-5 days

HOMEWORK Occasionally

REQUIRED READING College level textbooks Less than 25 pages/week



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# EXPLORE THE POSSIBILITIES. FAST TRACK YOUR FUTURE.

The manufacturing industry has a high demand for skilled professionals with the foundation skills in design and tooling operations. Our program provides students with hands on laboratory projects, career based education, and industrial skill sets needed.

## **EXPECTED STUDENT OUTCOMES**

- · Use software to convert the designs into technical drawings
- Introduction of manual drafting skills (triangles, scales, compass, etc.)
- Identify type of measuring units (Metric, English)
- Identify and demonstrate Orthographic views, Section, and Auxiliary views
- · Identify and demonstrate Assembly Drawings
- Development of working drawings which will prepare the student for machine shop practices
- Introduction to CAD software (Solid Edge)
- Introduction of 3D printing
- Describe appropriate safety procedures
- OSHA regulations, MIOSHA regulations
- MSDS requirements
- Accident investigation
- Identify the types and purposes of drilling machines, lathes, grinders
- · Identify and operate milling machines and surface grinders

## CAREERS

Drafter CNC Programmer CNC Operator Machinist Tool and Die Maker

#### **MEDIAN WAGE**

Drafter: \$25.71 hourly CNC Programmer: \$18.21 hourly CNC Operator: \$24.32 hourly Machinist: \$20.05 hourly Tool and Die Maker: \$24.55 hourly

## **EMPLOYMENT OUTLOOK**

Faster than average, 10-14%

## CERTIFICATIONS

CPR/AED First Aid OSHA 10 Certification

## SUCCESS INDICATORS

Creative, detail oriented, organized, a strong problem solver, interested in computers, and have strong math skills. Realistic occupations frequently involve work activities that include practical, hands-on problems and solutions.

#### STUDENT LEADERSHIP

Students have the opportunity for leadership, competition, and community service through membership in SkillsUSA and MITES.

#### **13 COLLEGE CREDITS**

METS 102 - Industrial Safety METD 100 - Basic Mechanical Drafting METD 110 - Mechanical CAD Drafting I METM 108 - Machine Tool Operations

ACADEMIC RIGOR

# CAPITAL REGION TECHNICAL EARLY COLLEGE

Students enrolled in this program may choose to participate in the Capital Region Technical Early College (CRTEC). Capital Region Technical Early College is a high school-to-college program where students start in grade 11 and leave in grade 13 with a college degree or certification. The program gives students relevant career-related experience.

