

Charting the Course

CLICK THE LINKS BELOW TO EXPLORE...



Career Clusters

- [Agriculture, Food & Natural Resources](#)
- [Architecture & Construction](#)
- [Arts, A/V Technology & Communications](#)
- [Business Management & Administration](#)
- [Education & Training](#)
- [Finance](#)
- [Government & Public Administration](#)
- [Health Science](#)
- [Hospitality & Tourism](#)
- [Human Services](#)
- [Information Technology](#)
- [Law, Public Safety, Corrections & Security](#)
- [Manufacturing](#)
- [Marketing](#)
- [Science, Technology, Engineering & Mathematics \(STEM\)](#)
- [Transportation, Distribution & Logistics](#)

TCE Center Programs

- [Advanced Technology Center](#)
- [Tech Center](#)

High School Academies

- [Entrepreneurship & Business](#)
- [Global Studies & World Languages](#)
- [Governor's STEM & Technology](#)
- [Green Run Collegiate](#)
- [Health Sciences](#)
- [International Baccalaureate](#)
- [Legal Studies](#)
- [Mathematics & Science](#)
- [Visual & Performing Arts](#)

Dual Enrollment Programs

- [Tidewater Community College \(TCC\)](#)

Manufacturing

The Manufacturing Program of Study (POS) focuses on planning, managing and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance and manufacturing/ process engineering. There are obvious connections between manufacturing and other programs of study (please see those in parentheses below for possible opportunities). Pathways in this program include:

Pathways:

- Health, Safety & Environmental Assurance (Agriculture and Natural Resource, Health Science, STEM)
- Logistics & Inventory Control (STEM)
- Maintenance, Installation & Repair (STEM)
- Manufacturing Production Process Development (Business and Management, STEM)
- Production (STEM)
- Quality Assurance (Marketing)



Map pin denotes Virginia Beach Economic Development key industries aligned with career clusters

Suggested Learning Experiences

Middle School Electives	<ul style="list-style-type: none"> • Exploratory Technology Education Exploratory, Computer Solutions, Advanced Computer Solutions, and Keyboarding
Advanced Studies Diploma Coursework	<ul style="list-style-type: none"> • ENGLISH: Any sequence meeting graduation requirements • MATH: Algebra I, Geometry, Algebra II or Algebra II Trigonometry, any 4th math credit • SCIENCE: Earth Science, Biology, Chemistry, Physics or AP Physics • SOCIAL STUDIES: Any sequence meeting graduation requirements
Standard Diploma Coursework	<ul style="list-style-type: none"> • ENGLISH: Any sequence meeting graduation requirements • MATH: Algebra I, Geometry, Algebra II or any 3rd math credit • SCIENCE: Earth Science, Biology or any 3rd science credit • SOCIAL STUDIES: Any sequence meeting graduation requirements
Career Coursework	<ul style="list-style-type: none"> • Basic Technical Drawing, Construction Technology, Engineering Technology I & II, Production Systems, Engineering Design
Academy/Center Programs	<ul style="list-style-type: none"> • Advanced Technology Center • Governor's STEM & Technology Academy • Technical & Career Education Center
Industry Certifications	<ul style="list-style-type: none"> • NOCTI Electronics Assessment, NOCTI Electronics Technology, NOCTI Pre-engineering/Engineering Tech, NOCTI Small Engine Technology, AutoCAD Certified User, Autodesk Inventor Certified User, CareerSafe OSHA 10 - Engineering Technology, GEF: Sustainability 101, NOCTI Manufacturing Technology, OSHA 10-Hour Construction Safety and Health
Student Organizations	<ul style="list-style-type: none"> • SkillsUSA • TSA - Technology Student Association
Career Exploration/Enrichment	<ul style="list-style-type: none"> • RU Ready • VA Wizard for College & Career Information • VA Career V.I.E.W. for K-8 Career Information • Major Clarity
Co-operative Education/Internships	<ul style="list-style-type: none"> • Co-op or internship recommended



Manufacturing

Career Types by Pathway

HIGH SCHOOL DIPLOMA ON-THE-JOB TRAINING	CERTIFICATE/LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/DOCTORAL PROFESSIONAL DEGREE
HEALTH, SAFETY & ENVIRONMENTAL ASSURANCE				
	Occupational Safety & Health	Environmental Engineering Technology Environmental Studies Occupational Safety & Health	Environmental Engineering Environmental Studies Occupational Safety & Health	Environmental Biology Environmental Studies Occupational Safety & Health
LOGISTICS & INVENTORY CONTROL				
Heavy Equipment Operation Industrial Truck & Tractor Operation Material Handling	Truck Driving	Logistics & Materials Management Industrial Truck & Tractor Operation Transportation, Distribution & Logistics	Logistics & Materials Management Industrial Truck & Tractor Operation Transportation, Distribution & Logistics	Logistics & Materials Management
MAINTENANCE, INSTALLATION & REPAIR				
Business Machine Technology Custodial Services Electronics Technology	Computer Installation & Repair Electronics Technology Industrial Mechanics	Diesel Technology Manufacturing Technology Mechanical Engineering Technology Industrial Technology	Biomedical Technology Manufacturing Technology Mechanical Engineering Technology	
MANUFACTURING PRODUCTION PROCESS DEVELOPMENT				
Construction Trades	Construction Trades	Architectural Engineering Technology Automotive Engineering Technology Drafting & Design Technology	Architectural Engineering Civil Engineering Computer Engineering	Architecture Civil Engineering Construction Management & Inspection Transportation & Highway Engineering
PRODUCTION				
Iron Working Precision Production Upholstering & Leather Working Woodworking	Iron Working Precision Production Upholstering & Leather Working Welding	Building Construction Electrical & Electronics Engineering Technology Iron Working	Computational Mathematics Electrical & Electronics Engineering Technology Operations Management	Computational Mathematics Operations Management
QUALITY ASSURANCE				
	Quality Control Technology	Occupational Safety & Health Quality Control Technology	Occupational Safety & Health Quality Control Technology	Occupational Safety & Health

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