



2017 Joint Board Meeting

Workforce Development - June 13, 2017

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■ Goal 1 – Further Diversify our Economy

- Cultivate and embrace new business areas and grow Fairfax County's brand as a location for innovation and dynamic thinking
- Support the attraction, retention, and expansion efforts in key targeted industries: data analytics, cyber security, translational medicine, other emerging technology areas

■ Goal 5 – Achieve Economic Success through Education and Social Equity

- Link people to opportunities including education, workforce development, and employment
- Ensure coordination and efficient delivery of workforce and training programs with Northern Virginia Community College and Fairfax County Public Schools
- Align existing workforce development and vocational training programs with current and projected employment needs in Fairfax County

■ Convened Career Pathways Workgroup- Initial focus is STEM

- Fairfax County, FCPS, NOVA, GMU, NVTC



SCIENCE | TECHNOLOGY | ENGINEERING
ARTS | MATHEMATICS

Sample FCPS K-12 STEAM Overview

Elementary: K-6

Middle: 7-8

High: 9-12

FCPS STEAM Office Support

Math and Science Courses - # and selection required for graduation dependent on diploma type

Grade 6 Energy Unit

Access to Integrated Curriculum

Project Lead the Way

Environmental Clubs

Get2Green Eco-schools

Coding - Hour of Code, Computer Science/Programming Courses, etc.

STEM/STEAM Labs - 60+

Elective STEM Courses Offered

Makerspaces

Industry Certifications -132

Career Day with STEM Professionals

Cyber Security/Cyber Patriot

Career & Tech Ed Academies

Thomas Jefferson HS for Science & Technology

STEAM Clubs

Career Technical Student Organizations (CTSO)

Science Olympiad

Robotics – FIRST Lego League, VEX

Summer Enrichment Camps

NASA STEM Challenge

Family STEM Nights

Science and Engineering Fair

In School

Out-of-school

COOPERATIVE SCHOOLS

FCPS Career Pathways



High School Academies

- Edison, Fairfax, Chantilly (STEM), Marshall (STEM), Falls Church (Health and Sciences), and West Potomac (Health and Sciences)
- Offer advanced technical and specialized courses that integrate career and academic preparation for post-secondary education
- Provide opportunities to obtain industry certification and career experiences

Thomas Jefferson HS for Science and Technology

- Offers a comprehensive program that focuses on scientific, mathematical, and technological fields
- All courses are taught at the gifted, honors, Advanced Placement (AP), or post-AP level.

Sampling Course Pathways at High Schools

- Animal Science
- Architecture
- Automotive
- Computer Science
- Construction
- Culinary
- Early Childhood Education
- Engineering
- Entrepreneurship
- Finance
- Fire and EMT
- Hospitality and Tourism
- Information Technology
- Law Enforcement
- Marketing
- Military Services
- Nursing
- Performing Arts
- Social Media marketing

Edison Global STEM Challenges Program

- STEM focused, interdisciplinary three-year program focusing on authentic global problems
- Integrates traditional mathematics, science, and engineering curricula into an integrated course sequence





Quick Facts for FCPS 2015-2016

- Total CTE Enrollment: 60,000 (includes EPF)
- Over 130 career and technical courses offer a certification option
- 18,549 certifications were awarded in 2016. The majority for...
 - Workplace Readiness Skills for the Commonwealth (6,661)
 - Financial Literacy (WISE) (8,359)
- Industry certifications are a graduation requirement for standard diploma only; not required for advanced diploma
- Fewer number of students pursue STEM-related certification options

Sample certifications awarded in 2015-16

- Microsoft Office Specialist (Word, Excel, PowerPoint, Outlook or Access) 1881
- Microsoft Technology Associate, 46
- Autodesk and Certiport: Revit Certified User, 77
- Autodesk and Certiport: AutoCAD, 150
- Autodesk and Certiport: Inventor, 135
- Pharmacy Technician, 122
- A+ Essentials Examination, 55
- A+ Practical Application, 34
- Cisco (ICND 100-101), <10
- Emergency Medical Technician, 26



- Expand partnerships with NOVA, GMU, and other colleges/universities to develop pathways for career preparation
- Develop 13th year (post-grad training) opportunities through FCPS Adult and Community Education
 - Would require instructors and materials
- Increase internship and employment opportunities for high school students and beyond
- Advocate to VDOE for greater curriculum flexibility to allow for pursuit of career interest and preparation
- Focus on equity and access through collaboration with Opportunity Neighborhoods, ESOL Office in FCPS to support English Learners

Strengthening the Workforce Pipeline



- Higher education in the Washington Metropolitan Region graduates less than 5,000 bachelor's degrees in IT fields...
- There are almost 50,000 job postings for IT professionals
- By 2027, there will be an estimated shortage of 7,000 workers in the IT workforce for northern Virginia
- The estimated gap in the Washington D.C. Metro area IT workforce is largest for northern Virginia
 - This will impede our ability to attract companies
- Other high growing industry sectors in our region
 - Leisure & Hospitality (19%); Education & Health (14%)

Strengthening the Workforce Pipeline



- ...what we have is an interest gap. Lack of awareness of high demand, good pay jobs and training/education needed to get them.
-And a need for a more strategic regional approach to preparing our workforce for the jobs available here. Build on existing interest and initiatives:
 - NVTC Workforce Needs Assessment and Follow-on Work
 - NOVA Works – Academy to prepare adults in transition for Tech jobs
 - Genesys Works, Year Up and similar models for high school internships

Regional Workforce Vision and Strategy

Internships and Career Readiness



■ Exploration early

- Internship and employment opportunities for high school students and beyond
- Internship requirements in high school

■ Partnerships

- NOVA, GMU, and other colleges/universities to develop pathways for career preparation

■ Improve speed to market

- Expand dual enrollments with NOVA
- Credit for certifications that provide marketable skills and experience (A+ cert)

■ North Carolina— a case study

- Site hosted by the WIB <http://youthbusinessconnector.com/>
- Marketing and outreach to parents, guidance counselors, teachers, students

Regional Workforce Vision and Strategy



- Convene stakeholders to develop consensus on vision and strategic direction
- Build marketing plan for career awareness
- Work with employers to increase opportunities/placements for internships, and workplace learning
- Advocate for legislative changes for graduation requirements with VDOE
- Assemble regional team to prepare and apply for Go Virginia funding

