Cumberland Valley School District, Harrisburg University & NuPaths
Track 1:
Technical and Security Assistant

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundations in Information Technology</td>
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<tr>
<td>Client &amp; Server Technician Fundamentals</td>
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<tr>
<td>The Fundamentals of Productivity Software</td>
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<tr>
<td>IT Security Essentials</td>
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<tr>
<td>Technical Support Project</td>
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<td>IT Security Project</td>
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- CompTIA IT Fundamentals
- Microsoft Office Specialist (Excel; Outlook)
- CompTIA A+
- Microsoft Technical Associate: IT infrastructure (Windows Server Administration Fundamentals)
- Microsoft Technical Associate: IT infrastructure (Security Fundamentals)
- Optional: Microsoft Office Specialist (Word; PowerPoint)

- 6 and Up to 8 potential certifications
- 2 projects
- 14 potential HU credits
Related Job Titles and Demand:
5856 Jobs in Washington, Baltimore, and Philadelphia Metro Area

553 Jobs Within 25 Miles of Harrisburg

- **Technical Support Representative** (50,554 nationwide | 1,237 in WBP | 167 within 25 miles of Harrisburg)
- **IT Technical Support Specialist** (21,626 nationwide | 950 in WBP | 80 within 25 miles of Harrisburg)
- **Technical Support Analyst** (46,069 nationwide | 2,028 in WBP | 267 within 25 miles of Harrisburg)
- **IT Service Desk Analyst** (3,662 nationwide | 136 in WBP | 56 within 25 miles of Harrisburg)
- **End User Support Specialist** (6,257 nationwide | 247 in WBP | 39 within 25 miles of Harrisburg)

- WBP = Washington, Baltimore, Philadelphia

2450 Jobs Within 100 Miles of Harrisburg

- **IT Security Monitor** (31,475 nationwide | 729 in WBP | 88 within 25 miles of Harrisburg)
- **Junior Security Analyst** (1,356 nationwide | 137 in WBP | 391 within 100 miles of Harrisburg)
- **Junior Information Security Analyst** (1,484 nationwide | 139 in WBP | 452 within 100 miles of Harrisburg)
- **Security Threat Analyst** (4,367 nationwide | 466 in WBP | 1,519 within 100 miles of Harrisburg)

- WBP = Washington, Baltimore, Philadelphia
# Track 2: Associate Web Site Analyst

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Details</th>
</tr>
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<tbody>
<tr>
<td>Web Design and Development Fundamentals</td>
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<tr>
<td>Foundations in Information Technology</td>
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<tr>
<td>Web Site Statistics and Data Analysis</td>
<td></td>
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<tr>
<td>Building Web User Interfaces and Interactions</td>
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<tr>
<td>Web Analyst Project</td>
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</tbody>
</table>

- **CompTIA IT Fundamentals**
- Adobe Dreamweaver; Adobe Photoshop
- Microsoft Technology Associate: Developer (HTML5 App Development Fundamentals)
- Google Analytics Individual Qualification (IQ)
- Microsoft Office Specialist – Microsoft Excel

- 6 potential certifications
- 1 project
- 14 potential HU credits
Related Job Titles and Demand:
1467 Jobs in Washington, Baltimore, and Philadelphia Metro Area

25 Jobs Within 25 Miles of Harrisburg

- Digital Marketing Assistant (2,043 nationwide | 56 in WBP | 3 within 25 miles of Harrisburg)
- Digital Marketing Specialist (6,334 nationwide | 84 in WBP | 10 within 25 miles of Harrisburg)
- e-Commerce Assistant (1,314 nationwide | 11 in WBP | 2 within 25 miles of Harrisburg)
- Digital Marketing Analyst (3,904 nationwide | 65 in WBP | 10 within 25 miles of Harrisburg)

WBP = Washington, Baltimore, Philadelphia

199 Jobs Within 25 Miles of Harrisburg

- Junior Front-End Developer (1,254 nationwide | 55 in WBP | 6 within 50 miles of Harrisburg)
- Entry-Level Web Developer (638 nationwide | 21 in WBP | 17 within 25 miles of Harrisburg)
- Web Developer (47,356 nationwide | 1,175 in WBP | 176 within 25 miles of Harrisburg)

WBP = Washington, Baltimore, Philadelphia

Certificates become more valuable when layered over business, marketing, communications background.
US Bureau of Labor and Statistics: Computer Support Specialists

2016 Median Pay (All Related Positions): $52,160 per year/ $25.08 per hour in May 2016.

The median annual wage for computer network support specialists was $62,670 in May 2016.

The median annual wage for computer user support specialists was $49,390 in May 2016.

Work Experience in a Related Occupation: None

Number of Jobs, 2016: 835,300

Job Outlook, 2016-26: 10% (Faster than average)

Employment Change, 2016-26: 87,100

Education:

Education requirements for computer support specialists vary. Computer user support specialist jobs require some computer knowledge, but not necessarily a post-secondary degree. Applicants who have taken some computer-related classes may be qualified for these jobs.

Licenses, Certifications, and Registrations:

Certification validates the knowledge of and best practices required by computer support specialists. Companies may require their computer support specialists to hold certifications in the products the companies use.
# US Bureau of Labor and Statistics: Computer Support Specialists

## Attaining Post-Secondary Degrees:

The US Bureau of Labor and Statistics reports that students who seek a bachelor’s degree in this field can expect to hold positions such as the ones listed below.

<table>
<thead>
<tr>
<th>Position</th>
<th>2016 Median Pay</th>
</tr>
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<tbody>
<tr>
<td>Network and Computer Systems Administrators</td>
<td>$79,700</td>
</tr>
<tr>
<td>Computer Programmers</td>
<td>$79,840</td>
</tr>
<tr>
<td>Computer Systems Analysts</td>
<td>$87,220</td>
</tr>
<tr>
<td>Information Security Analysts</td>
<td>$92,600</td>
</tr>
<tr>
<td>Computer Network Architects</td>
<td>$101,210</td>
</tr>
<tr>
<td>Software Developers</td>
<td>$102,280</td>
</tr>
</tbody>
</table>
Pathways

- Roles
- Courses | Labs
- Skills
- Project
- IT Certifications
- HU Certificate
- Edu. Credits
- Internship | Employment
- Continuing Ed

Outcomes

1 or 2 Semesters

Post 23 High School Credits
Program Design

CV Students on Programming or IT Pathway or CPAVTS Students who Begin as Freshman and Spend Senior Year in CV IT

CVSD - Accelerate Through HS Credits in MS, Term III, Articulation Agreements

CVSD Supervised Employment (Co-op or Internship)

High School Graduation

Apprenticeship, Associated Degree Post-Secondary Studies and/or Continued Employment

Employment

Life-Long Learning

CV/Harrisburg University/NUPaths

HU/PASSHE 4 Year Degree

Bachelors Degree Post-Secondary Studies

23+ Credits

6 Credits

0 Credits
ENDORSEMENT PATHWAYS

Cumberland Valley High School Diploma

- 4 English
- 3 Math
- 3 Science
- 3 Social Studies
- 2 Math or Science or Social Studies
- 1.5 Health and Physical Education
- and
- 6.5 Electives
  (CV Programming Courses or Votech can be Included in 6.5 Electives)

WORKFORCE READY

Three Years at Votech in Networking or Programming Lab

CAREER AND POST-SECONDARY STUDIES

Three Years at Votech with Post-Secondary Credit or Three Years at Votech and One Year CV IT or Three Years at CV with 1 Year CVIT – CVIT Requires Completion of 1 or more IT Certifications

ADVANCED POST-SECONDARY STUDIES

4 CV Computer Programming including AP Computer Science – 1 Year CV IT Optional but Recommended
Delivery Model

• The IT Pathway would be delivered in a traditional and nontraditional setting and would include face-to-face and blended instruction.

• A CV teacher will work in a "lab setting" the first half of the day in partnership with the HU consultant preparing students to take industry exams that lead to marketable IT certifications.

• The HU consultant would be physically present two or three days a week insuring industry standards, university rigor, and real-world applications.

• Students only seeking certifications with their CV Diploma will participate in coop and internship experiences the second half of the day and have lab time for test preparation.
Delivery Model

- Students from the four year college bound group who brought credits from Middle School and utilized Term III would have the ability in their schedule to cross-over into the certification program.

- We would seek a Vocational/Technical Certification of the program to receive additional reimbursement.

- Students seeking only 1 semester may graduate early.

- Open seats would be tuitioned to neighboring districts.

- With the space and the program in place we can “rent” the educational space to HU outside the school day and in the summer for classes.
Why an HU Consultant?

- Industry standards and software versions change at a rate greater than CV can provide professional development to a secondary teacher.
- IT security challenges/issues change constantly and without on-going alignment with industry standards is essential.
- Students need to be industry ready upon graduation which requires real-world interactions.
- The consultant will also serve as corporate faculty at HU assuring curriculum and academic rigor are being met for the issuing up to 11 university credits.
- Depending on the certification track the consultant strengths can be matched to student and market needs and as industry standards change over time.
HU CONSULTANT PROFILE

Degree / Certification

Teaching Experience

Work Experience

SKILLS

- HTML5
- CSS3
- JavaScript
- React JS
- Vue JS
- PHP
- Sass
- Git
- Node.js
- JSON
- Adobe CC
- Sketch
- XML
- MySQL
- Gulp
- Yarn
- WordPress
- Drupal
- Microsoft Office

EXPERIENCE

Owner/Director/Contractor
Hacky Interactive, Inc | September 2006 – Present

Adjunct Instructor
Harrisburg Area Community College | Spring 2009 – Present

- York College | Fall 2015
  Developed curriculum and taught Art 940.901 Web Design I

- Harrisburg University | Spring 2014
  Created a curriculum and taught LTMS 611: Extensible Languages for Development. The blended course covered project management, front-end and back-end development, and working with third-party APIs.

- Colorado College | 2009
  Visiting Instructor for Big Games/Alternate Reality Game class.

- City College of New York | Spring 2007
  Taught web animation with Adobe Flash. Developed curriculum. Responsible for assigning and grading student projects, teaching timeline and Actionscript-based animation, as well as basic programming and interactivity.

- John Wiley & Sons | 2011

- Freelance | September 2004 – September 2006
  Web Designer/Developer

- JPL Productions | March 2000 – September 2004
  Responsible for concept development, design layout, and interactivity of corporate and business websites. Spearheaded Adobe Flash development and served as group leader for internal Flash designer meetings. Introduced shared components, Flash video, and helped implement emerging Web standards.

EDUCATION

New York University
Master of Professional Studies
Interactive Telecommunications Program
September 2004 – December 2005

Pennsylvania State University
Bachelor of Humanities in Communications
August 2000 – May 2002

Harrisburg Area Community College
Associate in Arts, Visual Arts - Graphic Design
August 1997 – December 1999
Target Cost Per Student

Target Annual Instructional Cost/Student: At or below current annual CV instructional cost per student of $7300.00/year.

- 15-24 Students per Cohort
- Our Teacher (Half Day)
- HU Consultant - 3-4 Days Per Week
- Instructor materials
- Technology
- Texts and Materials
- Certification Exam Fees
Additional Cumberland Valley SD Soft Costs Required:

► Curriculum Alignment
► Marketing IT Careers to Students with an Emphasis on bringing More Young Women into the IT/Tech Fields
► Classrooms
► Student Management (attendance/ grading / support)
► Soft skills training
► Technical setup/support
  ▪ Hardware/Software
► Miscellaneous: WiFi, Parking, etc.
Curriculum Alignment: Base Skills and Soft Skills

- Networking
- Social Media
- Résumé and Cover Letter Writing
- Interviewing
- Emotional Intelligence (EI) and Mindfulness
- 23 Core Credits

- Verbal Communication
- Non-Verbal Communication
- Algebra II/College Algebra
- Negotiation and Conflict Resolution
- Overcoming IT Stereotypes
Qualifications for Program Entry Beyond Mastery of Core Curriculum

- Excellent Analytical Skills
- An Attention to Detail
- A Commitment to Learning
- Good Communication Skills
- An Aptitude for Math
- The Ability to Learn & Memorize Programming Languages
- An Ability to Handle Multitasking
- Solid Problem Solving/Troubleshooting Capabilities
- Technical Writing Skills
- Versatility

For those students who are not immediately post-secondary bound this program will make the marketable in positions with mean salaries that are family sustaining. This program will enhance the skills of college bound students and make them marketable if they do not receive a secondary degree.
Hardware/Software Requirements

**Hardware**
- Student desktop / laptop
- Wired network
- Wireless network
- Routers
- Lab workstations
  - Expansion cards
  - Peripherals
  - Storage devices
  - Printers
- Lab laptops with displays
- Windows server
- Web server

**Software**
- Microsoft Word 2016
- Microsoft PPT 2016
- Microsoft Excel 2016
- Microsoft Outlook 2016
- Windows Server
- WordPress
- Adobe Dreamweaver
- Adobe Photoshop