CAREER AND TECHNICAL EDUCATION

ADVISORY COMMITTEE

(CTEAC)

ANNUAL REPORT

TO THE

FAIRFAX COUNTY SCHOOL BOARD

For the period covering June 2015 through May 2016
Presented June 2016
Executive Summary

The Career and Technical Education Advisory Committee (CTEAC) was charged by the 2015-2016 School Board to examine data relating to each of the 16 Career Clusters and to make recommendations affecting career and technical course offerings and student learning experiences that would enhance alignment with Northern Virginia’s current and future economic growth and employment opportunities.

Our conclusion is that healthcare and technically oriented career clusters explicitly align with growing workforce needs. These areas must be supported by the Fairfax County Public Schools (FCPS) Administration and the School Board, and should be continually expanded and adjusted to provide a labor feed stream to support increasing demand for these skills. While post-secondary experiences may be needed prior to joining the workforce, FCPS CTE courses provide opportunities for students to explore interests and gain early exposure to disciplines related to college pursuits or workforce entry.

Every other Career Cluster has varying degrees of relevance to the local economy and should not be dismissed from continued support by the school system. Marketable skills result from CTE training whether the student proceeds directly into trade skills, continues with a formal post-secondary education or chooses to expand skills via the military.

Also, during our meetings we provided endorsements to new course offerings, a national (Perkins) grant and received briefing information related to CTE in the county and Commonwealth.
Summary of Recommendations

The CTEAC submits the following recommendations for equal consideration by the Fairfax County Public School (FCPS) Administration and the Fairfax County Public School Board:

1. Support continued expansion of existing Science, Technology, Engineering, Arts and Mathematics (STEAM) K-12 programs to connect to existing and future CTE programs.
2. Support continued expansion of the health and medical course offerings to address the growing demand for employees at all levels in the health care field.
3. Support professional development and training of teachers for integrated math, science, and engineering instruction, and for maintaining currency with newer developments in the healthcare fields.
4. Support continued expansion of Cyber Security and Computer Programming/Coding offerings. Include expansion of the Cyber Patriot programs at the middle and high school level, coding activities and infusion at the elementary school level, and a review of the coding pathway for students at the middle and high school level.
5. Investigate and communicate multiple pathways to fulfill graduation requirements for students that could include workplace based learning opportunities and integration of programs such as Genesys Works (now working in partnership with FCPS).
6. Monitor and advocate regarding legislative initiatives at the state and national level that impact CTE. One goal is to secure graduation credits for CTE courses that share equal rigorous content as traditional mathematics and science courses.
7. Continue to promote CTEAC recommendations favorably accepted by FCPS that have been offered in recent years.
The Career and Technical Education Advisory Committee (CTEAC) charge for the 2015-2016 school year was “Examine data relevant to the 16 Career Clusters (current courses and enrollments, workforce development needs, industry credentials, and student career interest surveys) and make recommendations for changes to Career and Technical curriculum, course offerings, and student’s work-based learning experiences that would better align with Northern Virginia’s current and future economy.”

The main focus of the committee has been to begin a multi-year process of examining course enrollments, student interest data, industry credentialing data, and regional future workforce projections. The committee examined the 16 career clusters (listed below) in each of the meetings to determine if there was representation of instruction and opportunity for students. In addition, they looked at enrollment and pass rates on relevant industry credentials. Finally, they examined the workforce projection data to determine if offered course work was supported by workforce requirements in demand in the Northern Virginia area.

<table>
<thead>
<tr>
<th>Career Clusters Table</th>
<th>Agriculture, Food, and Natural Resource</th>
<th>Government</th>
<th>Law, Public Safety, Corrections and Security</th>
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</thead>
<tbody>
<tr>
<td>Architecture and Construction</td>
<td>Agriculture, Food, and Natural Resource</td>
<td>Health Sciences</td>
<td>Manufacturing</td>
</tr>
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<td>STEM</td>
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<td>Education</td>
<td>Business</td>
<td>Human Services</td>
<td>Transportation</td>
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<td>Finance</td>
<td>Information Technology</td>
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The longitudinal comparison of Northern Virginia workforce requirements applied to Career Cluster occupations indicates that the Health Services, Information Technology and STEM clusters have a significantly larger workforce requirement, have established CTE courses in place and share a strong level of student interest.

The committee recommends that the school board annual charge remain the same for the committee next year, and the work begun this year continue. The committee would like to narrow the focus to enable a more in-depth look into three significant career clusters: Health Science, Information Technology (Coding and Cyber Security), and STEM. The CTE staff will continue to evaluate and monitor other career clusters regarding student interest and workforce trends and make recommendations to the Committee as appropriate.

Additional committee discussions addressed the logical requirement for CTE instructors to remain fully trained and competent with new evolving technologies. Accordingly, CTEAC recommends the development of a multi-year plan that will include the examination of professional development and training, and implementation for the three career clusters.

To better enable the Committee to focus on the three key Career Clusters next year, the committee recommends that expanded efforts be initiated internally to staff the future committee with workforce leaders and experts in each key cluster to determine where infusion of content can take place and/or creation or redesign of courses is necessary to meet the current/future needs of regional employers. Therefore, selection and school board appointment of committee members relevant to this purpose is crucial. School Board members are encouraged to consider this guidance as well when selecting individuals as their committee appointments.

This year the committee has reduced the frequency of its meetings from a monthly session during the school year to a planned four or five meetings. During the 2015-2016 school year the committee meetings were comprised of the following activities:

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1 Trailblazers--http://ctetrainblazers.org/labor-market-data/
1. Highlights of CTE program achievements and activities. Prior to each meeting the activities from all CTE related programs were sent to members and then briefly discussed at the beginning of each meeting.

2. A review of the previous year for CTE. The annual Year in Review document in a new presentation format was presented to the committee highlighting the accomplishments and statistics relating to CTE programs.

3. Endorsements of new courses. The recommendations for new course offerings for CTE were presented to the committee with explanations as to why the courses were being offered based on workforce data and student interest. In addition possible new dual enrollment course offering were presented. Courses with declining student interest and/or relevance were also discussed to determine, among other means, if course content should be blended into another related course or would there be other means to increase student enrollment.

4. Explanation of the reorganization of Camp CTE into the Academy Experience. Camp CTE, an experience for base school staff to experience academy courses, was redesigned this year to focus on each academy. The academies invited their feeder schools to attend. This new experience greatly reduced the amount of staff time out of base schools and was very popular. The expected implementation of this plan had been presented to the committee the previous year.

5. Endorsement and explanation of the Perkins Budget request for school year 2016 - 17. The proposed Perkins budget was presented for CTEAC endorsement as required by the Federal Act.

6. Recommendations for new members and leadership for the 2016-2017 school year.

7. The Virginia Department of Education Annual Report. The 2014-2015 VDOE annual report was presented. County-wide CTE met all targeted areas with the exception of non-traditional enrollments. This category refers to members of each gender taking courses that are mostly accessed by the opposite gender.

8. Review of the committee Charge for 2016-17. The committee developed the charge to recommend to the school board for the 2016-2017 school year.
CTEAC held four meetings during the 2015-2016 school year and focused on the following at each meeting:

<table>
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<tr>
<th>Date</th>
<th>Agenda Topics</th>
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<tr>
<td>September 22, 2015</td>
<td>Introductions; CTE Overview; endorsement of new courses; review of our charge and mission statements; and Career Cluster Reports – Agriculture, Food and Natural Resources; Education and Training; Government and Public Administration; and Law, Public Safety, Corrections, and Security.</td>
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<tr>
<td>October 27, 2015</td>
<td>Academy Experience/Camp CTE review; CTE Year in Review; and Career Cluster Reports – Architecture; Information Technology; Manufacturing; and STEM.</td>
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<tr>
<td>February 23, 2016</td>
<td>School Board Update; CTE State Advisory Committee; Appointment of the Selection and Nomination Committee; and Career Cluster Reports – Business; Finance; Marketing; Arts, A/V, and Communications.</td>
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Career and Technical Education Advisory Committee Members
2015-2016

School Board Representation (shown as appointed prior to November 2015 election)
Jung Byun McElveen, At Large
Dr. Yosung Cho Moon, At Large
John Wittman Hough (Velkoff), At Large
Dr. James McCormack McLaughlin, Braddock
Mr. Jay Reddy Strauss, Dranesville
Dr. Muhammad Islam Hynes, Hunter Mill
Sheree Brown Kaplan Palchik (Reed), Providence
Theresa Minton-Eversole Derenak Kaufax, Lee
Alex Rodriguez Evans, Mason
Mary Porter Corbett Sanders (Storck), Mount Vernon
Arun Sambandam Schultz, Springfield
Anitha Raj Wilson (Smith), Sully
Hyun (Eunice) Cho Press, Student Representative

Community Representatives
Vacant County Council PTA
Ramona Morrow Community Member

Business and Industry Representative
Charles Britt, Jr IT Contractor
Dr. Sharon Caraballo GMU
Kristin D’Amore Dovel Technologies
Patricia DeiTos Chamberlain College of Nursing
Rachel Domer Teacher Representative
Wayne Freeman Sheet Metal Industry-Workforce Dev.
Jay Garant Fairfax County Public Schools
Lorna Gardner Northrop Grumman Information Systems
Tyna Gaylor SkillSource Group
Thomas Grane NVCC
Amy Platt CalAmp Corporation
Dana Sherwood Bagin Aces
Irvin Varkonyi Supply Chain Operations Education
Wendy Lindquist Williams Engility Corporation
Daniel Woodley AJ Dwoskin & Associates