

MEMORANDUM

TO: Arlington School Board

FROM: Career, Technical, and Adult Education Advisory Committee

DATE: December 28, 2015

SUBJECT: Non-Recommendation Year Report

2015-2016 Activities:

The activities of the committee for this year included:

- Planning for broader coordination with business organizations such as Arlington Economic Development, the Alexandria-Arlington Regional Workforce Council, the Arlington Chamber of Commerce, and Northern Virginia Technology Council on workforce development initiatives;
- Presentation and joint meeting at the Arlington Economic Development offices;
- Visits to apprenticeship programs serving as a model for broader partnerships;
- Presentations from regional workforce leaders, individual schools, and in particular the Arlington Tech programs;
- Collaborated on summer mobile application development, cybersecurity pathways, and other programs responsive to workforce needs.

Success Defined:

The School Board has asked each committee to define success for each program area. Success for Career and Technical Education (CTE) Students helps to expand the School Board's Strategic Plan emphasis on educating the whole child. All students in CTE classes gain valuable skills related to the student's career pathway. A deeper understanding of career fields and opportunities are also instilled in a CTE student. Students are able to determine if they want to continue their education in that career field or pursue other opportunities. Industry credentials, licenses, and college-level classes validate a student's skill level which students in CTE classes gain while they are still in high school. A CTE student also has an understanding of the educational needs of a career and knows that additional education is necessary after high school. When a student graduates with validated skills and the understanding of the need for further education they are better prepared to continue their education toward their career goals.

Update on Previous Recommendations

Past Recommendation #1: Provide Full Quality Points for Dual-Enrolled, College-Credit Courses

This was ACI's top-rated recommendation from 2014-2015. Dual enrollment is widely recognized as an acceleration mechanism that allows students to pursue an advanced

curriculum and college credit relevant to their individual and post-secondary academic and professional interests. Currently Arlington Public Schools (APS) dual enrollment programs are established between APS and Northern Virginia Community College (NOVA), James Madison University, Shenandoah University, and Adams College (Colorado). Dual Enrollment credits through NOVA transfer to all Virginia public universities and are accepted by most institutions nationally. Unlike AP and IB courses, the grades assigned to students in dual-enrolled courses affect the student's GPA at the institution awarding the credit, and students do not get credit for the course if they do not get a grade of C or better. This reinforces student motivation to perform at the highest level, even among graduating seniors.

Status: Dual enrolled courses with Northern Virginia Community college, Shenandoah University and James Madison University continue to evolve.(appendix 1) Data collection and aggregation strategies are also evolving. There were 307 enrollments in 2014-2015, an approximate 57% increase from the 196 enrollments in 2013-2014. Data for 2015-2016 enrollments will be confirmed in the spring semester. This year Northern Virginia Community College is not charging Arlington Public Schools for dual enrollment credits that students gain within our schools. This was a welcome change from last year and was supported through the Virginia Community College Systems and the Commonwealth of Virginia.

The School Board passed this recommendation and students are awarded a full quality point for completion of the dual enrollment class. This change will go into effect for the 15-16 school year.

Program Area/Course Type	Enrollments 2013-2014	Enrollments 2014-2015	Available courses 2015-2016
Math	26	102	5
Language Arts	11	18	1
Business & IT/Computer Science	43	26	7
Family and Consumer Sciences	16	18	2
Health & Medical	18	52	2
Science	0	21	2
Technology Education	8	18	3
Trade & Industrial	74	52	7

TOTALS	196	307	25
---------------	------------	------------	-----------

Work is continuing to increase the number of teachers that are qualified to teach dual enrollment classes. Last year we had 20 teachers teaching dual enrollment classes in all secondary schools. Funding is available to support teachers in taking additional graduate level courses needed to teach a dual enrollment class. Presently, the requirement is for the teacher to have 18 graduate level credits in the area they are teaching. Many high school teachers have a master's degree but not in the specific field they are teaching.

Over the past two school years we have had an increase in enrollment in dual enrollment classes. Enrollment for 2013-14 was 196 and enrollment for the 2014-15 school year was 307. This information was pulled from our data warehouse. During that time we established a new course code for dual enrollment classes and we have worked to capture all dual enrollment students. Enrollments have increased in Health and Medical classes due to the EMT program being dual enrolled with NOVA two years ago. Math classes have also increased over the past two years. We have had a slight decrease in Business and IT dual enrollment due to NOVA's accreditation requirement for teacher credentialing to teach transfer credit courses. The new Arlington Tech Program will provide students the opportunity to gain college credit through dual enrollment with the goal of graduating high school with a high school diploma and an associate's degree.

2011 – 2017 Strategic Plan Alignment:

- Goal One: Ensure that Every Student is Challenged and Engaged
- Goal Two: Eliminate Achievement Gaps
- Goal Four: Provide Optimal Learning Environments
- Goal Five: Meet the Needs of the Whole Child

Budgetary Implications: \$5000

- Dual-enrolled courses can be identified by course code, and the steps necessary to change the software code to recognize these courses is expected to take less than one day.
- The largest part of the budgetary projection is for meetings between administrators (including our dual enrollment partners) and IT support staff to align goals and objectives.

2014-2015 ACI Vote:

- Yes: 24**
- No: 0**
- Abstained: 2**

Past Recommendation #2: Empower Teachers to Use Integrated Teaching and Learning Activities within All Curriculum Areas

The committee recommended expanding current STEM professional development activities in an effort to improve all teachers' proficiency in integrative teaching and learning. This initiative also supports Sheltered Instruction Observation Protocol (SIOP) professional development coordinated with the ESOL/HILT program, and lesson development aligned with Next Generation Science Standards, standard 5E and emerging 7E inquiry-driven models used in Science and CTE classrooms, Engineering design processes, Math integration models, and Backwards Design (*Understanding by Design*) templates. To improve curriculum integration, the Committee also recommended common planning time for elective teachers and core subject teachers, particularly in middle school.

Status: The new Arlington Tech programs under development and existing Career Center courses have expanded an emphasis on integrative, project-based instruction, integrated language objectives (through SIOP training), and integration of the Arts (STEAM initiatives). Teachers at Arlington Tech will have a common planning time to promote integrative lesson and activities. Students will be able to see that subjects are interrelated and not stand-alone subjects. Community involvement will also enhance student learning as projects are developed and expanded and students see the connectedness of subjects and opportunities during the designing process. Staff development on problem based learning will also be conducted for approximately 10 teachers at Arlington Tech and continue to expand over the next four years.

SIOP instruction for Career and Technical teachers has also been expanded to county-wide participation for teachers in all Arlington middle and high schools and programs. CTE teachers have completed two years of SIOP training with CALS in collaboration with the ESOL/HILT department. A new SIOP coach shared with the ESOL/HILT program provides training through groups, professional learning communities, and also at the individual teacher/classroom level. Additionally, each month in the CTAE newsletter, information is shared about each of the SIOP components.

A new pilot program at Kenmore Middle School in Computer Science and Math integration currently has 22 students and will be included in the 2016-2017 Program of Studies. A similar program at Kenmore Middle School integrates Technology Education and Science, and is now in its second year.

2011 – 2017 Strategic Plan Alignment:

- Goal One: Ensure that Every Student is Challenged and Engaged
- Goal Two: Eliminate Achievement Gaps
- Goal Three: Recruit, Retain and Develop High-Quality Staff
- Goal Four: Provide Optimal Learning Environments
- Goal Five: Meet the Needs of the Whole Child

Budgetary Implications: \$1,000,000 (not funded)

- Additional planning period for a teacher in each area, requiring ten additional teaching positions
- Professional development across all instructional areas
- Common planning time including elective teachers

2014-2015 ACI Vote:

Yes: 10

No: 4

Abstained: 8

Past Recommendation #3: Advance Student Outcomes through Career Pathways and Community Engagement

This recommendation for coordinated, career-focused lessons, learning activities, field trips, professional development, and professional lesson study in curricula county-wide using a Career Pathways system requires the support of administrators and curriculum supervisors and specialists to engage teachers and counselors. Career awareness and community-teacher partnerships are critical aspects in meeting the growing need for middle-skills and high-skills workers in our region. Cooperative education work and teacher externships expand the integration of careers within various subject areas, increase familiarity with technical and professional experiences provided by CTE courses, and lead to additional student opportunities through internships, job shadowing and mentorships.

Status: A partnership with the Arlington Community Foundation created four teacher fellowships (externships) in which teachers participated in business and nonprofit groups in work similar to what graduates would pursue. Partnerships facilitating student experiences include Culpepper Gardens, Potomac Energy Group, Miller and Long Construction, Urban Alliance, and nearly 50 shorter experiences through the PRIME internship program. A partnership from Urban Alliance provided over 30 internships from South Arlington schools, and the PEP program provides 63 internships in 2015-2016. A proposal will go to the School Board to reinstate the Cooperative Education program in the 2016-2017 Program of Studies. Efforts to expand Health and Medical partnerships with Northern Virginia Community College (EMT program student experiences), CVS (pharmacy technician), Virginia Hospital Center (Physical Therapy and Pharmacy Technician) and Marymount University (Physical Therapy). Marymount University also supports Cybersecurity, and National Foundation for Teaching Entrepreneurship (NFTE) supports student entrepreneurship programs. Plans are in place to track the number of internships and partnerships. The goal is to increase opportunities for students to get out into business to better inform their future career choice.

2011 – 2017 Strategic Plan Alignment:

Goal One: Ensure that Every Student is Challenged and Engaged

Goal Three: Recruit, Retain, and Develop High Quality Staff

Goal Four: Provide Optimal Learning Environments

Goal Five: Meet the Needs of the Whole Child

Budgetary Implications: \$120,000 (not funded)

Cooperative Education

- Cooperative Education will require a 0.20 FTE teacher for each high school program with 20-40 students enrolled in the cooperative education program.
- Coordinating teachers will be assigned extended contracts to ensure effective cooperative education coordination.
- An extended contract of 20 days (during summer) is recommended for coordinating teachers in addition to the regular contract.
- *The Committee estimates the total cost for six coordinating teachers (at each high school, H-B Woodlawn and the Career Center) to be \$100,000.*

Teacher Externships

- Similar programs estimate costs of \$2000 per participating teacher, including graduate credit.
- Sponsoring universities have been successful in getting participating business partners to absorb these costs after the first year.
- Costs include outreach, website creation and preparation of materials for distribution.
- *The total cost for 10 teachers participating in Teacher Externships is \$20,000, provided by the Arlington Community Foundation.*

2014-2015 ACI Vote:

Yes: 24

No: 0

Abstained: 0

Committee members:

Michael Shea, Committee Co-Chair
Alisa Cowen, Cowen Design Group, Committee Co-Chair
Dr. John Andelin, Community Volunteer
Kevin Burton, Community Volunteer
Alessandra Colia, Community Volunteer
Latasha Fisher, Community Volunteer
Simson Garfinkel, Community Volunteer
Jason Gray, Community Volunteer
Marcus Henderson, Northern Virginia Community College
Don Hodgen, APS Parent and Community Volunteer
Natalie Monkou, Arlington Economic Development
Luann Moy, Community Volunteer
Dr. Peter Neal, Community Volunteer
Rosie O'Neil, Georgetown University and NOVA Board
Dr. Lisa O'Quinn, Community Volunteer
Dr. Diane Murphy, Marymount University
David Remick, Alexandria/Arlington Regional Workforce Council
Stan Rodia, Mercedes Benz of Arlington
Jennifer Vogel, ACI Liaison

CTAE Staff:

Kris Martini, Director, APS Career, Technical, and Adult Education
Phyllis Gandy, Supervisor, Career and Technical Education
Shari Brown, Coordinator, Project Y.E.S
Margaret Chung, Principal, Arlington Career Center
Kathleen Costar, SIOP Coach/Coordinator, ESOL/HILT & CTE
Dr. Jim Egenrieder, STEM Education Specialist
Suzanne Grant, REEP
Rona Hernandez, Administrative Specialist to the Director
Schirley Soto, Administrative Assistant
Raul Matos, Coordinator, Adult Education

Appendix 1
Arlington Public Schools
Dual Enrolled Courses at a Glance

Course Offerings	APS Locations	College/University Awarding Credit Earned
Advanced Math: NOVA MATH 151/152 (93160HW)	Arlington Mill, Career Center, Wakefield, Washington-Lee, and Yorktown	Northern Virginia Community College
Advanced Topics in Business and Marketing (98137HW) (CC only: 98138HW)	Arlington Mill, Career Center, Wakefield, Washington-Lee, and Yorktown	Northern Virginia Community College
Advanced Topics in Information Technology (96648HW) (CC only: 96645HW)	Arlington Mill, Career Center, Wakefield, Washington-Lee, and Yorktown	Northern Virginia Community College
Air Force Junior ROTC III & IV (98736HW)	Career Center	Adams State College
Air Force Junior ROTC V & VI (98737HW)	Career Center	Adams State College
Automotive Technology I (98509HW)	Career Center	Northern Virginia Community College
Automotive Technology II (98507W)	Career Center	Northern Virginia Community College
Automotive Technology III (98508W)	Career Center	Northern Virginia Community College
Biology II/Human Biology (98085HW)	Career Center	Northern Virginia Community College
Computer Information Systems II (96613HW)	Arlington Mill, Wakefield, Washington-Lee, and Yorktown	Northern Virginia Community College
Computer Assisted Technical Drawing (98439HW)	Arlington Mill, Wakefield, Washington-Lee, and Yorktown	Northern Virginia Community College
Computer Assisted Technical/Architectural Drawing (98408HW) (CC only: 98435HW)	Arlington Mill, Career Center, Wakefield, Washington-Lee, and Yorktown	Northern Virginia Community College
Computer Assisted Technical/Engineering Drawing (98436HW)	Career Center	Northern Virginia Community College
Computer Keyboarding I (96151HW)	Arlington Mill, Wakefield, Washington-Lee, and Yorktown	Northern Virginia Community College

Course Offerings	APS Locations	College/University Awarding Credit Earned
Computer Keyboarding II (96152HW)	Arlington Mill, Wakefield, Washington-Lee, and Yorktown	Northern Virginia Community College
Computer Programming (96647HW)	Career Center	Northern Virginia Community College
Computer Science II (96641HW)	Wakefield, Washington-Lee, and Yorktown	Northern Virginia Community College
Differential Equations – NOVA Math 291 (93180W)	HB Woodlawn, Wakefield, Washington-Lee, and Yorktown	Northern Virginia Community College
Digital Photography III (98610HW)	Wakefield, Washington-Lee, and Yorktown	Northern Virginia Community College
Early Childhood Education II (98236HW)	Career Center	Northern Virginia Community College
Emergency Medical Technician/Human Anatomy and Physiology (98334HW)	Career Center	Northern Virginia Community College
English 12 (91160HW)	Career Center and Arlington Mill	Northern Virginia Community College
Entrepreneurship (99094HW)	Arlington Mill, Wakefield, Washington-Lee, and Yorktown	Northern Virginia Community College
Geospatial Tools and Techniques (98423HW)	Washington-Lee	James Madison University
Linear Algebra - NOVA Math 285 (93165W)	HB Woodlawn, Wakefield, Washington-Lee, and Yorktown	Northern Virginia Community College
Medical Terminology (98383HW)	Career Center	Northern Virginia Community College
Multivariable Calculus (93178W)	HB Woodlawn, Wakefield, Washington-Lee, and Yorktown	Northern Virginia Community College
Teachers for Tomorrow (99062W)	Wakefield, Washington-Lee, and Yorktown	Shenandoah University
Television and Multimedia Production II (98690HW)	Career Center	Northern Virginia Community College
US/VA Government (92240HW)	Arlington Mill, Career Center, Wakefield, Washington-Lee, and Yorktown	Northern Virginia Community College
Vector Calculus – NOVA Math 277 (93175W)	HB Woodlawn, Wakefield, Washington-Lee, and Yorktown	Northern Virginia Community College