

Board of Education Agenda Item

Item: J.

Date: July 17, 2008

Topic: First Review of a Proposal to Establish a Governor's Career and Technical Academy: The Loudoun Governor's Career and Technical Academy

Presenter: Dr. Lois A. Williams, STEM Coordinator
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Origin:

Topic presented for information only (no board action required)

Board review required by
 State or federal law or regulation
 Board of Education regulation

Other: Process for Initiating a Governor's Career and Technical Academy Approved by the Board of Education on November 29, 2007

Action requested at this meeting Action requested at future meeting: _____ (date)

Previous Review/Action:

No previous board review/action

Previous review/action
date _____
action _____

Background Information:

Virginia is one of six states to receive a grant from the National Governors Association (NGA) Center for Best Practices to improve science, technology, engineering, and mathematics (STEM) education. The development of Governor's Career and Technical Academies is one of the major initiatives of the grant.

Virginia's Governor's Career and Technical Academies are programs designed to expand options for the general student population to acquire science, technology, engineering and mathematics (STEM) literacy and other critical skills, knowledge and credentials that will prepare them for high-demand, high-wage and high-skill careers. Partnerships establishing academies must include at least one public school division, business and industry, and postsecondary education.

On November 29, 2007, the Board of Education approved the criteria to establish a Governor's Career and Technical Academy. Subsequently, on March 19, 2008, the Board approved the standards for the Governor's Career and Technical Education Exemplary Standards Awards Program, in which all Career and Technical Academies must participate.

As required by the Board of Education, the State Council of Higher Education in Virginia (SCHEV) has reviewed the attached proposal and recommends that the Board approve the proposal. Staff at the Virginia Department of Education (DOE) have also reviewed the proposal in the context of the Board's criteria. An executive summary of the proposal is contained in Attachment A. Attachments B and C contain the reports from the reviews by SCHEV and the DOE. Attachment D contains the complete proposal.

Summary of Major Elements:

The proposed program is a partnership among Loudoun County Public Schools, the Monroe Technology Center, Northern Virginia Community College, and Virginia Polytechnic Institute and State University. This partnership supports four career clusters and five pathway initiatives that are aligned with regional and state work force demands outlined within this proposal.

The Loudoun Governor's Career and Technical Academy will focus on the four specific career clusters. They are: Agriculture, Food, and Natural Resources with a pathway in Plant Systems; Health Science with pathways in Diagnostic Services and Therapeutic Services; Science, Technology, Engineering, and Mathematics with a pathway in Engineering and Technology; and Transportation, Distribution and Logistics with a pathway in Facility and Mobile Equipment Maintenance.

The Loudoun Governor's Career and Technical Academy will develop and expand offerings for the secondary school population of Loudoun County Public Schools. These offerings will prepare Academy students to obtain science, technology, engineering, and mathematics (STEM) literacy, critical knowledge, and workplace skills, in addition to the industry credentials that prepare them for the high-demand, high-wage, and high-skill careers available within the Commonwealth of Virginia.

Superintendent's Recommendation:

The Superintendent of Public Instruction recommends that the Board of Education waive first review and approve the proposal to establish the Loudoun Governor's Career and Technical Academy.

Impact on Resources:

Funding must be provided at the local level.

Timetable for Further Review/Action:

The Loudoun Governor's Career and Technical Academy will be in operation by the beginning of the 2008-2009 academic year.

**The Loudoun Governor's Career and Technical Academy
Executive Summary
July 17, 2008**

Partnership Members:	Loudoun County Public Schools; Monroe Technology Center; Northern Virginia Community College; Shenandoah University; Virginia Polytechnic Institute and State University; George Washington University; REHAU; Fortessa, Inc.; Lockheed Martin; Metropolitan Washington Airports Authority; America Online, LLC; Loudoun County Economic Development, The Claude Moore Charitable Foundation; TELOS/Xacta Corporation; Hayes-Large Architects; Jerry's Automotive Group
Lead Entity:	Loudoun County Public Schools
Fiscal Agent:	Loudoun County Public Schools
Contact Person:	Ms. Shirley L. Bazdar Director of Career and Technical Education Loudoun County Public Schools 571-252-1070 shirley.bazdar@loudoun.k12.va.us
Academy Location:	The Loudoun Governor's Career and Technical Academy 715 Childrens Center Road, SW Leesburg, Virginia 20175
Number Students:	One hundred twenty-five high school students will have the opportunity to enroll in the Academy for the 2008-2009 school year. Future plans are in place to expand and grow Academy programs.
Career Pathways:	Plant Systems Diagnostics Services Therapeutic Services Engineering and Technology Facility and Mobile Equipment Management
Academy Goals and Description:	The Loudoun Governor's Career and Technical Academy will provide rigorous academic content within its career and technical instruction, concentrating on five career pathways. Academic integration and STEM curriculum expansion will enhance student learning through curriculum enhancements and targeted staff development with concentrations on integrative applications of mathematics and science. Academic content integration will be facilitated by enrollment in the STEM certificate/degree program at Virginia Polytechnic Institute and State University for identified faculty. A cluster resource teacher will also be identified to assist with curriculum enhancement and monitoring. Each of these tools will be used to connect and integrate academic content areas. Additionally, a partnership with the Loudoun Academy of Science program will enhance the academic rigor and create opportunities for future STEM education initiatives.

Graduates of The Loudoun Governor's Career and Technical Academy will complete a college and work readiness curriculum meeting the Commonwealth Scholars course of study. High school diploma completion will include up to nine career and technical course credits that can be earned, including corresponding industry credentials. Academy graduates will meet the requirements for an Advanced Technical Diploma. Opportunities will be available within Academy programs for students to earn at least nine dual enrollment college credits. Academy programs will utilize Virginia's Workplace Readiness competencies. Advisory committee members will work with Academy students by offering seminars addressing topics such as life skills, background checks, or professional ethics and behaviors.

**Highlights
of the
Program:**

- Dual enrollment opportunities will be available through Northern Virginia Community College and Virginia Polytechnic Institute and State University. Future dual enrollment opportunities will be made available through the George Washington University and Shenandoah University.
- Academy students will receive enhanced science, technology, engineering, and mathematics instruction via the staff development opportunities, curriculum enhancement, and partnerships with the Loudoun Academy of Science, as well as advisory and planning committee member participation.
- The Health Science cluster pathways contain two new and innovative pathway programs. Curriculum is currently being developed at the CTE Resource Center for these two pathways. The Medical Laboratory Technology and Radiology Technology pathway programs have been created through the support and partnership of the Claude Moore Charitable Foundation and the Inova Healthcare System.
- The Agriculture, Food and Natural Resources Plant Systems pathway is aligned with the global movement to develop more green technologies and practices to conserve and protect earth's natural resources.
- The Transportation, Distribution and Logistics Facility and Mobile Equipment Maintenance pathway will provide direct instruction in the development and maintenance of alternative fuels and hybrid vehicles.
- The Engineering and Technology pathway offers a digital visualization and animation program. This program prepares students to enter the evolving career fields of animation, gaming and software development, prototyping, and rendering.

**The State Council of Higher Education for
Virginia**

**Review of Governor's Career and Technical
Academy Proposal**

Name of Lead Entity on Proposal: Loudoun County Public Schools

Date of Review: May 29, 2008

The State Council of Higher Education for Virginia recommends approval of The Loudoun Governor's Career and Technical Academy as a Governor's Career and Technical Academy.



Dr. Daniel LaVista
Executive Director
State Council for Higher Education

6.1.08

Date

State Council of Higher Education for Virginia

**Governor’s Career and Technical Academies
Postsecondary Curriculum Review Checklist**

Academy Name	Collaborating Partners	Total Funds Requested	Allocated Funds for Postsecondary Component
The Loudoun Governor’s Career and Technical Academy	Loudoun County Public Schools, NOVA, Virginia Tech (see proposal for a full list)	\$100,000	NA

Criteria

Category 1: Postsecondary Accreditation and Approvals

YES/NO

- YES **Postsecondary institution is appropriately accredited**
- YES **Proposed postsecondary program has specialized accreditation, if applicable**
- YES **Proposed postsecondary program is SCHEV and/or VCCS approved**
- NA **Proposed postsecondary program will be seeking SCHEV and/or VCCS approval**

Category 2: Governor’s Career and Technical Academy Requirements

YES/NO

- YES **Evidence of a partnership with a postsecondary institution, business, or industry, and demonstrated roles for each entity**

- YES **Offers at least one career pathway in a field identified by a statewide authority or organization as a strategic growth area for Virginia**

- YES **Offers at least one career pathway addressing regional and local work force demand in a high-wage, high-skill field identified by employers and work force officials**

- YES **At least one of the two career pathways is in a STEM-related field**

Category 3: Postsecondary/Business Component Requirements

YES/NO

- YES **Provides opportunities for students to earn industry credentials, state licensure, associate or baccalaureate degrees, and college credit for work-based experiences**

- YES **Articulates with baccalaureate programs or to higher levels of training or professional credentialing**

- YES **Demonstrates P-16 integration including curriculum development with high school, college, and university faculty (desired)**

- YES **Includes college faculty as adjunct faculty of the academy (desired)**

- YES **Provides opportunities for students to participate in work-based experiences**

Category 4: Academic Quality

YES/NO

- YES **Requires appropriate postsecondary faculty qualifications**
- YES **Requires faculty to hold industry certification, where necessary**
- YES **Planned professional development for faculty and administrators**
- YES **Planned systematic program and learning outcomes assessment**

Category 5: Administration and Funding

YES/NO

- YES **Funding is sufficient to support effective administrative and operational needs including materials, administrative personnel, and facilities**
- YES **Funding is sufficient to sustain faculty salaries, curriculum development costs, and instructional materials and delivery**
- YES **Facilities possess the necessary physical attributes to deliver the instructional program (classroom space, technology, labs, equipment)**

Comments

Overall, this is a cohesive program proposal demonstrating foresight regarding the future employment needs of Loudoun County.

**Virginia Department of Education
Governor's Career and Technical Academy
Proposal Review Checklist**

Final Review

Title of Proposal: The Loudoun Governor's Career and
Technical Academy

Lead Entity for Proposal: Loudoun County Public
Schools

Date of Review: May 28, 2008

**Virginia Department of Education
Governor's Career and Technical Academy
Proposal Review Checklist**

I. Partnership Capacity

Partnerships desiring to implement a Governor's Career and Technical Academy shall provide the Department of Education with evidence of the following:

Criteria	Documentation			Comments
	Full	Partial	None	
A. An active, ongoing planning committee, including a list of members and signed certifications from each that they are willing and able to serve in that capacity. At a minimum, members must represent K-12 education (superintendent or designee), higher education, and business and industry. All partners must be represented on the committee.	X			
B. An advisory committee, including a list of members and signed certifications from each that they are willing and able to serve in that capacity.	X			
C. A written memorandum of agreement among school divisions, local businesses, postsecondary institutions, and any other partners that outlines ways in which community resources will contribute to the Governor's Career and Technical Academy to broaden the scope of students' educational experiences.	X			

Criteria	Documentation			Comments
	Full	Partial	None	
D. A statement of assurances that the Governor’s Career and Technical Academy Planning Committee has reviewed provisions of <i>Administrative Procedures Guide for the Establishment of Governor’s Career and Technical Academies</i> and agrees to follow the guidelines set forth in the document (see appendix).	X			
E. A statement of assurances that, if applicable, an ongoing Governing Board will be established to reflect current Board of Education regulations relative to jointly operated schools and programs (see appendix).	X			
Comments:				

II. Need/Rationale for the Academy

Partnerships desiring to implement a Governor’s Career and Technical Academy shall provide the Department of Education with evidence of the following:

Criteria	Documentation			Comments
	Full	Partial	None	
A. Demonstration of the need/rationale for the Academy. This statement should be concise and state the major reasons to have a Governor’s Career and Technical Academy, including need at the state, local and/or regional levels.	X			
B. A description of the enhanced or additional offerings in science, technology, engineering, and/or mathematics (STEM) that will meet the need described above.	X			

Criteria	Documentation			Comments
	Full	Partial	None	
C. A fiscal agent that is a public entity, including a certification that the entity is willing and able to serve in that capacity.	X		X	5/28 A statement about the fiscal agent is missing. 6/3 This statement has been added.
Comments: The need was very well documented for each pathway.				

III. Program Description

Each Governor’s Career and Technical Academy planning committee shall develop cooperatively with local school divisions, business, community, and higher education partners and have available for review and dissemination, a program description that includes:

A. A statement of program goals addressing the following criteria:

Criteria	Documentation			Comments
	Full	Partial	None	
1. Rigorous academic content in career and technical instruction;	X			
2. An emphasis on STEM career pathways;	X			
3. Individualized high school plans to ensure course selections that are aligned with students’ transition and career goals after high school;	X			
4. Evidence that graduates will complete a college and work readiness curriculum, minimally at the level specified for Commonwealth Scholars Course of Study (State Scholars Core) with the possibility of pre-approved substitution of equivalent courses where there may be more relevant course selections for a particular career pathway;	X			

Criteria	Documentation			Comments
	Full	Partial	None	
5. Evidence that graduates will qualify for the Technical and/or the Advanced Technical Diplomas; and	X			
6. Incorporation of Virginia's Workplace Readiness Skills.	X			
Comments:				

B. A statement of program objectives and performance measures to:

Criteria	Documentation			Comments
	Full	Partial	None	
1. Improve academic achievement of Academy students;	X			
2. Increase completion of dual enrollment courses;	X			
3. Provide work place readiness experiences for students through strong partnerships with businesses;	X			
4. Increase high school graduation rates;	X			
5. Reduce dropout rates;	X			
6. Increase enrollment and retention in postsecondary education;	X			
7. Increase the proportion of students completing a college and work place ready curriculum in high school;	X			
8. Reduce the proportion of students requiring remediation in college;	X			
9. Increase the number of industry certifications awarded to high school students; and	X			The 20 percent increase objective in this area is commendable.

Criteria	Documentation			Comments
	Full	Partial	None	
10. Increase the number of graduates employed in high-wage, high-demand and high-skill careers.	X			
<p>Comments:</p> <p>5/28 The 0.5 increase for SOL test scores is currently required for all career and technical education students through the Perkins IV Act. Since an Academy objective is to increase rigor the review committee suggests revisiting this measure.</p> <p>6/3 The partnership has revisited the measure and decided that the 0.5 increase should be required for all students and removed it as a special requirement for Academy students only.</p>				

C. A brief description of the proposed program, including:

Criteria	Documentation			Comments
	Full	Partial	None	
1. Site location;	X			
2. Number of students to be served;	X			
3. Grade levels;	X			
4. General curriculum design;	X			
5. List of courses to be delivered;	X			
6. Description of how/where the courses will be delivered. Courses may be delivered on a high school, technical center or community college campus, online, or in other innovative ways; and	X			
7. Designation of full-day or part-day, academic-year program.	X			
<p>Comments:</p>				

D. Evidence of participation in the Governor’s Exemplary Standards Award Program for Career and Technical Education.

	Documentation			Comments
	Full	Partial	None	
	X			
Comments: Loudoun County Public Schools should be commended for the initiative taken by their CTE office to align with the national exemplary standards.				

E. Program and course descriptions

E.1. At least two well-articulated career pathways must be included that meet the following criteria:

Criteria	Documentation			Comments
	Full	Partial	None	
Pathway #1: Engineering and Technology				
a. Must include opportunities to earn industry credentials, postsecondary certificates, diplomas or associate degrees while in high school and pursue additional industry credentials and academic degrees at the associate, bachelor’s and graduate levels. These pathways may be in the same or different career clusters.	X			
b. Must be in a field identified by a statewide authority or organization, such as the Virginia Economic Development Partnership or the Virginia Research and Technology Advisory Commission, as a strategic growth area for Virginia. Examples include biosciences, information technology, automotive technology and motor sports, as well as modeling and simulation and nanotechnology; or	X			

Criteria	Documentation			Comments
	Full	Partial	None	
c. Must address regional and local work force demand in a high-wage, high-skill field as identified by employers and work force officials.	X			
d. At least one pathway must be in a STEM-related field. This career pathway should drive the innovative capacity of the region and/or state.	X			
Comments:				

Criteria	Documentation			Comments
	Full	Partial	None	
Pathway #2: Diagnostic Services				
a. Each career pathway must include opportunities to earn industry credentials, postsecondary certificates, diplomas or associate degrees while in high school and pursue additional industry credentials and academic degrees at the associate, bachelor's and graduate levels. These pathways may be in the same or different career clusters.	X			
b. Must be in a field identified by a statewide authority or organization, such as the Virginia Economic Development Partnership or the Virginia Research and Technology Advisory Commission, as a strategic growth area for Virginia. Examples include biosciences, information technology, automotive technology and	X			

Criteria	Documentation			Comments
	Full	Partial	None	
motor sports, as well as modeling and simulation and nanotechnology; or				
c. Must address regional and local work force demand in a high-wage, high-skill field as identified by employers and work force officials.	X			
d. Of the two pathways described, at least one must be in a STEM-related field. This career pathway should drive the innovative capacity of the region and/or the state.	X			
e. Additional career pathways may address one of the areas described above, or an area identified by the partnership as an area of interest, growth, or expansion for students in the service area of the Academy.	X			
<p>Comments: Loudoun County should be commended for including five pathways in the opening of their Academy. All have a fully documented program of studies.</p>				

E.2 List of all requirements for successful program completion.

	Documentation			Comments
	Full	Partial	None	
	X			
Comments: 5/28 The diploma requirements are not clear. 6/3 It is now clearly expressed that Academy students will meet all the requirements for the proposed Advanced Technical Diploma.				

E.3 Academy graduates must achieve one or more of the following benchmarks:

Criteria	Documentation			Comments
	Full	Partial	None	
a. Earn one or more industry certifications or state occupational licenses, and/or demonstrate competencies on an assessment instrument recognized by postsecondary institutions such as CLEP examinations, collaboratively designed or mutually approved end-of-course tests, college placement tests, or student portfolios reviewed by a team of college and high school faculty; or	X			
b. Earn at least nine transferable college credits as defined in the Early College Scholars program (includes dual enrollment, AP and other options); or	X			
c. Earn an Associate Degree.	X			
Comments:				

E.4 Significant work-based experience must be included representing additional instruction or training beyond the classroom such as:

Criteria	Documentation			Comments
	Full	Partial	None	
a. Cooperative Education; or				
b. Internships; or	X			
c. Job Shadowing; or	X			
d. Mentorships; or	X			
e. Project-based learning; or	X			
f. Service learning; or				
g. A combination of the above.				
Comments:				

F. Length of program and daily schedule: Governor’s Career and Technical Academies are defined by program content, not by the location or delivery system of courses. Evidence of the following must be submitted:

Criteria	Documentation			Comments
	Full	Partial	None	
Designation of full-day or part-day, academic-year program.	X			
Comments:				

G. Assurance from the fiscal agent that operating funds and facilities are available to support the Governor’s Career and Technical Academy and are adequate to meet the needs of the program.

	Documentation			Comments
	Full	Partial	None	
	X			
Comments:				

H. Materials and equipment to be provided to accomplish program goals and objectives.

	Documentation			Comments
	Full	Partial	None	
	X			
Comments:				

I. Evidence of an internal evaluation process to effect program improvement, including:

Criteria	Documentation			Comments
	Full	Partial	None	
1. A review of the Academy’s policies, procedures, and outcomes;	X			
2. A review of the program design and instructional delivery;	X			
3. Consideration of feedback from students, staff, parents, the community, and partnership members; and	X			
4. Annual collection and reporting of data to the Department of Education related to student achievement, goal achievement, and other indicators.	X			
Comments: Loudoun’s current work on exemplary standards enhances their internal review process.				

IV. Administrative Procedures

Each Governor’s Career and Technical Academy must develop and maintain procedures developed cooperatively with participating partners. There should be evidence of procedures in the four areas that follow.

A. Partnerships - The role of business and industry, public school divisions, and postsecondary institutions in the partnership. The role of work force and economic development entities should also be included if they are among the partners.

	Documentation			Comments
	Full	Partial	None	
	X			
Comments:				

B. Student recruitment, selection criteria, and admissions.

	Documentation			Comments
	Full	Partial	None	
	X			
Comments: Excellent documentation provided in the appendix.				

C. Code of student conduct and attendance.

	Documentation			Comments
	Full	Partial	None	
	X			
Comments:				

D. Transportation provided by the school division or consortium that is in compliance with all applicable federal and state regulations.

	Documentation			Comments
	Full	Partial	None	
	X			
Comments:				

E. Staff recruitment, selection, and assignment - The Governor’s Career and Technical Academy shall hire staff members who meet the Virginia teacher licensure requirements and/or postsecondary faculty qualifications. Where applicable, they must have industry-specific education with training and experience, including industry certification.

	Documentation			Comments
	Full	Partial	None	
	X			
Comments:				

F. Staff development - The program will provide appropriate staff training in addition to staff planning time.

	Documentation			Comments
	Full	Partial	None	
	X			
Comments:				

G. Staff evaluation – Staff will be evaluated according to the human resources policies of the agency or institution employing Academy personnel.

	Documentation			Comments
	Full	Partial	None	
	X			
Comments:				

H. Parent, student and community involvement

Criteria	Documentation			Comments
	Full	Partial	None	
1. Preparation for entering the Academies should begin by eighth grade.	X			
2. Students, parents, teachers, and counselors should work collaboratively to:	X			
a. Complete career interest inventories;				
b. Prepare academic and career plans outlining an intended course of study in high school;	X			
c. Review multiple postsecondary pathways and the steps required to pursue them;	X			
d. Participate in career assessments to identify areas students should strengthen to qualify for their selected pathways; and	X			
e. Discuss available diplomas, seals, and other recognitions including admission to specialized programs such as Governor's Academies.	X			

I. Documentation of insurance, budget, and other fiscal information.

	Documentation			Comments
	Full	Partial	None	
Insurance	X			
Budget (from appendix)	X			
Budget Narrative	X			
Other				
Comments:				

The Loudoun Governor's Career and Technical Academy



The Loudoun Governor’s Career and Technical Academy Board of Education Proposal

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Introduction

The Loudoun Governor’s Career and Technical Academy will develop and expand offerings for the secondary school population of Loudoun County Public Schools to obtain science, technology, engineering, and mathematics (STEM) literacy, critical knowledge, skills, and credentials that prepare students for high-demand, high-wage, and high-skill careers in Virginia.

Loudoun County is home to increasingly high numbers of regional and global corporations whose active participation in school and business partnerships enriches and extends learning opportunities within Loudoun County Public Schools. Loudoun County’s need for additional secondary school sites has doubled in the past ten years. Short-term fixes to meet our secondary and postsecondary educational population’s needs no longer provide long-term solutions to filling the high-demand, high-skill occupation employment gap. The Loudoun Governor’s Career and Technical Academy plans to integrate STEM education and training opportunities for career and technical education (CTE) faculty, academic teachers, and administrators in order to fill the needs gaps identified in the following career clusters and pathways:

CAREER CLUSTER	PATHWAY
Agriculture, Food, and Natural Resources	Plant Systems
Health Science	Diagnostic Services
Health Science	Therapeutic Services
Science, Technology, Engineering, and Mathematics (STEM)	Engineering and Technology
Transportation, Distribution and Logistics	Facility and Mobile Equipment Maintenance

To meet the employment demands of our local and regional work force, we also need to improve the middle school, secondary, and postsecondary transitional opportunities and increase mentorships and internships.

The Loudoun Governor's Career and Technical Academy will be part of Loudoun County Public Schools at the Monroe Technology Center located in Leesburg, Virginia. The Loudoun Governor's Career and Technical Academy will serve as a STEM instructional center for all ten high schools across the county offering three to nine elective credits, with an alternating day block schedule.

Rationale and Enhancements

The Loudoun Governor's Career and Technical Academy will focus on four specific cluster areas – Agriculture, Food and Natural Resources; Health Science; Science, Technology, Engineering, and Mathematics; and Transportation, Distribution, and Logistics. The selected programs will increase options for Loudoun County students to acquire the knowledge and skills that will prepare them to successfully transition through postsecondary pathways and enter high-wage, high-skill need area – locally, regionally, and across the Commonwealth.

Agriculture, Food and Natural Resources

The Plant Systems pathway supports a local economic need within Loudoun County. Approximately four percent of employment in the Washington Metropolitan area is in the agricultural industry. According to the Virginia Employment Commission the major employers include Meadows Farms, Village Landscape and Irrigation, Incorporated, and Chapel Valley Landscape Company. An emerging area of growth in agriculture in Loudoun is identified as a nontraditional farm, defined as less than 50 acres. These nontraditional farms include Christmas tree production, animal production, equine industries, hydroponics and organic products. These

products and industries represent 66 percent of all farms in Loudoun County. Niche market areas, including service-based businesses such as resort properties, wineries and vineyards, and turf management, are diversifying our economy through job development. Subsequent benefits include opportunities within travel and tourism, sports and leisure, and its positive impact to our local economy. Emerging areas of focus for horticulture in Loudoun County include: landscape design, landscape maintenance, horticulture and garden center management, and landscape lighting and irrigation. Potential internships and placement sites include: The Smithsonian Institute, the National Arboretum, the American Horticulture Society, Merrifield Garden Center, Green Spring, as well as the local employers listed previously. The Academy's horticulture students will be prepared with the science and technical knowledge to pursue careers in a variety of innovative and high-demand occupations.

Health Science

Multiple data sources including the National Governor's Association Center for Best Practices, the Virginia Employment Commission, and the Bureau of Labor Statistics support the need for career pathways in diagnostic and therapeutic services. Within the Commonwealth, the health science field is identified as a high-demand occupational area. The Virginia Employment Commission anticipates 19,211 new direct-care positions will be created by 2014, a 38 percent increase over the number of positions in 2004. Northern Virginia projects the largest population increase with a significantly aging population creating a gap of supply versus demand within the nursing and other health science occupations. The Northern Virginia shortage is projected to increase to 16,600 vacant positions by 2020 without additional interventions – a 490 percent increase over the next 16 years. Employers like Inova Loudoun Hospital Center and Loudoun Medical Group are among the top 50 largest employers in Loudoun County. Inova Loudoun Hospital Center is the eighth largest employer within Loudoun County.

Science, Technology, Engineering and Mathematics

The Engineering and Technology pathway meets local and state needs by preparing students with computer-related skills to fill high-wage, high-skill occupational areas. According to the 2006-2007 Occupational Outlook Handbook, the explosive impact of computers and information technology on our everyday lives has generated a need to design and develop new computer software systems and to incorporate new technologies into a rapidly growing range of applications. Growth plus replacement needs for Computer Software Engineers and Systems Software Developers in Virginia is estimated to average 1,661 openings per year from 2004-2014. Of these estimated 1,661 openings per year, 85.6 percent are due to growth (new positions) and 14.4 percent are due to replacements of workers leaving this occupation. This compares with all occupations in Virginia where 42.9 percent of annual openings are due to growth (new positions) and 57.1 percent are due to replacements of workers leaving this occupation. It is projected that in 2014 there will be 48,392 openings, representing an annual average growth rate of 4.8 percent, faster than the 1.6 percent growth rate for all occupations in Virginia. In Virginia, “the greatest gaps between supply and demand are in computer engineering and computer systems,” per the National Governors Association Gap Analysis. Thirteen of the top 50 employers in Loudoun County are representatives of this STEM-focused industry. America Online, LLC, is the second largest employer located within Loudoun County. Students within the Engineering and Technology pathway will be prepared to enter careers in civil, systems, software, and design engineering. Dynamic career options for Academy students like prototype production, gaming, rendering, digital visualization and multimedia communications will be fundamental to twenty-first century work force development.

Transportation, Distribution and Logistics

The Facility and Mobile Equipment Maintenance pathway has evolved from the early field of mechanical repair to a highly skilled technical occupation. Within the Commonwealth, the supply of technicians is not meeting the ever increasing demand. The Virginia Workforce Connection's occupational profile data, states "growth plus replacement needs for Automotive Service Technology and Mechanics in Virginia statewide are estimated to average about 1,085 openings per year from 2004-2014. Of these estimated openings per year, 38.2 percent are due to growth (new positions) and 61.8 percent are due to replacements of workers leaving this occupation." According to the Bureau of Labor Statistics, 4.3 percent of employment in the Washington D.C., metropolitan area is attributed to the automotive service technology and mechanics occupational area. Major employers in Loudoun County include Carmax Auto Superstores, Incorporated, BMW of Sterling, and Koons Sterling Ford. Students specializing in automotive service technology training through secondary pathways will not only be prepared to fill the immediate needs of a new and existing work force, but will also be prepared for advanced college placement.

These STEM-enhanced programs target four existing career cluster areas, and five career pathways. Each career pathway meets the identified goals of The Loudoun Governor's Career and Technical Academy. These goals include preparation for: high-demand, high-wage, and highly skilled careers, as identified within Loudoun County and the Commonwealth of Virginia; industry certification; strengthening the postsecondary certificate or Associate's degree opportunities and alignment; and STEM literacy. Further enhancements of these identified pathways will extend into cross-disciplinary and vertical STEM instructional opportunities through innovative offerings within Loudoun County Public Schools. These offerings will be available through the following avenues:

1. The Loudoun Governor's Career and Technical Academy will provide professional development opportunities to our faculty and staff through the Virginia Polytechnic Institute and State University Integrative STEM Education program (i-STEM). Identified staff will be trained as STEM trainers within the Academy. The professional development opportunities will include the 12 graduate semester hours certificate program and higher education degree options. This increased training and certification opportunity will provide direct instruction both to the students and to other faculty within The Loudoun Governor's Career and Technical Academy.
2. The Loudoun Governor's Career and Technical Academy will implement a train-the-trainer model to develop the instructional tools for other teachers with high-level industry certifications to develop ways of integrating STEM within existing curricula.
3. The Loudoun Governor's Career and Technical Academy will provide school-based STEM integration resource teachers with shared planning time to work with and follow through on the STEM pedagogy and foundations within new and existing career pathway areas. The STEM integration resource teachers will work with academic and CTE teachers across the school division to demonstrate cross-disciplinary instructional strategies and techniques to incorporate using technology while reinforcing workplace readiness skills.
4. The Loudoun Governor's Career and Technical Academy, in partnership with the Loudoun County Public Schools' Academy of Science, will develop digital and/or videoconferencing for instructional collaboration. The focus of this collaboration will be for advanced instructional opportunities within mathematics and science. Our goal is to provide both The Loudoun Governor's Career and Technical Academy and the Loudoun County Public Schools' Academy of Science students with further STEM enhancements

and postsecondary course pathways. Instructional collaboration between these programs will enhance learning opportunities through inquiry-based learning, research, independent study, internship, mentoring or job shadowing options.

5. During the 2008-2009 school year The Loudoun Governor's Career and Technical Academy staff will develop and present a resource guide offering STEM integration activities. This option will allow teachers at the comprehensive high schools to have field experiences and lesson activities that integrate CTE content to the academic content. Contextual learning applications will increase exposure to the STEM opportunities within The Loudoun Governor's Career and Technical Academy and the Loudoun County Public Schools (LCPS) secondary school communities.

The 2006 population of Loudoun County was estimated at 268,817. This represents a 115 percent increase from 1996. According to future projections (Carl Fisch), "80 percent of the jobs that today's five-year-olds will occupy don't yet exist and of the 60 percent of jobs being created today, only 20 percent of workers will have the necessary skills." The challenge today is to prepare our youth for a future that will change and differ from the stability and prospects that many parents and grandparents experienced. The complexity of surrounding educational achievement with high-demand, high-skill workplace readiness experiences is to provide students with a twenty-first century knowledge base and to grow an economy to meet increasing future job projections. This is the driving force for The Loudoun Governor's Career and Technical Academy; we need to grow tomorrow's STEM program options for today's student population. In preparing a twenty-first century work force, Loudoun County Public Schools will continue its research and development in STEM literacy and best practices. Cluster charts specific to the identified pathways are available in Appendix A, offering further analysis, explanation, and sequence of the pathway models.

Appendix A outlines The Loudoun Governor's Career and Technical Academy plan for its pathway areas identified for growth. However, to further develop the areas of literacy and best practices, staff will continue its training with Mid-continent Research for Education and Learning (McREL). McREL's research and development training provides teachers and administrators with valuable information about proven, effective approaches to the challenges within education today. By building on research to solve specific problems, McREL develops widely acclaimed preK-16 educational products that are used in classrooms nationally and internationally to help educators maximize student learning (Mission and Principles, <http://www.mcrel.org/about/>). These innovative instructional approaches offer the identified STEM pathway Academy programs, research-based best practices that are currently applied within our existing classroom environments to help us define and deliver quality instruction. In conjunction with the STEM Curriculum Resource Guide, these research-based strategies and the school improvement plan process will continue to support Academy initiatives. Additionally, the career pathways and i-STEM pedagogy provide for a well-balanced program.

The Academy design strives to meet the occupational forecasts and trends for the twenty-first century by raising the level of academic achievement through CTE content. STEM pedagogy within CTE will be implemented through innovative program delivery by preparing existing faculty with STEM certification and curriculum enhancement strategies. Academy leadership will continue ongoing monitoring and assessment of these programs and practices.

Program Description

Goals

The Loudoun Governor's Career and Technical Academy will provide rigorous academic content within its career and technical instruction, concentrating on five career pathways. Academic integration and STEM curriculum expansion will enhance student learning through lesson plan development and targeted staff development with concentrations on integrative application of mathematics and science. Academic content integration will be facilitated through enrollment in the STEM Certificate or Degree program at Virginia Polytechnic Institute and State University for identified faculty, and the addition of a cluster resource teacher. Each of these tools will be used to connect and integrate academic content areas. In addition, we are developing joint programming and instruction with the Loudoun County Public Schools' Academy of Science and all ten feeder high schools to provide cross-disciplinary field experiences to the core areas within The Loudoun Governor's Career and Technical Academy. As a result of this collaboration, a STEM Curriculum Resource Guide will be developed during the 2008-2009 school year for distribution to the ten feeder high schools focusing on science, technology, engineering, and mathematics applications. The Loudoun Governor's Career and Technical Academy will continue to grow and enhance the rigor of career and technical content by expanding certification and licensure offerings; increasing dual enrollment status; increasing workplace experiences and internships; utilizing state of the art technology; and expansion of the college and workplace readiness curriculum.

In coordination with Loudoun County Public Schools' guidance services, individualized high school plans are initiated in a variety of ways. Interest surveys and career planning begin early in middle school to help outline course selection in preparation for high school entrance and beyond. A three-step process is outlined within the program of studies including 1) selecting

a career cluster or pathway; 2) deciding upon a diploma type; and 3) choosing courses related to the career pathway and diploma choice. The Advanced Technical diploma will reflect the same academic rigor of the current diploma options, with a focus on CTE.

A goal for The Loudoun Governor's Career and Technical Academy graduates will be to complete a college and work readiness curriculum. High school diploma completion will include up to nine high school CTE course credits that can be earned from The Loudoun Governor's Career and Technical Academy, including corresponding credentialing and licensures. Graduates of The Loudoun Governor's Career and Technical Academy will meet the requirements for an Advanced Technical Diploma. Additionally, three or more CTE elective course options will broaden the traditional high school experience by offering postsecondary opportunities, industry certification and additional field experiences to enhance the students STEM education. (See Appendix A for college credit and certification information).

Each CTE course utilizes Virginia's Workplace Readiness competencies. Teachers develop individual class lessons supporting these competencies. Business partners work with program areas to offer enrichment seminars addressing these skills via program area advisory councils. Internships and workplace shadowing experiences offer Academy students reinforcement and mentoring. Each teacher also has access to the Opportunities, Incorporated compilation of workplace readiness skills lesson plans.

Performance Measures

The Loudoun Governor's Career and Technical Academy will address the program objectives outlined in the Virginia Board of Education's Criteria for Governor's Career and Technical Academies. Baseline data will be collected during the 2008-2009 school year.

Annually data will be evaluated and performance measures adjusted as necessary. The Loudoun Governor's Career and Technical Academy goals and performance measures are outlined below:

1. *Improve academic achievement of Academy student by increasing academic rigor and relevance within selected pathways.*
 - Increase by 20 percent the number of students taking advanced mathematics options beyond Algebra II upon graduation.
 - Increase by 20 percent the number of students taking four years of science upon graduation.
 - Increase by 20 percent the number of Academy students meeting the requirements of the Advanced Studies and/or proposed Advanced Technical Diplomas.
2. *Increase completion of dual enrollment courses.*
 - Each Academy pathway is articulated with a postsecondary institution with a minimum of nine potential dual enrollment credits.
 - Dual enrollment status within Loudoun County CTE programs has increased in 2008 by 43 percent. An increase in student enrollment within these programs is a direct result of the partnership with Northern Virginia Community College (NVCC) and Virginia Polytechnic Institute and State University. The Academy plans to increase by 50 percent the number of Academy students earning dual enrollment credit in the 2008-2009 school year.
3. *Provide workplace readiness experiences through strong partnerships with businesses.*
 - Attract students to enroll in Academy pathway programs and strengthen student preparation by increasing cooperative internship opportunities by 50 percent.

- Workplace experiences will include: supervised internships, job shadowing, mentoring, simulations, project-based learning, and guest speakers.

4. *Increase high school graduation rates.*

- Increase the high school graduation rate by 0.5 percent from 99.15 percent (2006-2007) to 99.65 percent (2008-2009). Beginning with the 2008-2009 school year, baseline data for the four-year cohort graduation rate will be calculated and goals for improvement will be established.

5. *Reduce dropout rates.*

- Reduce dropout rates by 0.5 percent from 0.85 percent (2006-2007) to 0.35 percent (2008-2009) for Academy students and the general secondary student population through acceleration options with industry. Beginning with the 2008-2009 school year, baseline data for the four-year cohort dropout rate will be calculated and goals for improvement will be established.

6. *Increase enrollment and retention in postsecondary education.*

- Students will have an opportunity to earn at least nine transferable college credits as defined in the Commonwealth's Early College Scholars Initiative giving Academy students a community college transcript prior to graduating from high school.
- Academy completers will be surveyed to determine successful enrollment and retention in postsecondary institutions annually, beginning with Academy students in 2008-2009.
- Increase Academy completer transition to postsecondary institutions by 10 percent beginning in 2009-2010.

7. *Increase the proportion of students completing a college and workplace ready curriculum in high school.*
 - Increase enrollment in Academy programs annually by 10 percent.
 - Baseline data will be established in the 2008-2009 school year with criteria including: diploma type, dual enrollment credit earned, program completer status, and industry credentials earned.
8. *Reduce the proportion of students requiring remediation in college.*
 - Academy students will successfully pass the college level English and mathematics placement tests (COMPASS) as a criterion for continued enrollment in Academy programs and will therefore reduce the need for college remediation for Academy students by 100 percent.
 - Preparatory and remediation sessions will be provided for students that do not initially pass the college placement tests based on individual student performance on these assessments.
 - The Academy student support structure will help ease postsecondary enrollment transition and improve retention strategies by working with students individually on a case-by-case basis.
9. *Increase the number of industry certifications awarded to high school students.*
 - Increase by 20 percent the number of Academy students earning industry credentials or licensures to provide well-trained workers to benefit the Northern Virginia work force and to meet employment needs across the Commonwealth.
 - Baseline data will be established in the 2008-2009 school year with the criterion to include industry licensure and credentials earned.

10. *Increase the number of graduates employed in high-wage, high-skilled careers.*

- Seventy percent of Academy graduates will obtain employment within identified career pathways and related occupations following postsecondary education as evidenced by a follow-up survey.

Program Details

The Loudoun Governor's Career and Technical Academy site will be located in Leesburg, Virginia, at the Monroe Technology Center. Selected health sciences courses are currently held off-site at Inova Loudoun Hospital, Leesburg campus, providing dedicated classroom space in partnership with Northern Virginia Community College, also in Leesburg, Virginia. Students will attend six-hour, all-day, every-other-day classes, alternating with their feeder high schools during the academic calendar year. Due to clinical requirements and/or credentialing, Academy students in the Diagnostic and Therapeutic Services pathways of the Health Sciences cluster may have an extended program through the summer. The general curriculum design would allow students to take a sequence of elective courses to develop their specialization area, but Academy students are directed to follow their individualized plan of study. Each Academy student will complete the requirements for the Advanced Technical Diploma. Preparation should begin in middle school to complete the Algebra I and foreign language high school credit requirement. (Detailed pathway requirements are outlined in Appendix B). The proposed number of students to be served, based on current projections, will be approximately 125 students for the 2008-2009 school year. Our estimated projections consider an increase within the targeted pathways of 25 percent, which is based on three-year Loudoun County Public School's student enrollment figures. The enrollment figures used are: 2005 - 47,361; 2006 - 50,478; and 2007 - 53,396. Most Academy programs will serve eleventh

and twelfth graders with students applying for entrance beginning in their sophomore year. Preparation for career exploration and the process of choosing a career pathway will begin during middle school. The Academy will target potential students through enriched exploratory activities. These activities will include career and skill assessments, Middle School Career Camp (during the summer), Middle School Night (held the first semester of each year), and our annual open house. All of these activities will give LCPS students an opportunity to discover career pathways.

Materials and equipment will be provided to support program goals and objectives through Loudoun County Public School's facilities at the Monroe Technology Center. Additional facilities, materials, and equipment are outlined in the Memoranda of Agreement, Appendix C. Each agreement lists the Academy partners and cites their pledge of support. Examples of materials and equipment provided in-kind by partners include: classroom space; use of labs or equipment; professional mentors; assistance with curriculum development and program assessment; funds for start-up of new program areas; funds for staffing; funds for consumables and equipment; and access to, or donation of, vehicles and/or parts.

The Governor's Exemplary Standards model has been in use divisionwide for the past three years. Secondary principals have partnered with the Office of Career and Technical Education to monitor progress through a specially designed observation tool based on the goals of program quality, educational significance and evidence of effectiveness and success. This same model will be used with The Loudoun Governor's Career and Technical Academy. (See Appendix D for the Loudoun County Public School's Observation Tool) The Academy will participate in the Governor's Career and Technical Education Exemplary Standards Awards Program. Additionally, each Academy pathway will self-evaluate per the indicators outlined in the Virginia Governor's CTE Exemplary Standards Award model.

Program and Course Descriptions

The Loudoun Governor's Career and Technical programs are outlined in Appendix B. These career clusters, pathways, and pathway programs of study diagram how students will graduate with an Advanced Technical Diploma which meets the Commonwealth Scholars requirement of nine credits. Also included are: CTE course sequences, dual enrollment courses, internship experiences, credentialing opportunities, postsecondary degree options, and program completion options. Current course descriptions may be found in Appendix E.

Requirements for Program Completion

Successful program completion at The Loudoun Governor's Career and Technical Academy targets three areas:

1. A minimum of one industry credential in an identified Academy pathway.
2. Dual enrollment college credit achievement (minimum of nine credits) and qualifying Academy students completing the Commonwealth Scholars course of study.
3. Completion of the requirements for the Advanced Technical diploma, including an Academy pathway concentration.

Internal Evaluation

For continued success, internal evaluation of the Academy's policies and procedures and program design and delivery will be essential. Feedback from all stakeholders including students, staff, parents, and community partners will be vital in program improvement. The Career and Technical Exemplary Standards will serve as a measure of how Academy goals are being addressed. Surveys, advisory council input, focus groups, and participation in the Exemplary Standards review process will produce valuable data. The Academy will adhere to

current Virginia Department of Education reporting requirements, but would additionally focus on diploma achievement, dual enrollment completion, career and technical course concentration completion, workplace internship and employment placement, and student success as key indicators of self assessment and improvement.

Administrative Procedures

Partnerships are the key to the success of The Loudoun Governor's Career and Technical Academy. Business and industry, Loudoun County Public Schools, Northern Virginia Community College, and Virginia Polytechnic Institute and State University will work cooperatively to validate a cluster and specific pathway focus based on the identified needs locally and across the Commonwealth. With the shared goal of Academy students' successful transition to postsecondary community college, work force, and/or a four-year university, these entities will collaborate in regard to instructional competency, rigor, relevance, and planning for the future of the Academy pathways. In-kind contributions of funds, academic space, faculty, internship and co-op placements, mentors, workplace simulations and clinical rotations will help Loudoun County Public Schools meet the high standards of each Academy program of study. Collaboration and commitment by all stakeholders will be an ongoing characteristic of the Academy planning model.

Student recruitment plays an important role in the successful placement of students in their career choice pathway. One information tool that will highlight Academy offerings is the program of studies for Loudoun County Public Schools. This handbook is provided to every middle and high school student to promote planning of their individualized course of study. Events throughout Loudoun County Public Schools will also highlight the Academy programs of study. These events include: middle school and high school elective fairs, Information Nights at

middle and high schools, the Diversity in Education College and Career Fair, elementary and middle school career days, Monroe Technology Center's Middle School Career Camp, the divisionwide Parent Involvement Symposium, high school Shadowing Days at Monroe Technology Center, and the annual Career and Technical Education Open House. Each of the above events will give students a firsthand look at the pathway programs, expectations, and most importantly, educational opportunities provided within the Academy.

Students interested in The Loudoun Governor's Career and Technical Academy programs will begin the process by applying for admission. This competitive application process begins with students completing the admissions application, signed by student, parent, and counselor. (See application example in Appendix F.) Next, the application, counselor's recommendation form (Appendix G), and transcript is sent to the Academy placement coordinator serving The Loudoun Governor's Career and Technical Academy programs. Academy applicants will also be required to take the placement tests for Northern Virginia Community College and provide the COMPASS results. Follow-up interviews of Academy applicants may be required. Once the application packets are completed, the selection committee will consider the following for placement: 1) application; 2) high school transcript; 3) attendance; 4) standardized test scores (PSAT, SOL, Stanford); 5) counselor recommendations; 6) career skills and interest assessments; 7) individual career and postsecondary plans; and 8) Northern Virginia Community College Placement test results.

Loudoun County Public Schools outlines student conduct, attendance requirements, and transportation in the Student Rights and Responsibilities publication provided to each student of Loudoun County Public Schools. Each student and parent is required to sign an "acknowledgment of receipt" of this publication each school year. This publication would also apply to students in The Loudoun Governor's Career and Technical Academy. Transportation to

and from Monroe Technology Center and other off-site classroom space will be provided by Loudoun County Public Schools. Schedules are coordinated with students' home schools.

The Loudoun Governor's Career and Technical Academy is tied to the procedures outlined by the personnel department of Loudoun County Public Schools to recruit, select, and assign faculty members for the Academy programs. Interviews for faculty positions at The Loudoun Governor's Career and Technical Academy will be conducted by the director of Career, Technical and Adult Education and the principal of Monroe Technology Center. Selection for positions associated with The Loudoun Governor's Career and Technical Academy will also include the criteria for acceptance by Northern Virginia Community College as an adjunct faculty member.

The goal of staff development for the Academy faculty is to "align staff member's personal and professional growth with student learning needs and district mission and goals." "The policies, programs, and practices support formal and informal opportunities to build a culture of lifelong learning to ensure a climate for success." (Mission Statement, Department of Instructional Services). STEM certification and training will occur during the multiple days built into the teacher's contract calendar and/or during paid per diem extended contract days. Academy teachers will continue their individual and cluster skill enhancements during the planning time built into the teaching day and through divisionwide staff development opportunities. Each teacher has one hour and fifteen minutes of unencumbered planning each day. Besides course preparation, faculty members will focus on Academy directives and STEM pedagogy.

Staff will be evaluated according to the Loudoun County Public School's licensed employee evaluation procedures. Nontenured teachers are to be evaluated annually. Tenured teachers are to be evaluated every third year.

Student achievement and success within the Academy pathways is the ultimate goal of The Loudoun Governor's Career and Technical Academy and is the responsibility of the students, parents, and school personnel. Preparation for entering the Academy will begin during middle school. Interest inventories and career assessments such as "Bridges" and "Career Futures" are used during seventh and eighth grade. Individual instructors also focus on career investigation through the career and technical offerings in family and consumer sciences, technology education, and keyboarding. The program of studies for middle school students and high school students offers planning information in selecting courses. Individuals are available who can help with course and career decisions, administrative details regarding courses and report cards, promotion and credit information, diploma requirements, recommended testing, special programs (including the Academy in the future) and career clusters and sample pathways.

Assurances

A statement of assurance (Appendix H) has been signed by the Superintendent of Loudoun County Public Schools on behalf of The Loudoun Governor's Career and Technical Academy stipulating that the Governor's Academy for Career and Technical Academy Planning Committee has reviewed provisions of *Administrative Procedures Guide for the Establishment of Governor's Career and Technical Academies* and agrees to follow the guidelines set forth in the document. Additionally, another statement of assurance (Appendix I) has been signed by the Superintendent of Loudoun County Public Schools indicating that operating funds and facilities are available to support The Loudoun Governor's Career and Technical Academy and the Academy programs. Loudoun County Public Schools will serve as the fiscal agent for The Loudoun Governor's Career and Technical Academy.

Planning Committee and Advisory Committee

The Loudoun Governor's Career and Technical Academy partners will provide membership to the Planning Committee (Appendix J) and Advisory Committee (Appendix K). These committees will have the responsibility for the design, implementation, and evaluation of all Academy pathway programs. The CTE director will be responsible for the facilitation, coordination, and/or implementation of these committees.

Insurance

Loudoun County Public Schools is insured by the Virginia Municipal Liability Pool Insurance Program for property, liability, and auto insurance (Appendix L). The liability insurance is comprehensive coverage of \$1,000,000 per occurrence with no annual aggregate limit. Loudoun County Public Schools does not provide individual health insurance to students but offers a voluntary student insurance program.

Budget Narrative

Loudoun County Public Schools will be the fiscal agent for The Loudoun Governor's Career and Technical Academy beginning with the 2008-2009 school year. The fiscal year 2009 Loudoun County Public Schools budget has provided for appropriate staffing and resources necessary to support identified Academy career clusters and pathway programs. Additional expenses and contributions follow in Appendix M.

1.	Personnel: Teacher	\$50,500
	Personnel: Career Coach	\$26,000

Funds for a full-time teacher’s salary expense of \$50,500 will be paid by the Claude Moore Charitable Foundation Grant to Loudoun County Public Schools. Funds for a full-time Career Coach salary expense of \$26,000 will be paid by Perkin’s Funds through Tech Prep.

2. Employee Benefits \$20,916

Employee benefits expenses of \$20,916 will be paid by the Claude Moore Charitable Foundation Grant to Loudoun County Public Schools. Benefits include: Virginia Retirement System contribution, Social Security and Medicare, group life insurance, and disability coverage.

3. Staff Development \$15,000

Funds will be used to cover the cost of identified staff to obtain the STEM certificate coursework offered by Virginia Polytechnic Institute and State University.

4. Summer Component Activities \$5,000

The Loudoun Governor’s Career and Technical Academy staff members will be developing curriculum during noncontract days focusing on STEM instruction. Teachers will be compensated for time beyond contract parameters.

5. Contractual Services \$10,000

Services to be used for consultants, curriculum resources, and other related expenses for Academy pathway development and implementation.

6. Materials and Supplies \$30,000

This budget allotment will be used to fund career pathway consumables, student instructional supplies and instructional resources.

7. Equipment \$30,000

Each pathway requires unique equipment to facilitate instruction. These funds will be used to cover expenses for purchasing these items.

8. Facilities (In-Kind Contributions) \$37,500

Northern Virginia Community College will be providing classroom space to Loudoun County Public Schools to be used for the Health Science cluster, Diagnostic and Therapeutic pathway courses. The classroom space is housed at Inova Hospital, Leesburg, Virginia. The in-kind contribution breakdown is the following: 10 months x \$3,750 per month = \$37,500.

Appendix A
Career Cluster Charts

Appendix A

Career Cluster: Health Science Career Pathway: Diagnostic Services	
Current Courses Offered	Introduction to Health and Medical Sciences Laboratory Technology Radiology Technology
Industry Certification, Postsecondary Offering and Preparation	Clinical Laboratory Technician (CLT) Phlebotomy (CLPIb) Radiology Assistants Certification Northern Virginia Community College Articulation Agreement Introduction to Medical Laboratory Technology (MD100), Introduction to Radiology and Protection (RAD100), Medical Terminology I (HIT111) Inova Loudoun Hospital Job Placement
Economic Need/ Strategic Growth	Overall job opportunities are expected to be excellent and favorable for Registered Nurses, Radiologic technologists and technicians, and Medical and Clinical Laboratory Technologists and Technicians. 19,211 new positions by 2014 Northern Virginia estimated largest population and aging population increase Estimated 16,600 vacancies by 2020 in Northern Virginia Inova Loudoun and Loudoun Medical Group are top employers in Loudoun County Source: United States Department of Labor, Bureau of Labor Statistics, National Governor's Association Gap Analysis, Virginia Employment Commission
High-Wage/High-Skill Options	Nurse Lab Technician Radiology Assistant/Technician Phlebotomist
Integrated STEM Professional Development for CTE Faculty	STEM Certificate or Degree from Virginia Polytechnic Institute and State University Train-the-Trainer of all existing Health Science faculty Cluster Resource Teacher to focus on area Science and Mathematics integration with Academy of Science Field Trip, Lesson Plan, and Tips Resource Writing Examples to develop a booklet for home school distribution within science and mathematics core areas
STEM Enhancements	Clinical Mentorships/Internships/Practical Rotations Independent Research Exploration of emerging technologies within career fields

Career Cluster: Health Science Career Pathway: Therapeutic Services	
Current Courses Offered	Introduction to Health and Medical Sciences Nursing I/II Emergency Medical Technician Pharmacy Technology
Industry Certification, Postsecondary Offering and Preparation	Certified Nursing Assistant Licensed Practical Nurse Registered Nurse Pharmacy Technician Northern Virginia Community College Articulation Agreement Medical Terminology I (HIT 111) Inova Loudoun Hospital Job Placement
Economic Need/ Strategic Growth	Overall job opportunities are expected to be excellent and favorable for Registered Nurses, Radiologic technologists and technicians, and Medical and Clinical Laboratory Technologists and Technicians. 19,211 new positions by 2014 Northern Virginia estimated largest population and aging population increase Estimated 16,600 vacancies by 2020 in Northern Virginia Inova Loudoun and Loudoun Medical Group are top employers in Loudoun County Source: United States Department of Labor, Bureau of Labor Statistics, National Governor's Association Gap Analysis, Virginia Employment Commission
High Wage/High Skill Options	Nurse Paramedic Pharmacy Technician
Integrated STEM Professional Development for CTE Faculty	STEM Certificate/Degree from Virginia Polytechnic Institute and State University Train-the-Trainer of all existing health science faculty Cluster Resource Teacher to focus on area Science and Mathematics integration with Academy of Science Field Trip, Lesson Plan, and Tips Resource Writing Examples to develop a booklet for home school distribution within science and mathematics core areas
STEM Enhancements	Clinical Mentorships/Internships/Practical Rotations Independent research Emerging technologies within career fields

Career Cluster: Transportation, Logistics, and Distribution Career Pathway: Facilities and Mobile Equipment Maintenance	
Current Courses Offered	Automotive Servicing Technology
Industry Certification, Postsecondary Offering and Preparation	AYES Northern Virginia Community College Articulation Agreement Introduction to Automotive Shop Practices(AUT 100), Automotive Power Trains I-II (AUT141), Automotive Electricity (AUT 241), Automotive Electricity I-II (AUT 266), Automotive Suspension and Braking Systems (AUT 267) Associates of Applied Science Degree Bachelors of Science, Automotive Engineering
Economic Need/ Strategic Growth	The number of jobs for Automotive Service Technicians and Mechanics and Automotive Body and related repairers is projected to grow faster than average or on average for all occupations over the next decade. Employment growth will create many new jobs, but total job openings will be significantly larger because many skilled technicians are expected to retire and will need to be replaced. 1,085 openings per year (2004-2014) 4.3 percent of employment in the District of Columbia/Metro area Major employer category in Loudoun County Source: United States Department of Labor, Bureau of Labor Statistics, Occupational Outlook Handbook, Virginia Workforce Connection
High Wage/High Skill Options	Automotive Service Technicians Automotive Body Repair Technician Engineering Technician Commercial and Industrial Designers
Integrated STEM Professional Development for CTE Faculty	STEM Certificate/Degree from Virginia Polytechnic Institute and State University Train-the-Trainer model for automotive/engineering faculty Cluster resource teacher to focus on area Science and mathematics integration with Academy of Science Field Trip, Lesson Plan, and Tips Resource Writing Examples to develop a booklet for home school distribution within Science and Mathematics core areas
STEM Enhancements	Mentorships/Internships Local dealership internships Independent research Emerging Science Research and Technology within TLD career fields Green/Environmental Science and Technology Research Design prototype activity Collaborative discipline and cross training with automotive engineering partners and postsecondary engineering students New course offering: Aviation Maintenance Technology

Career Cluster: Agriculture, Food and Natural Resources Career Pathway: Plant Systems	
Current Courses Offered	Greenhouse Management/Floriculture Operations Nursery and Landscape/Sports Turf Management
Industry Certification, Postsecondary Offering and Preparation	VFGA Greenhouse Operator's Manual Virginia Certified Horticulturist Registered Pesticide Technician Certification Introduction to Horticulture (HR T100), Tools and Equipment (HRT 117), Greenhouse Crop Production (HRT 121), Introduction to Floral Design (HRT 260) Northern Virginia Community College Articulation Agreement Virginia Polytechnic Institute and State University
Economic Need/ Strategic Growth	Opportunities may vary with local economic conditions. Employment of engineering and natural sciences managers is projected to grow about as fast as the average for all occupations, similar to the growth rate of engineers and life and physical scientists. Opportunities will be best for workers with strong communication and business management skills. Four percent of employment in DC/Metro area Major employer in Loudoun County Focus change to service component of horticulture Emerging non-traditional farms, garden centers, recreation venues Source: United States Department of Labor, Bureau of Labor Statistics, Occupational Outlook Handbook, Loudoun County Extension Office
High Wage/High Skill Options	Biotechnology Lab Technician Sports Turf Manager Green House/Landscape Manager Botanist Environmental Scientist
Integrated STEM Professional Development for CTE Faculty	STEM Certificate/Degree from Virginia Polytechnic Institute and State University Train-the-Trainer model proposed for horticulture faculty Cluster resource teacher to focus on area Science and mathematics integration with Academy of Science Field Trip, Lesson Plan, and Tips Resource Writing Examples to develop a booklet for home school distribution within science and mathematics core areas.
STEM Enhancements	Mentorships/Internships Public/Government Partnerships/Internships Independent research Emerging technologies within career fields

Career Cluster: Science, Technology, Engineering and Mathematics Career Pathway: Engineering and Technology	
Current Courses Offered	Computer and Digital Animation (Digital Visualization)
Industry Certification, Postsecondary Offering and Preparation	Brainbench: AutoCAD Web Design and Development Northern Virginia Community College – Engineering Technology Associates Degree Northern Virginia Community College Articulation Agreement Computer Aided Modeling and Rendering I (DRF 238), Computer Aided Modeling and Rendering II (DRF 239), Computer Aided Digital Terrain Modeling and Earthworks (DRF 261) Engineering Drafting Certificate Animation Certificate CAD Certificate Solidworks Certification
Economic Need/ Strategic Growth	Computer scientists and database administrators are projected to be one of the fastest growing occupations over the next decade. Strong employment growth combined with a limited supply of qualified workers will result in excellent employment prospects for this occupation and a high demand for their skills. Software engineer positions are projected to increase by 38 percent over the 2006 to 2016 period; faster than the average for all occupations. This occupation will generate about 324,000 new jobs, over the projections decade 1,661 openings per year estimated Gap exists between supply and demand of qualified labor force Occupation area for 13 out of top 50 largest employers in Loudoun County Source: United States Department of Labor, Bureau of Labor Statistics, Occupational Outlook Handbook, National Governor’s Association Gap Analysis, Virginia Employment Commission
High Wage/High Skill Options	Engineer Web Designer/Engineer Computer Engineer CAD Technician Computer Scientist
Integrated STEM Professional Development for CTE Faculty	STEM Certificate and Degree from Virginia Polytechnic Institute and State University Train-the-Trainer model proposed for IT and technical education Cluster resource teacher to focus on area Science and mathematics integration with Academy of Science field trip, lesson plan, and tips resource writing examples to develop a booklet for home school distribution within science and mathematics core areas

STEM Enhancements	Mentorships/Internships Independent Research Emerging Technologies within career fields Begin 2 nd Year Course Option for 2009-2010 school year for Dual Enrollment Option with Northern Virginia Community, Computer Aided Drafting and Design I (DRF 201)
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Appendix B
Pathway Programs of Study



Appendix B

Student Name:
School:
Date:

Cluster: Agriculture, Food, & Natural Resources Pathway: Plant Systems

*This Career Pathway Plan of Study (based on the Plant System Pathway of the Agriculture, Food, and Natural Resources Career Cluster) can serve as a guide, along with other career planning materials, as learners continue on a career path. Courses listed within this plan are only recommended coursework and should be individualized to meet each learner's educational and career goals. *This Plan of Study, used for learners at an educational institution, should be customized with course titles and appropriate high school graduation requirements as well as college entrance requirements.*

EDUCATION LEVELS	GRADE	English/ Language Arts	Mathematics	Science	Social Studies/ Science	Other Required Courses Recommended Electives Learner Activities	Recommended Career and Technical Courses Source: Administrative Planning Guide www.doe.virginia.gov/VDOE/ Instruction/CTE/app/	SAMPLE – Occupations Relating to This Pathway: www.doe.virginia.gov/VDOE/ Instruction/CTE/careerclusters/ www.careerclusters.org www.cteresource.org/cpg/	
Graduation Requirements: http://www.doe.virginia.gov/2plus4in2004/index.shtml									
MIDDLE	7	English	Pre-Algebra	Life Science	U.S. History 1877-Present	(Required) FACS 8206 (Required) Tech Ed 8464 Keyboarding 6150	NOTE: Use state course titles Exploring Work & Family Roles (8206) Inventions & Innovations (8464) Keyboarding (6150)	<ul style="list-style-type: none"> - Biotechnology Lab Technician - Golf Course Manager - Green House Manager - Landscape Architect - Plant Pathologist - Bioinformatics Specialist - Plant Breeder - Soil & Water Specialist - Tree Surgeon - Agriculture Educator - Plant & Breed Geneticist - Botanist 	
	8	English	Algebra I	Physical Science	Civics & Economics	Foreign Language			
Career Assessment: Administration of a career assessment instrument is appropriate at the middle school level to help students and their parents plan for high school (Virginia's Career Planning System or other assessment product).									
SECONDARY	9	English 9	Geometry	Earth Sciences	World History/ Geography I	Health & PE (2 years) Foreign Language (4 years) Other Electives to Complement Pathway (Core Academic and CTE):	Principles of Business & Marketing (6115/8115)		
	10	English 10	Algebra II	Biology	World History/ Geography II	Greenhouse Management/Floriculture Operations (DE)	Technical Drawing & Design (8435)		
	11	English 11	Trigonometry/ Advanced Algebra	Chemistry	US/VA History		Turf Establishment & Maintenance (8051) DE (HRT 121) (HRT 117) (HRT 100)		
	12	English 12	Pre-Calculus	Physics (or Principles of Technology I and II)	US/VA Government	Greenhouse Plant Production & Management (8038) DE (HRT 117) (HRT 260) (HRT 100)			
High school courses in the pathway offered locally for college credit should be coded: DE (Dual Enrollment) and/or VC (Validated Credit)									
List related certifications/credentials approved by VDOE and offered locally: http://www.doe.virginia.gov/VDOE/Instruction/CTE/app/ (Go to Section 9.) VNLA Certification VFGA Greenhouse Operators NOCTI - Greenhouse Assessment and Floriculture Assessment, Commercial Pesticide Applicator Certification Exam Greenhouse Operators Certification Program AutoCAD 2004 Certification						Additional Learning Opportunities: CTSO Organization(s): <input type="checkbox"/> DECA <input type="checkbox"/> FBLA <input type="checkbox"/> FCCLA <input checked="" type="checkbox"/> FFA <input type="checkbox"/> FEA <input type="checkbox"/> HOSA <input type="checkbox"/> SkillsUSA <input type="checkbox"/> TSA			
Postsecondary: Placement Assessments such as COMPASS & SAT II						Work-Based Learning: <input checked="" type="checkbox"/> Career Research <input checked="" type="checkbox"/> Cooperative Education <input checked="" type="checkbox"/> Internship <input checked="" type="checkbox"/> Mentorship <input checked="" type="checkbox"/> Job Shadowing <input checked="" type="checkbox"/> Service Learning Project <input type="checkbox"/> Student Apprenticeship			
College Entrance Exams such as ACT & SAT									

POSTSECONDARY	SAMPLE POSTSECONDARY PROGRAMS RELATED TO THIS CAREER PATHWAY Individual plans must include locally agreed upon courses at the postsecondary level (See page 2)								
	Pathway	Associate Degree, College Certificate, or Apprenticeship			Bachelors Degree		Postgraduate Degree		
	Plant Systems	Associate of Applied Science			Bachelor of Science, Horticulture		Master of Science, Horticulture Master of Science, Landscape Architecture		
Postsecondary: Placement Assessments such as COMPASS & SAT II									
POSTSECONDARY - COMMUNITY COLLEGE or APPRENTICESHIP - Determined Locally	Semester	English	Mathematics	Science	Social Studies	Required Courses or Recommended Electives			
	POSTSECONDARY PLAN OF STUDIES MUST INCLUDE POSTSECONDARY ACADEMIC, CTE, AND OTHER ELECTIVE COURSES APPROPRIATE FOR AN ASSOCIATE DEGREE.								
	Year 1 1 st Semester	English 111	Math 151	Science		Introduction to Horticulture HRT 100 (DE)	HRT 125 SDV	HRT 127 PED 116	
	Year 1 2 nd Semester					HRT 115	HRT 120 Humanities/Fine Arts Elective	HRT 245 ITE 115 SPD Elective	
	Year 2 1 st Semester					BUS 165	HRT 207	HRT 231 HRT 246 HRT 269 Social Science Elective (DE)	
	Year 2 2 nd Semester				Social Science Elective	HRT 205	HRT 247	HRT 275 HRT 290 HRT 297 HRT Elective (DE) PED/RPK	
College courses offered locally in the high school for college credit should be coded: DE (Dual Enrollment) and/or VC (Validated Credit)									
Related Industry Certifications Available: VNLA Certification Greenhouse Operators Certification Program Fundamental Business Concepts Certification NOCTI - Greenhouse Assessment and Floriculture Assessment, Commercial Pesticide Applicator Certification Exam					Additional Suggested Learning Opportunities: Work-Based Learning: <input checked="" type="checkbox"/> Cooperative Education <input checked="" type="checkbox"/> Internship <input checked="" type="checkbox"/> Mentorship <input checked="" type="checkbox"/> Job Shadowing <input checked="" type="checkbox"/> Service Learning Project <input checked="" type="checkbox"/> Registered Apprenticeship				
UNIVERSITY	University/College: Virginia Tech Degree or Major: Associate of Agricultural Technology, Bachelor of Science, Agriculture & Applied Economics, Agricultural Sciences Number of Articulated CC Credits: 9								



Appendix B

Student Name:

School:

Date:

Cluster: Health Science Pathway: Diagnostic Services (Medical Laboratory Technology)

This Career Pathway Plan of Study (based on the Diagnostic Services of the Health Science Career Cluster) can serve as a guide, along with other career planning materials, as learners continue on a career path. Courses listed within this plan are only recommended coursework and should be individualized to meet each learner's educational and career goals. *This Plan of Study, used for learners at an educational institution, should be customized with course titles and appropriate high school graduation requirements as well as college entrance requirements.

EDUCATION LEVELS	GRADE	English/ Language Arts	Mathematics	Science	Social Studies/ Science	Other Required Courses Recommended Electives Learner Activities	Recommended Career and Technical Courses Source: Administrative Planning Guide www.doe.virginia.gov/VDOE/ Instruction/CTE/appg/	SAMPLE – Occupations Relating to This Pathway: www.doe.virginia.gov/VDOE/ Instruction/CTE/careerclusters/ www.careerclusters.org www.cteresource.org/cpg/	
Graduation Requirements: http://www.doe.virginia.gov/2plus4in2004/index.shtml									
MIDDLE	7	English	Pre-Algebra	Life Science	U.S. History 1877-Present	(Required) FACS 8206 (Required) Tech Ed 8464 Keyboarding 6150	NOTE: Use state course titles Exploring Work & Family Roles (8206) Inventions & Innovations (8464) Keyboarding (6150)	<ul style="list-style-type: none"> - Clinical Lab Technician - Phlebotomist - Cytogenetic Technologist - Pathologist - Pathology Assistant - Medical Lab Technician 	
	8	English	Algebra I	Physical Science	Civics & Economics	Foreign Language			
Career Assessment: Administration of a career assessment instrument is appropriate at the middle school level to help students and their parents plan for high school (Virginia's Career Planning System or other assessment product).									
SECONDARY	9	English 9	Geometry	Biology DE (BIO 101) with a final grade of C or better	World History/ Geography I	Health & PE (2 years) Foreign Language (4 years) Other Electives to Complement Pathway (Core Academic and CTE): Introduction to Health & Medical Sciences Medical Lab Technology	Intro to Early Childhood Education & Services (8233), Psychology, or Sociology		
	10	English 10	Algebra II	Chemistry DE (CHM 101) with a final grade of C or better	World History/ Geography II		Introduction to Health & Medical Sciences (8302) DE (HIT 111, SDV 101)		
	11	English 11	Trigonometry/ Advanced Algebra	Physics	US/VA History		Medical Lab Technology I (Pending VDOE Course Code) DE (MDL 100)		
	12	English 12 or DE (ENG 111)	Pre-Calculus DE (MTH 163)	Anatomy & Physiology DE (BIO 141) or AP Biology	US/VA Government		Medical Lab Technology II (Pending VDOE Course Code) DE (SDV 107)		
High school courses in the pathway offered locally for college credit should be coded: DE (Dual Enrollment) and/or VC (Validated Credit)									
List related certifications/credentials approved by VDOE and offered locally: http://www.doe.virginia.gov/VDOE/Instruction/CTE/appg/ (Go to Section 9.) Phlebotomy Technician Phlebotomy Career Studies Certificate NOCTI – Medical Assisting Assessment National Healthcare Foundation Skill Standards (National Consortium on Health Science & Technical Education)						Additional Learning Opportunities: CTSO Organization(s): <input type="checkbox"/> DECA <input type="checkbox"/> FBLA <input type="checkbox"/> FCCLA <input type="checkbox"/> FFA <input type="checkbox"/> FEA <input checked="" type="checkbox"/> HOSA <input checked="" type="checkbox"/> SkillsUSA <input type="checkbox"/> TSA			
						Work-Based Learning: <input checked="" type="checkbox"/> Career Research <input type="checkbox"/> Cooperative Education <input checked="" type="checkbox"/> Internship <input checked="" type="checkbox"/> Mentorship <input checked="" type="checkbox"/> Job Shadowing <input checked="" type="checkbox"/> Service Learning Project <input type="checkbox"/> Student Apprenticeship			
Postsecondary: Placement Assessments such as COMPASS & SAT II						College Entrance Exams such as ACT & SAT			

POSTSECONDARY	SAMPLE POSTSECONDARY PROGRAMS RELATED TO THIS CAREER PATHWAY								
	Individual plans must include locally agreed upon courses at the postsecondary level (See page 2)								
	Pathway	Associate Degree, College Certificate, or Apprenticeship			Bachelors Degree		Postgraduate Degree		
	Diagnostic Services-Medical Lab Technology	Associate of Applied Science			Bachelor of Science		Master of Science		
Postsecondary: Placement Assessments such as COMPASS & SAT II									
POSTSECONDARY - COMMUNITY COLLEGE or APPRENTICESHIP - Determined Locally	Semester	English	Mathematics	Science	Social Studies	Required Courses or Recommended Electives			
	POSTSECONDARY PLAN OF STUDIES MUST INCLUDE POSTSECONDARY ACADEMIC, CTE, AND OTHER ELECTIVE COURSES APPROPRIATE FOR AN ASSOCIATE DEGREE.								
	Year 1 1 st Semester	ENG 111 (unless already taken during Senior Year)	MTH 163 (unless already taken during Senior Year)	BIO 101 or BIO Elective with Lab CHM 101 or 111		MDL 100 (DE) MDL 110 MDL 196			
	Year 1 2 nd Semester	SPD 229, 110, OR 126		BIO 205	Social Science Elective (3 rd Semester)	MDL 120 MDL 215 PED 116	MDL 276 (3 RD Semester) PED/RPK Elective(3 RD Semester)		
	Year 2 1 st Semester				HIS 101, 111, or 261	MDL 216 MDL 251 MDL 252 MDL 261			
Year 2 2 nd Semester					MDL 265 MDL 266 MDL 277 MDL 278	MDL 281			
College courses offered locally in the high school for college credit should be coded: DE (Dual Enrollment) and/or VC (Validated Credit)									
Related Industry Certifications Available: Phlebotomy Career Studies Certificate					Additional Suggested Learning Opportunities: Work-Based Learning: <input checked="" type="checkbox"/> Cooperative Education <input checked="" type="checkbox"/> Internship <input checked="" type="checkbox"/> Mentorship <input checked="" type="checkbox"/> Job Shadowing <input checked="" type="checkbox"/> Service Learning Project <input checked="" type="checkbox"/> Registered Apprenticeship				
UNIVERSITY	University/College: Virginia Commonwealth University-Medical College of Virginia, Eastern Virginia Medical School, University of Virginia, Old Dominion University Degree or Major: Bachelor of Science, Medical Lab Technology Number of Articulated CC Credits: 15								



Appendix B

Student Name:

School:

Date:

Cluster: Health Science Pathway: Diagnostic Services (Radiology Technology)

This Career Pathway Plan of Study (based on the Diagnostic Services of the Health Science Career Cluster) can serve as a guide, along with other career planning materials, as learners continue on a career path. Courses listed within this plan are only recommended coursework and should be individualized to meet each learner's educational and career goals. *This Plan of Study, used for learners at an educational institution, should be customized with course titles and appropriate high school graduation requirements as well as college entrance requirements.

EDUCATION LEVELS	GRADE	English/ Language Arts	Mathematics	Science	Social Studies/ Science	Other Required Courses Recommended Electives Learner Activities	Recommended Career and Technical Courses Source: Administrative Planning Guide www.doe.virginia.gov/VDOE/ Instruction/CTE/apg/ Instruction/CTE/apg/	SAMPLE – Occupations Relating to This Pathway: www.doe.virginia.gov/VDOE/ Instruction/CTE/careerclusters/ www.careerclusters.org www.cteresource.org/cpg/
Graduation Requirements: http://www.doe.virginia.gov/2plus4in2004/index.shtml								
MIDDLE	7	English	Pre-Algebra	Life Science	U.S. History 1877-Present	(Required) FACS 8206 (Required) Tech Ed 8464 Keyboarding 6150	NOTE: Use state course titles Exploring Work & Family Roles (8206) Inventions & Innovations (8464) Keyboarding (6150)	<ul style="list-style-type: none"> - Computer Tomography (CT) Technologist - Diagnostic Medical Sonographer - Mammographer - Radiologist - Radiation Oncology - Magnetic Resonance Imaging (MRI) - Echocardiogram Technician - Electrocardiographic (ECG) Technician
	8	English	Algebra I	Physical Science	Civics & Economics	Foreign Language		
Career Assessment: Administration of a career assessment instrument is appropriate at the middle school level to help students and their parents plan for high school (Virginia's Career Planning System or other assessment product).								
SECONDARY	9	English 9	Geometry	Biology	World History/ Geography I	Health & PE (2 years) Foreign Language (4 years) Other Electives to Complement Pathway (Core Academic and CTE):	Intro to Early Childhood Education & Services (8233), Psychology, or Sociology	
	10	English 10	Algebra II	Chemistry	World History/ Geography II	Introduction to Health & Medical Sciences (8302) DE (HIT 111, SDV 101)		
	11	English 11	Trigonometry/ Advanced Algebra	Physics	US/VA History	Introduction to Health & Medical Sciences Lab Technology Radiology Technology	Radiology Technology I (Pending VDOE Course Code) DE (RAD 100)	
	12	English 12 or DE (ENG 111)	Pre-Calculus or DE (MTH 163)	Anatomy & Physiology DE (BIO 141) or AP Biology	US/VA Government		Radiology Technology II (Pending VDOE Course Code) Orientation to Health Care DE (SDV 107)	
High school courses in the pathway offered locally for college credit should be coded: DE (Dual Enrollment) and/or VC (Validated Credit)								
List related certifications/credentials approved by VDOE and offered locally: http://www.doe.virginia.gov/VDOE/Instruction/CTE/apg/ (Go to Section 9.) NOCTI – Medical Assisting Assessment National Healthcare Foundation Skill Standards (National Consortium on Health Science & Technical Education)						Additional Learning Opportunities: CTSO Organization(s): <input type="checkbox"/> DECA <input type="checkbox"/> FBLA <input type="checkbox"/> FCCLA <input type="checkbox"/> FFA <input type="checkbox"/> FEA <input checked="" type="checkbox"/> HOSA <input checked="" type="checkbox"/> SkillsUSA <input type="checkbox"/> TSA		
						Work-Based Learning: <input checked="" type="checkbox"/> Career Research <input type="checkbox"/> Cooperative Education <input checked="" type="checkbox"/> Internship <input checked="" type="checkbox"/> Mentorship <input checked="" type="checkbox"/> Job Shadowing <input checked="" type="checkbox"/> Service Learning Project <input type="checkbox"/> Student Apprenticeship		
Postsecondary: Placement Assessments such as COMPASS & SAT II						College Entrance Exams such as ACT & SAT		

POSTSECONDARY	SAMPLE POSTSECONDARY PROGRAMS RELATED TO THIS CAREER PATHWAY <small>Individual plans must include locally agreed upon courses at the postsecondary level (See page 2)</small>								
	Pathway		Associate Degree, College Certificate, or Apprenticeship		Bachelors Degree		Postgraduate Degree		
	Diagnostic Services-Radiology Technology		Associate of Applied Science		Bachelor of Science		Master of Science		
Postsecondary: Placement Assessments such as COMPASS & SAT II									
POSTSECONDARY - COMMUNITY COLLEGE or APPRENTICESHIP - Determined Locally	Semester	English	Mathematics	Science	Social Studies	Required Courses or Recommended Electives			
	POSTSECONDARY PLAN OF STUDIES MUST INCLUDE POSTSECONDARY ACADEMIC, CTE, AND OTHER ELECTIVE COURSES APPROPRIATE FOR AN ASSOCIATE DEGREE.								
	Year 1 1 st Semester	English 111(unless already taken in Senior Year)	Math 163 (unless already taken in Senior Year)			PED 116 PED/RPK	RAD 121 RAD 125 RAD 141 RAD 196		
	Year 1 2 nd Semester				Social Science Elective		RAD 131 RAD 142 RAD 221 RAD 135 (3 rd Semester)		
	Year 2 1 st Semester	SPD 229				RAD 205 RAD 231 RAD 246 RAD 255			
Year 2 2 nd Semester				HIS 101 or HIS 111 or HIS 261	MDL 195 RAD 215 RAD 232 RAD 240				
College courses offered locally in the high school for college credit should be coded: DE (Dual Enrollment) and/or VC (Validated Credit)									
Related Industry Certifications Available: Radiography AAS Radiation Oncology Certificate Magnetic Resonance Imaging Career Studies Certificate American Registry of Radiologic Technology					Additional Suggested Learning Opportunities: Work-Based Learning: <input checked="" type="checkbox"/> Cooperative Education <input checked="" type="checkbox"/> Internship <input checked="" type="checkbox"/> Mentorship <input checked="" type="checkbox"/> Job Shadowing <input checked="" type="checkbox"/> Service Learning Project <input checked="" type="checkbox"/> Registered Apprenticeship				
UNIVERSITY	University/College: Virginia Commonwealth University-Medical College of Virginia, Eastern Virginia Medical School, University of Virginia, Old Dominion University Degree or Major: Bachelor of Science, Pre-Health Science, Pre-Radiology Technology, Bachelor of Science degree in Clinical Radiation Number of Articulated CC Credits: 15								



Appendix B

Student Name:

School:

Date:

Cluster: Health Science Pathway: Therapeutic Services

This Career Pathway Plan of Study (based on the Therapeutic Services of the Health Science Career Cluster) can serve as a guide, along with other career planning materials, as learners continue on a career path. Courses listed within this plan are only recommended coursework and should be individualized to meet each learner's educational and career goals. *This Plan of Study, used for learners at an educational institution, should be customized with course titles and appropriate high school graduation requirements as well as college entrance requirements.

EDUCATION LEVELS	GRADE	English/ Language Arts	Mathematics	Science	Social Studies/ Science	Other Required Courses Recommended Electives Learner Activities	Recommended Career and Technical Courses Source: Administrative Planning Guide www.doe.virginia.gov/VDOE/ Instruction/CTE/app/	SAMPLE – Occupations Relating to This Pathway: www.doe.virginia.gov/VDOE/ Instruction/CTE/careerclusters/ www.careerclusters.org www.cteresource.org/cpg/	
Graduation Requirements: http://www.doe.virginia.gov/2plus4in2004/index.shtml									
MIDDLE	7	English	Pre-Algebra	Life Science	U.S. History 1877-Present	(Required) FACS 8206 (Required) Tech Ed 8464 Keyboarding 6150	NOTE: Use state course titles Exploring Work & Family Roles (8206) Inventions & Innovations (8464) Keyboarding (6150)	<ul style="list-style-type: none"> - Certified Nursing Assistant - Home Health Aide - Licensed Practical Nurse - School Nurse 	
	8	English	Algebra I	Physical Science	Civics & Economics	Foreign Language			
Career Assessment: Administration of a career assessment instrument is appropriate at the middle school level to help students and their parents plan for high school (Virginia's Career Planning System or other assessment product).									
SECONDARY	9	English 9	Geometry	Biology	World History/ Geography I	Health & PE (2 years) Foreign Language (4 years) Other Electives to Complement Pathway (Core Academic and CTE):	Psychology		
	10	English 10	Algebra II	Chemistry	World History/ Geography II		Introduction to Health & Medical Sciences (8302) DE (HIT 111)		
	11	English 11	Trigonometry/ Advanced Algebra	Physics	US/VA History	Introduction to Health & Medical Sciences	Licensed Practical Nursing I VC (8357)		
	12	English 12	Pre-Calculus	AP Biology	US/VA Government		Licensed Practical Nursing II VC (8358)		
High school courses in the pathway offered locally for college credit should be coded: DE (Dual Enrollment) and/or VC (Validated Credit)									
List related certifications/credentials approved by VDOE and offered locally: http://www.doe.virginia.gov/VDOE/Instruction/CTE/app/ (Go to Section 9.) Health Assisting Assessment Home Health Aide Assessment National Health Care Foundation Skills Standards Assessment Nurses Aide Nursing Assisting Assessment Certified Nursing Assistant Licensed Practical Nurse						Additional Learning Opportunities: CTSO Organization(s): <input type="checkbox"/> DECA <input type="checkbox"/> FBLA <input type="checkbox"/> FCCLA <input type="checkbox"/> FFA <input type="checkbox"/> FEA <input checked="" type="checkbox"/> HOSA <input checked="" type="checkbox"/> SkillsUSA <input type="checkbox"/> TSA			
Postsecondary: Placement Assessments such as COMPASS & SAT II						Work-Based Learning: <input checked="" type="checkbox"/> Career Research <input type="checkbox"/> Cooperative Education <input checked="" type="checkbox"/> Internship <input checked="" type="checkbox"/> Mentorship <input checked="" type="checkbox"/> Job Shadowing <input checked="" type="checkbox"/> Service Learning Project <input type="checkbox"/> Student Apprenticeship			
						College Entrance Exams such as ACT & SAT			

POSTSECONDARY	SAMPLE POSTSECONDARY PROGRAMS RELATED TO THIS CAREER PATHWAY								
	Individual plans must include locally agreed upon courses at the postsecondary level (See page 2)								
	Pathway	Associate Degree, College Certificate, or Apprenticeship			Bachelors Degree		Postgraduate Degree		
	Therapeutic Services	Associate of Applied Science			Bachelor of Science		Master of Science		
Postsecondary: Placement Assessments such as COMPASS & SAT II									
POSTSECONDARY - COMMUNITY COLLEGE or APPRENTICESHIP - Determined Locally	Semester	English	Mathematics	Science	Social Studies	Required Courses or Recommended Electives			
	POSTSECONDARY PLAN OF STUDIES MUST INCLUDE POSTSECONDARY ACADEMIC, CTE, AND OTHER ELECTIVE COURSES APPROPRIATE FOR AN ASSOCIATE DEGREE.								
	Year 1 1 st Semester					LPN to RN Transition Program (VC): upon successful completion of NUR 115	LPN to RN Transition course, the LPN is awarded advanced placement standing into the Second year class		
	Year 1 2 nd Semester								
	Year 2 1 st Semester	SPD 229, 110, 115 or 126				Humanities/ Fine Arts Elective	NUR 216		
	Year 2 2 nd Semester						NUR 217 NUR 254 NUR 255		
College courses offered locally in the high school for college credit should be coded: DE (Dual Enrollment) and/or VC (Validated Credit)									
Related Industry Certifications Available: Nursing AAS Registered Nurse					Additional Suggested Learning Opportunities: Work-Based Learning: <input checked="" type="checkbox"/> Cooperative Education <input checked="" type="checkbox"/> Internship <input checked="" type="checkbox"/> Mentorship <input checked="" type="checkbox"/> Job Shadowing <input checked="" type="checkbox"/> Service Learning Project <input checked="" type="checkbox"/> Registered Apprenticeship				
UNIVERSITY	University/College: Shenandoah University, George Mason Degree or Major: Bachelor of Science, Nursing Number of Articulated CC Credits: 39								
Notes:									



Appendix B

Student Name:
School:
Date:

Cluster: Science, Technology, Engineering & Mathematics Pathway: Engineering & Technology

*This Career Pathway Plan of Study (based on the Engineering and Technology Pathway of the Science, Technology, Engineering & Mathematics Career Cluster) can serve as a guide, along with other career planning materials, as learners continue on a career path. Courses listed within this plan are only recommended coursework and should be individualized to meet each learner's educational and career goals. *This Plan of Study, used for learners at an educational institution, should be customized with course titles and appropriate high school graduation requirements as well as college entrance requirements.*

EDUCATION LEVELS	GRADE	English/ Language Arts	Mathematics	Science	Social Studies/ Science	Other Required Courses Recommended Electives Learner Activities	Recommended Career and Technical Courses Source: Administrative Planning Guide www.doe.virginia.gov/VDOE/ Instruction/CTE/apg/	SAMPLE – Occupations Relating to This Pathway: www.doe.virginia.gov/VDOE/ Instruction/CTE/careerclusters/ www.careerclusters.org www.cteresource.org/cpg/	
Graduation Requirements: http://www.doe.virginia.gov/2plus4in2004/index.shtml									
MIDDLE	7	English	Pre-Algebra	Life Science	U.S. History 1877-Present	(Required) FACS 8206 (Required) Tech Ed 8464 Keyboarding 6150	NOTE: Use state course titles Exploring Work & Family Roles (8206) Inventions & Innovations (8464) Keyboarding (6150)	<ul style="list-style-type: none"> - Aerospace Engineer - Design Engineer - Architect - CAD Technician - Computer Programmer - Civil Engineer - Electronics Technician - Systems Engineer - Software Engineer - Industrial Engineer - Survey Technician 	
	8	English	Algebra I	Physical Science	Civics & Economics	Foreign Language			
Career Assessment: Administration of a career assessment instrument is appropriate at the middle school level to help students and their parents plan for high school (Virginia's Career Planning System or other assessment product).									
SECONDARY	9	English 9	Geometry	Earth Sciences	World History/ Geography I	Health & PE (2 years) Foreign Language (4 years) Other Electives to Complement Pathway (Core Academic and CTE): Art Electives Computer & Digital Animation	Design, Multimedia, & Web Technologies (6630) Technical Drawing & Design (8435)		
	10	English 10	Algebra II	Biology	World History/ Geography II		Advanced Design, Multimedia, & Web Technologies (6631) Technical Drawing & Design (8437)		
	11	English 11	Trigonometry/ Advanced Algebra	Chemistry	US/VA History		Digital Visualization (8459) (DE) (DRF 238/239/261)		
	12	English 12	Pre-Calculus	Physics (or Principles of Technology I and II)	US/VA Government		(Proposed) Advanced Digital Visualization (DE TBA)		
High school courses in the pathway offered locally for college credit should be coded: DE (Dual Enrollment) and/or VC (Validated Credit)									
List related certifications/credentials approved by VDOE and offered locally: http://www.doe.virginia.gov/VDOE/Instruction/CTE/apg/ (Go to Section 9.) AutoCAD 2004 Brainbench Web Design & Development Certified Solid Works Professional Pre-skills Assessment for Master CAM						Additional Learning Opportunities: CTSO Organization(s): <input type="checkbox"/> DECA <input checked="" type="checkbox"/> FBLA <input type="checkbox"/> FCCLA <input type="checkbox"/> FFA <input type="checkbox"/> FEA <input type="checkbox"/> HOSA <input checked="" type="checkbox"/> SkillsUSA <input checked="" type="checkbox"/> TSA Work-Based Learning: <input checked="" type="checkbox"/> Career Research <input type="checkbox"/> Cooperative Education <input checked="" type="checkbox"/> Internship <input checked="" type="checkbox"/> Mentorship <input checked="" type="checkbox"/> Job Shadowing <input checked="" type="checkbox"/> Service Learning Project <input type="checkbox"/> Student Apprenticeship			
Postsecondary: Placement Assessments such as COMPASS & SAT II						College Entrance Exams such as ACT & SAT			
POSTSECONDARY	SAMPLE POSTSECONDARY PROGRAMS RELATED TO THIS CAREER PATHWAY Individual plans must include locally agreed upon courses at the postsecondary level (See page 2)								
	Pathway		Associate Degree, College Certificate, or Apprenticeship		Bachelors Degree		Postgraduate Degree		
	Engineering and Technology		Associate of Science Career Studies Certificate		Bachelor of Science, Engineering		Master of Science, Engineering		

Postsecondary: Placement Assessments such as COMPASS & SAT II

Semester	English	Mathematics	Science	Social Studies	Required Courses or Recommended Electives			
	POSTSECONDARY PLAN OF STUDIES MUST INCLUDE POSTSECONDARY ACADEMIC, CTE, AND OTHER ELECTIVE COURSES APPROPRIATE FOR AN ASSOCIATE DEGREE.							
Year 1 1 st Semester	ENG 111	MTH 173	CHM 111		EGR 120	PED 116 SDV Elective		<u>Career Studies Certificate</u> DRF 233
Year 1 2 nd Semester	ENG 112	MTH 174	PHY 241 or PHY 231	Social Science Elective	EGR 126			DRF 238 (DE)
Year 2 1 st Semester		MTH 277		Social Science Elective	EGR 240	PED/RPK	SPD Elective	DRF 239 (DE)
Year 2 2 nd Semester			PHY 242 or 232	Humanities/Fine Arts Elective	EGR Elective	EGR 245	EGR 246	DRF 295 DRF 261 (DE)
Year 2 3 rd Semester (For Transfer to Higher Ed)		MTH 285 MTH 291 MTH 292	CHM 112		EGR Elective (DE) (EGR 206 Suggested)			DRF 298
College courses offered locally in the high school for college credit should be coded: DE (Dual Enrollment) and/or VC (Validated Credit)								

Related Industry Certifications Available:
 AutoCAD 2004
 Brainbench Web Design & Development
 Certified Solid Works Professional
 Pre-skills Assessment for Master CAM
 Engineering Technology: Electronic Media in Design Rendering & Animation Career Studies Certificate

Additional Suggested Learning Opportunities:
Work-Based Learning:
 Cooperative Education Internship Mentorship
 Job Shadowing Service Learning Project Registered Apprenticeship

UNIVERSITY
 University/College: Virginia Tech, George Mason, Old Dominion University
 Degree or Major: Bachelor of Science
 Number of Articulated CC Credits: 9



Appendix B

Student Name:
School:
Date:

Cluster: Transportation, Distribution & Logistics Pathway: Facility and Mobile Equipment Maintenance

*This Career Pathway Plan of Study (based on the Facility and Mobile Equipment Maintenance Pathway of the Transportation, Distribution & Logistics Career Cluster) can serve as a guide, along with other career planning materials, as learners continue on a career path. Courses listed within this plan are only recommended coursework and should be individualized to meet each learner's educational and career goals. *This Plan of Study, used for learners at an educational institution, should be customized with course titles and appropriate high school graduation requirements as well as college entrance requirements.*

EDUCATION LEVELS	GRADE	English/ Language Arts	Mathematics	Science	Social Studies/ Science	Other Required Courses Recommended Electives Learner Activities	Recommended Career and Technical Courses Source: Administrative Planning Guide www.doe.virginia.gov/VDOE/ Instruction/CTE/apg/ Instruction/CTE/apg/	SAMPLE – Occupations Relating to This Pathway: www.doe.virginia.gov/VDOE/ Instruction/CTE/careerclusters/ www.careerclusters.org www.cteresource.org/cpg/	
Graduation Requirements: http://www.doe.virginia.gov/2plus4in2004/index.shtml									
MIDDLE	7	English	Pre-Algebra	Life Science	U.S. History 1877-Present	(Required) FACS 8206 (Required) Tech Ed 8464 Keyboarding 6150	NOTE: Use state course titles Exploring Work & Family Roles (8206) Inventions & Innovations (8464) Keyboarding (6150)	<ul style="list-style-type: none"> - Service Manager - Mechanical Engineer - Insurance Adjuster/Appraiser - Technician - Parts Specialist - Automotive Engineer - Performance Engineer 	
	8	English	Algebra I	Physical Science	Civics & Economics	Foreign Language			
Career Assessment: Administration of a career assessment instrument is appropriate at the middle school level to help students and their parents plan for high school (Virginia's Career Planning System or other assessment product).									
SECONDARY	9	English 9	Geometry	Earth Sciences	World History/ Geography I	Health & PE (2 years) Foreign Language (4 years) Other Electives to Complement Pathway (Core Academic and CTE): Auto Service Technology I/II	Principles of Business & Marketing (6115/8115)		
	10	English 10	Algebra II	Biology	World History/ Geography II		Computer Info Systems (6612)		
	11	English 11	Trigonometry/ Advanced Algebra	Chemistry	US/VA History		Automotive Technology I Certified DE (AUT 100, AUT 141, AUT 241)		
	12	English 12	Pre-Calculus	Physics (or Principles of Technology I and II)	US/VA Government		Automotive Technology II Certified DE (AUT 266, AUT 267)		
High school courses in the pathway offered locally for college credit should be coded: DE (Dual Enrollment) and/or VC (Validated Credit)									
List related certifications/credentials approved by VDOE and offered locally: http://www.doe.virginia.gov/VDOE/Instruction/CTE/apg/ (Go to Section 9.) Automotive Technician Examination (ASE) (National Institute for Automotive Service Excellence) Automotive Youth Educational Systems (AYES) (Exit Exams) National Automotive Technicians Education Foundation (NATEF) End of Program Test Series Examinations (NATEF) Parts Specialist (ASE) (National Institute for Automotive Service Excellence)						Additional Learning Opportunities: CTSO Organization(s): <input type="checkbox"/> DECA <input type="checkbox"/> FBLA <input type="checkbox"/> FCCLA <input checked="" type="checkbox"/> FFA <input type="checkbox"/> FEA <input type="checkbox"/> HOSA <input checked="" type="checkbox"/> SkillsUSA <input type="checkbox"/> TSA			
Postsecondary: Placement Assessments such as COMPASS & SAT II						Work-Based Learning: <input checked="" type="checkbox"/> Career Research <input type="checkbox"/> Cooperative Education <input checked="" type="checkbox"/> Internship <input checked="" type="checkbox"/> Mentorship <input checked="" type="checkbox"/> Job Shadowing <input checked="" type="checkbox"/> Service Learning Project <input type="checkbox"/> Student Apprenticeship			
College Entrance Exams such as ACT & SAT									

POSTSECONDARY	SAMPLE POSTSECONDARY PROGRAMS RELATED TO THIS CAREER PATHWAY Individual plans must include locally agreed upon courses at the postsecondary level (See page 2)								
	Pathway		Associate Degree, College Certificate, or Apprenticeship		Bachelors Degree			Postgraduate Degree	
	Facility and Mobile Equipment Maintenance		Associate of Applied Science, Automotive Technology		Bachelor of Science, Business Administration, Bachelor of Science, Automotive Engineering, Bachelor of Science, Electromechanical Engineering			Master of Science, Automotive Engineering Master of Science, Engineering & Design	
Postsecondary: Placement Assessments such as COMPASS & SAT II									
POSTSECONDARY - COMMUNITY COLLEGE or APPRENTICESHIP - Determined Locally	Semester	English	Mathematics	Science	Social Studies	Required Courses or Recommended Electives			
	POSTSECONDARY PLAN OF STUDIES MUST INCLUDE POSTSECONDARY ACADEMIC, CTE, AND OTHER ELECTIVE COURSES APPROPRIATE FOR AN ASSOCIATE DEGREE.								
	Year 1 1 st Semester	English 111 or 131	Math 151 or Physics 101	Physics 101 or Math 151		AUT 100 (DE)	AUT 111	AUT 121 AUT 241 (DE)	
	Year 1 2 nd Semester	SPD 110			Social Science Elective	AUT 236	AUT112	AUT122	
	Year 2 1 st Semester				History Elective	AUT 141 (DE) AUT 242	AUT 267 (DE) PED 116	AUT 142 AUT245 AUT 266 (DE)	
Year 2 2 nd Semester							PED/RPK		
College courses offered locally in the high school for college credit should be coded: DE (Dual Enrollment) and/or VC (Validated Credit)									
Related Industry Certifications Available: Automotive Technician Examination (ASE) (National Institute for Automotive Service Excellence) Automotive Youth Educational Systems (AYES) (Exit Exams) National Automotive Technicians Education Foundation (NATEF) End of Program Test Series Examinations (NATEF) Parts Specialist (ASE) (National Institute for Automotive Service Excellence)					Additional Suggested Learning Opportunities: Work-Based Learning: <input checked="" type="checkbox"/> Cooperative Education <input checked="" type="checkbox"/> Internship <input checked="" type="checkbox"/> Mentorship <input checked="" type="checkbox"/> Job Shadowing <input checked="" type="checkbox"/> Service Learning Project <input checked="" type="checkbox"/> Registered Apprenticeship				
UNIVERSITY	University/College: Virginia Tech, George Mason, Old Dominion University Degree or Major: Bachelor of Science, Business Administration, Bachelor of Science, Automotive Engineering, Bachelor of Science, Electromechanical Engineering Number of Articulated CC Credits: 18								

Appendix C
Memoranda of Agreement

Appendix C

Memorandum of Agreement

TO: Loudoun County Public Schools

FROM: David S. Goldberg, Chief Growth Officer and Assistant Vice President,
Operations, Inova Mount Vernon Hospital

RE: The Loudoun Governor's Career and Technical Academy

The statement(s) below outlines the resources provided to the development, implementation, and operation of The Loudoun Governor's Career and Technical Academy proposed by Loudoun County Public Schools:

Inova Health System has a long standing reputation for growth and innovation in medical science education and training. Over its 50 years of existence, Inova Health System has created partnerships with the Fairfax County Public School System, Northern Virginia Community College, George Mason University and other esteemed leaders in education to broaden the availability of health and medical career training for the Northern Virginia community.

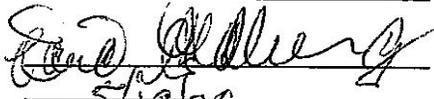
In 2005, Loudoun Hospital Center joined the Inova Health System to expand the access to health care and innovation of research and programming to the Loudoun County community. With that merger, came the opportunity for Northern Virginia's largest non-profit health care provider to work with the Loudoun County Public School System to help create a revolutionary health and medical sciences program aimed to introduce the field to high school aged children starting in their sophomore year.

Since the launch of the program, Inova Loudoun Hospital has been at the table in review of future plans for the Monroe Technical Science Academy, a proposed expansion of the now present Monroe Technical Center in Leesburg, been part of the curriculum development for radiography technologist; medical assistant; laboratory assistant; phlebotomy assistants; EMT and LPN programs, and invested more than \$200,000 in development funds, through a joint grant from the Claude Moore Charitable Foundation, and supplied education space on our Leesburg campus to research other programs that might be the foundation for the program planned for Loudoun County.

Further, we have offered internship opportunities to any student in the program at Inova Loudoun Hospital as well as provided full time staff to assist in broadening the exposure of these fields to interested students with the hopes of creating a solid pipeline of savvy, educated and well rounded medical career professionals for a future in health care.

It is our goal to maintain this relationship with Loudoun County Public Schools and continue to offer any assistance needed to grow the current program into a national model for other such innovative examples of public private partnerships that work to broaden awareness of health and medical fields to all levels of high school students, provide a source of recruitment into some of the most important fields of health care and be mentors to the next generation.

Recognizing Monroe Technical Center as a proposed Governor's Academy would be the Commonwealth's ratification of our efforts and vision for the future of medical and health care education. To generate a well balanced and educated work force, changes need to be made in our access points in health care fields. This program in the fastest growing jurisdiction of Virginia promises to be a national leader in the training, promotion and entry point for many stellar students into the health care sector. Inova Health System looks forward to a longstanding relationship with all our education partners in this journey and especially Loudoun County Public Schools on this initiative.

Name: David Goldberg (Type in names, date, and add original signature)
Signature: 
Date: 5/19/08

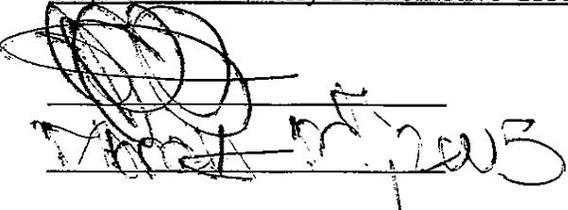
Memorandum of Agreement

TO: Loudoun County Public Schools
FROM: Stephen Cohen, Jerry's Automotive Group
RE: The Loudoun Governor's Career and Technical Academy

The statement(s) below outlines the resources provided to the development, implementation, and operation of The Loudoun Governor's Career and Technical Academy proposed by Loudoun County Public Schools:

Jerry's Automotive Group will continue to assist with student internship and mentorship placements for Automotive Technology students scheduled with the Loudoun Governor's Career and Technical Academy housed at the Monroe Technology Center. Further, we will assist in the planning and assessment of the current program pathway to ensure that it remains current and relevant within the automotive servicing industry.

Name: Stephen Cohen, Jerry's Automotive Group

Signature: 

Date: March 2015

Memorandum of Agreement

TO: Loudoun County Public Schools

FROM:

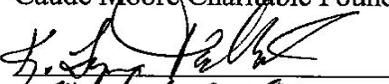
RE: The Loudoun Governor's Career and Technical Academy

The statement(s) below outlines the resources provided to the development, implementation, and operation of The Loudoun Governor's Career and Technical Academy proposed by Loudoun County Public Schools:

Claude Moore Charitable Foundation has financially supported the development of the Health Services Program primarily focusing on the Career Pathways of Therapeutics and Diagnostics Services. The trustees have allocated funds to support this program in 2008 and we anticipate continued financial support of the program in the future.

The Claude Moore Charitable Foundation's mission is to enhance educational opportunities, including higher education, for young people in the Commonwealth of Virginia and elsewhere.

Name: K. Lynn Tadlock, Director of Grants and Special Projects
Claude Moore Charitable Foundation

Signature: 

Date: March 6, 2008

Memorandum of Agreement

TO: Loudoun County Public Schools

FROM: Bernard J. Dunn School of Pharmacy
Shenandoah University

RE: The Loudoun Governor's Career and Technical Academy

The statement(s) below outlines the resources provided to the development, implementation, and operation of The Loudoun Governor's Career and Technical Academy proposed by Loudoun County Public Schools:

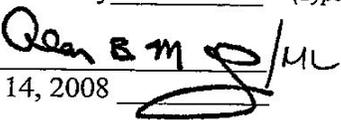
Type here what your organization is providing to our Academy program areas:

The Bernard J. Dunn School of Pharmacy is a fully accredited school of pharmacy that offers professional education leading to a Doctor of Pharmacy degree. The school's facilities are based both in Winchester and Ashburn, Virginia. Both sites provide both classroom and laboratory space for both instructional and research activities.

The school has a wide range of faculty members with professional expertise in basic science and professional practice. These faculty members are based at both the Winchester and Ashburn campus and real-time video teleconferencing is extensively utilized.

The faculty and administration of the school will provide consultation and physical facilities as needed to encourage and assist the Loudoun County Public Schools in appropriate areas related to the pharmaceutical sciences and the practice of pharmacy.

Name: Alan B. McKay (Type in names, date, and add original signature)

Signature: 

Date: March 14, 2008

Memorandum of Agreement

TO: Loudoun County Public Schools
FROM: Virginia Tech, Integrative STEM Education PRogram
RE: The Loudoun Governor's Career and Technical Academy

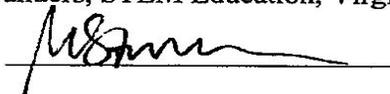
The statement(s) below outlines the resources provided to the development, implementation, and operation of The Loudoun Governor's Career and Technical Academy proposed by Loudoun County Public Schools:

Type here what your organization is providing to our Academy program areas:

Our (Virginia Tech) "Integrative STEM Education " program will be offering "Integrative STEM Education graduate courses" online, in which LCPS Science, Technology, Engineering and Mathematics (or other) teachers and administrators may wish to enroll. These courses may be used toward a Master's, Education Specialist's or Doctoral degree or toward a Certificate* in "Integrative STEM Education at Virginia Tech.

* The Certificate is currently pending university approval

Name: Mark Sanders, STEM Education, Virginia Tech

Signature: 

Date: 3/8/08

MEMORANDUM OF AGREEMENT

Virginia Polytechnic Institute and State University's College of Agriculture and Life Sciences' Agricultural Technology Program and Selected Commonwealth of Virginia High School Horticulture Programs

This memorandum of agreement is entered into by selected Virginia Public High Schools and the Agricultural Technology Program of Virginia Polytechnic Institute and State University (Virginia Tech) to establish the responsibilities of the parties regarding programs for high school students to obtain advanced placement in the Agricultural Technology Program. Accordingly, the parties agree that this document is the sole understanding concerning the operation of this program that shall be called the Agricultural Technology – High School Horticulture Linkage.

Purpose

To bestow advanced placement in the Landscape & Turf Management option of the Agricultural Technology Program in the College of Agriculture & Life Sciences at Virginia Tech to students who have met the criteria as specified in the Articulation Agreement.

Process

The Agricultural Technology – High School Horticulture Linkage will be composed of specific horticulture programs that have developed articulation agreements.

New Agreements: High school faculty or local school officials may submit proposals for inclusion in this Linkage to the Agricultural Technology Director in Virginia Tech's College of Agriculture and Life Sciences. When the proposal is approved by the high school principal, county vocational director and/or other appropriate school officials and the Agricultural Technology – High School Horticulture Linkage Committee, implementation can occur.

Agreement Maintenance: The Agricultural Technology Director will call a meeting of appropriate high school administrators and faculty, and Agricultural Technology administrators and faculty once a year to monitor each program. The Agricultural Technology Director will keep high school faculty aware of curriculum changes and scheduling changes affecting any articulated agreement.

Guidelines for the Tech-Prep Students

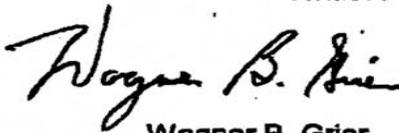
A student who completed one or more Identified Tech-Prep courses with a grade of "B-" or better and who meets all college admission requirements will be able to enroll directly in the appropriate advanced courses at the college as long as competency in the subject matter is shown via an advanced standing test.

After completing twelve University semester credits, the student's high school courses will be converted to the appropriate courses within the Agricultural Technology curriculum. More specific program requirements are described in each Articulation Agreement.

AGREEMENT ENTERED INTO ON

Date

Charles S. Monroe Technology Center



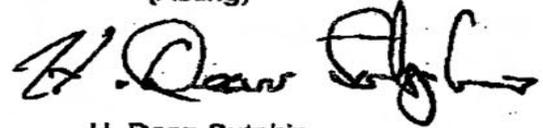
Wagner B. Grier
Principal



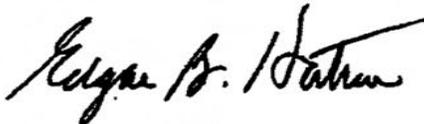
H. Dean Sutphin
Director of Agricultural Technology
(Acting)



Shirley Bazder
Director of Vocational Education



H. Dean Sutphin
Associate Dean and Director
of Academic Programs for the
College of Agriculture and Life Sciences



Dr. Edgar B. Hatrick
Superintendent

**ARTICULATION AGREEMENT FOR LANDSCAPE & TURF MANAGEMENT
and the Agricultural Technology Program**

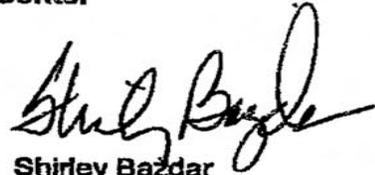
Based upon mutual concern for the needs of students pursuing technical education programs and in an effort to provide a continuing articulated program that builds on past learning experiences and eliminates any unnecessary duplication of instruction, the following are agreements to which we mutually subscribe:

1. Beginning in 2004-05, a Monroe Technology Center student who presents an official high school transcript and a letter of recommendation from the high school Horticulture instructor and who meets all Agricultural Technology admission requirements will be able to enroll in the advanced courses or have courses waived, if he/she meets the following criteria:
 - A. A student must have completed his/her Tech-Prep courses in high school, such as Horticulture III, IV and/or V or other appropriate courses, as defined by the local school with a "B-" or better grade.
 - B. The student takes the appropriate advanced standing tests which will be administered during May each year. The date, time and location of the tests are to be announced. Minimum score to pass the test is 70%.
 - C. Portfolios: A student may supplement his/her application with a portfolio of work completed and/or skills developed. Or in special cases, the Agricultural Technology Program may request a portfolio as part of the admissions process.
2. If the above criteria are met, then:
 - A. After completing twelve University credits in the Agricultural Technology Program, the following designated courses are eligible to be requested for advanced placement: Horticulture Production (AT 0544, three credits), Woody Landscape Plants (AT 0574, two credits) and a course in Herbaceous Plant Materials (AT 0564, two credits). These will be added to the transcript. Only the credits will be recorded, not the grades earned in the high school program.
 - B. Seven hours is the maximum number of credits to be awarded for advanced standing and three hours is the minimum.

Charles S. Monroe Technology Center

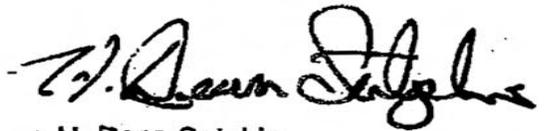


Wagner B. Grier
Principal



Shirley Bazdar
Director of Vocational Education

Deborah Chaves
Horticulture Teacher


11/22/04

H. Dean Sutphin
Director of Agricultural Technology
(Acting)

**DUAL ENROLLMENT CONTRACT
BETWEEN LOUDOUN COUNTY PUBLIC SCHOOLS
AND
NORTHERN VIRGINIA COMMUNITY COLLEGE**

This agreement defines the terms and conditions under which contract courses will be offered by Northern Virginia Community College (NVCC) at the request of Monroe Technology Center. The purpose of this offering is to allow high school students to take college-level courses and receive both college credit and high school credit toward graduation. The agreement is in response to the "Virginia Plan for Dual Enrollment Between Virginia Public Schools and Community Colleges" established by the Commonwealth's Secretary of Education, the Superintendent of Public Instruction, and the VCCS Chancellor in January 2005.

Each party does hereby agree to the following:

1. Offerings

NVCC will make available college-level courses when requested by school officials, beginning August 22, 2005. These courses will be offered at a time and place to be agreed upon by the parties. Developmental and physical education courses will not be included in dual enrollment offerings.

NVCC reserves the right to cancel, prior to the start of the semester, any courses that fail to meet state funding ratios, the right to determine the maximum enrollment in any courses taught under this agreement, and to enroll other students in courses offered under this agreement when the courses are offered on campus, at sites other than high schools or in the high schools during non-traditional hours.

Students who are not dual-enrolled may not be included in dual enrollment classes offered in the high school if those courses are intended for transfer to a senior institution, including career/technical courses that commonly transfer (e.g., ACC 211, ITE 115). Career/technical classes that do not typically transfer are discouraged but not prohibited from including non-dually enrolled students.

NVCC and the School reserve the right to cancel any class(es) or add to the list of class offerings, by the end of the drop/add period as indicated in the NVCC calendar.

The courses to be offered will be established by mutual agreement of both parties for the fall and spring semesters. Attachment 1 lists the courses agreed upon for the 2005 – 2006 academic year.

All equipment necessary for instruction will be provided by the host site.

2. Registration, Tuition, and Fees

Rates for in-state tuition will be in accordance with rates established by the State Board for Community Colleges for NVCC and in effect at the time the classes begin. Fees will be in accordance with fees established by the State Board for Community Colleges and the Northern Virginia Community College Local Board for the applicable term.

The School assumes responsibility for the payment of tuition and fees for the students. The School will, prior to registration, provide NVCC with the registration worksheets that include the list of students to be sponsored, NVCC user identification number, course prefix and course number, along with the school system's letter of authorization.

A deadline date for adding/dropping and withdrawing from classes that serves both NVCC and the School will be determined on a course-by-course basis. The School must notify the college before the deadline for withdrawal if the student decides to drop a course.

NVCC will issue an invoice to the School after the completion of 15% of the class meetings, which is designated as the census date. Payment is due from the School within 30 days of the date of the invoice. NVCC will reimburse the School \$750 per credit hour for each course taught at the School by a member of the School's faculty. The School will not be reimbursed for any course offered at another location or taught by an NVCC instructor who is not a member of the School's faculty.

Nothing in this agreement shall be interpreted to prevent the School from collecting tuition costs from students.

3. Texts

NVCC shall determine the textbooks for use in dual enrollment courses.

4. Faculty

NVCC has the authority to select and supervise instructional faculty for all NVCC courses covered by this agreement. Each faculty member teaching in the dual enrollment program shall be a member of the College's full-time or adjunct faculty. Dual enrollment course faculty must meet the minimum credentialing requirements set forth by Form VCCS-29 and the Southern Association of Colleges and Schools.

All faculty teaching dual enrollment courses will be required to attend faculty orientation and other in-service programs as agreed upon by both parties.

The School may recommend qualified teachers who are interested in teaching in the dual enrollment program. If an instructor for dual enrollment courses is employed full time by the School and the courses are part of the assigned teaching workload, NVCC will reimburse the School for the services of its employee in lieu of direct compensation to the faculty member. At no time will the amount of reimbursement to the school exceed the tuition and fees received by NVCC. Reimbursement of faculty salaries will occur no later than the end of the semester during which the course is taught.

If NVCC employs an instructor who is not affiliated with the School, the College will compensate the faculty member directly. Payment of faculty salaries will be in accordance with rates approved by the Virginia Community College System for NVCC. Appointments will be made on a term to term basis. Instructors who are not full-time NVCC faculty will be evaluated each semester.

5. Students

In order to be eligible to participate in the Dual Enrollment Program, students must be high school students, have the permission of their parent or guardian to participate, be recommended by their high school principal to cross register, and meet course prerequisites.

Students must meet admission and all course placement requirements of NVCC. Requirements for admission include the completion of an application for admission to the college, submission of current official high school transcripts, and completion and satisfactory scores on the college placement tests or approved alternatives to the placement tests.

Exceptions to the policies established in the above two paragraphs regarding student eligibility may be made on a case-by-case basis, with the approval of the public school superintendent or designee and appropriate NVCC officials.

Students in dual enrollment/dual credit classifications are not eligible to apply for state and federal financial aid.

6. College Administrative Responsibilities

NVCC, through the instructor(s), will provide the appropriate school official(s) with progress reports on each student from time to time as agreed by the school and NVCC, for students attending classes at an NVCC campus or alternative sites. Release of student grades by NVCC to the schools shall be conditional upon receipt of a proper student-signed authorization, conforming to the requirements of the US DOE FERPA regulations. At the conclusion of each college academic term, students will receive a college grade for each course in which they were registered and such grades will become part of the students' permanent college record.

NVCC will maintain a record for each student in the Dual Enrollment Course as a part of the permanent college record maintained by the College's Admissions and Records offices. Transcripts will be sent to colleges/ universities upon student request.

NVCC will provide a minimum of 800 minutes of instruction (to include testing and evaluation) for each lecture credit or laboratory contact hour to students enrolled in college courses under this agreement.

7. High School Administrative Responsibilities

The School will verify enrollments in each class section within two weeks of the beginning of each class according to mutually agreed-upon procedures. Instructors are expected to report grades to the community college on mutually agreed-upon dates.

8. Award of Credit

College and high school credit shall be awarded to the participating high school student upon successful completion of the course.

9. Course Standards

NVCC ensures that all courses taught through the dual enrollment program shall be equivalent with other instruction offered by the College, specifically in terms of course objectives, components of syllabi, level and rigor of content, textbooks, student outcomes assessment and faculty evaluation. Instructors must conform to college policies such as verifying class rosters, taking attendance, and providing final grades at the end of the semester. Evaluation will consist of the NVCC's instructor evaluation form and a formal meeting at the end of each term with NVCC and the school faculty, counselors and administrators, addressing instructor performance, student preparedness, curriculum, instructional media and other issues as identified by NVCC and the school.

For any courses offered at the School, modifications of on-campus policies, procedures and rules appropriate to the high school setting may be agreed to by the parties in writing before each term begins. For courses taught on NVCC campuses, students must adhere to all policies stated in the college *Catalog* and/or *Student Handbook*.

NVCC reserves the right to advise the student and school system that the student does not have sufficient skills or abilities to continue in the courses.

10. Agreement Contacts

- a. The School: Superintendent or designee
- b. The High School: Principal or Guidance Director (we may need a separate page for this)
- c. NVCC, Academic Matters: Executive Vice President or designee
- d. NVCC, Financial Matters: Vice President, Financial Services or designee

11. Transferability

Normally, academic courses intended for transfer with a grade of "C" or above should transfer to institutions of higher education. However, NVCC cannot guarantee transferability to all colleges and universities. Community college occupational/technical course credits are applicable to specific curricula and are intended to prepare students for employment in those areas. While some of these courses may be accepted for transfer, no unified policy on the transfer of such courses exists. Students should be advised to consult with transfer institutions in order to determine if their courses will be accepted for transfer.

12. Discrimination

NVCC and the school shall not unlawfully discriminate on the basis of race, nationality, ethnicity, religion, gender, age or disability in any undertaking pursuant to this agreement.

13. Liability

Each party will be responsible for liability coverage of its employees and agents in fulfilling its responsibilities under this agreement, to the extent authorized by law.

14. Contract Initiation, Termination, and Review

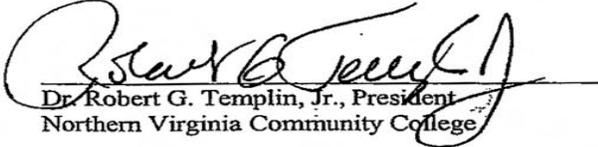
This agreement shall be effective with the date of the second signature and will automatically renew year to year unless terminated by either party. To terminate this agreement a written notice must be provided within three months of the requested termination date. Termination will not take place until dual enrollment courses in progress are completed.

This agreement may be altered, amended, or updated through the use of written addenda that are mutually acceptable to NVCC and the School as indicated by the signature of authorized officials.

Representatives of the School and NVCC for the purpose of assessing the program and making desirable changes in the program and the agreement will review the agreement annually before June 1.

Nothing herein shall be construed as a waiver of the sovereign immunity of the Commonwealth of Virginia, or the assumption of any liability contrary to the laws and statutes of Virginia.

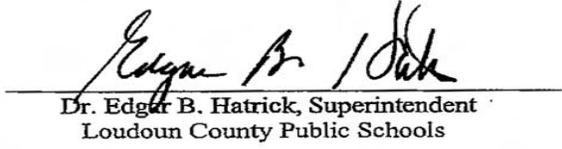
Signatures:



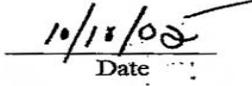
Dr. Robert G. Templin, Jr., President
Northern Virginia Community College



Date



Dr. Edger B. Hatrick, Superintendent
Loudoun County Public Schools



Date

**PROGRAM SPECIFIC ATTACHMENT FOR THE HORTICULTURE PROGRAM
BETWEEN NORTHERN VIRGINIA COMMUNITY COLLEGE
AND
LOUDOUN COUNTY PUBLIC SCHOOLS**

This agreement is based upon the 1996 General Articulation Agreement and the listed course equivalence requirements that represent comparable learning in the specific secondary school course(s) and the specific NVCC course(s). Advanced placement will be awarded to high school graduates who demonstrate mastery of college level skills gained through the secondary school course(s), thus avoiding unnecessary duplication of effort. NVCC will recognize any credit awarded to students at all campuses and in all NVCC programs to which the credit is applicable.

I. Identification of Course Equivalence

Students must complete the following high school courses with a grade of "B" or better:

8034 Greenhouse Management/ Floral Design
8036 Nursery and Landscape Management

Upon meeting validation requirements listed below in Section II, students will receive credit for the following NVCC course:

HRT 100, Introduction to Horticulture 3 credits

II. Validation of Competency

To receive this credit, the following conditions must be met:

1. The student must apply for Tech Prep articulated credit and successfully complete at least one course at NVCC within 24 months of graduation from high school.
2. Students who enroll after 24 months may petition a division dean/chair responsible for the **Horticulture** program to be considered for advanced standing as described in Section I.
3. No official NVCC transcript will be issued unless the student successfully completes at least one course at NVCC.
4. The student must submit an official high school transcript to the Tech Prep Center at the following:
 Tech Prep Director
 NVCC
 4001 Wakefield Chapel Road
 Annandale, VA 22003-3796

APPENDIX D

EXEMPLARY STANDARDS OBSERVATION TOOL

Appendix D
Loudoun County Public Schools
Career and Technical Education
Classroom observation and walk-through guidelines

Teacher: _____ Date: _____



Agriculture Program* Business and Information Technology Program*Family and Consumer Sciences Program*Marketing Program*Middle School Keyboarding Program*Technology Education Program

The following guidelines have been developed to assist administrators and supervisors in observing and evaluating career and technical education (CTE) programs and classroom lab areas. These guidelines were identified and developed by Loudoun County Public Schools (LCPS) career and technical education teachers as a result of a survey and staff development activities. These assessment areas are aligned with national standards identified for exemplary career and technical education programs.

Please check an appropriate response for each question in the box provided.

Classroom and Program Quality

Are learning goals and objectives clear, challenging, and appropriate for the intended population?

1. Are lesson objectives listed on the board for each class period?

Yes No

2. Is the teacher demonstrating effective classroom management? If not, please comment on what is observed in this classroom.

Yes No

3. Is there a detailed syllabus communicating standards and expectations for the CTE course being observed?

Yes No

Program content is aligned with learning goals, is accurate, current, and appropriate for the intended learner population.

1. Are course competency records maintained for all students?

Yes No

2. Is the lab or classroom area kept clean and orderly?

Yes No

3. Is all laboratory and classroom equipment operational and utilized within the classroom? In module learning labs, are modules regularly incorporated into the course curriculum?

Yes No

4. Within the classroom and lab areas, are safety guidelines and procedures communicated by the teacher?

Yes No

Program reflects the vision promoted in recognized academic and occupational standards; state and national legislation, as appropriate.

1. The teacher has identified the Virginia SOL supported by the course curriculum and communicates that information to students, parents, and faculty.

Yes No

2. The teacher is aware of industry licenses and certifications available to students within his/her instructional program and actively prepares students to achieve industry licenses and certifications.

Yes No

3. The teacher can provide examples of lesson plans that incorporate *Virginia's Workplace Readiness Skills* and *All Aspects of Industry* activities.

Yes No

4. The teacher provided administrator/supervisor access to signed cooperative education/internship training agreements, if applicable.

Yes No N/A

5. The teacher provided the administrator/supervisor access to cooperative education/internship training plans and student evaluations, if applicable.

Yes No N/A

Collaborations with internal and external organizations and effectiveness of the program.

1. The teacher can provide lists or copies of existing school and business partnerships.

Yes No

2. The teacher can document and identify course articulation efforts with higher education partners, if applicable.

Yes No N/A

3. The program instructor and students collaborate with other departments and programs within the school.

Yes No

Educational Significance

The course/program addresses important individual and societal needs.

1. The teacher can describe or demonstrate how the course or program meets the needs of the community and workforce development.

Yes No

2. The teacher can provide documentation of community service and academic/CTE integration projects by providing photos, newspaper articles, letters, and e-mails.

- Yes No

3). The teacher can provide documentation of student wage earnings, if applicable.

- Yes No N/A

The program contributes to educational excellence for all learners and leads to other positive results or outcomes.

1. Utilize a variety of resources to help students build career pathways.

- Yes No

2. Teacher can provide documentation or evidence of his/her professional leadership roles (i.e., curriculum writing teams, workshop/course instructors, school leadership roles and responsibilities, etc...).

- Yes No

The program design is innovative, reflects current research, and is worthy of replication.

1. Are the teacher's classroom lessons reflective of current research on teaching and learning?

- Yes No

2. Are the teacher's classroom lessons reflective of the changing needs, trends and technologies within business and industry?

- Yes No

Evidence of Effectiveness and Success

The program makes a measurable difference in learning for all participants.

1. Students attain at least 80 percent of listed student competencies within a given course.

Yes No

2. Students are actively involved in CTE student organizations.

Yes No

A systematic evaluation process is used to continuously improve the program.

1. The teacher can identify best practices that exist in the program (How do teachers evaluate the program's effectiveness? What data do they use? How does the teacher use data to improve the program?).

Yes No

Please list any follow up comments that you would like to include in the space below or on a separate sheet.

APPENDIX E
PATHWAY COURSE DESCRIPTIONS

Appendix E Course Descriptions

Auto Servicing Technology I

Grade 11 or 12

Credits: 3

Prerequisite: Competitive Application Process

This two-year program provides the opportunity for students to develop the skills needed to follow environmental and safety practices and inspect, diagnose, adjust, and repair the systems of the modern technological automobile.

An industry standard curriculum, certified by ASE (Automotive Service Excellence) and NATEF (National Automotive Technician Educational Foundation), provides the student the training format to proceed from the basic to advanced level technician in steering and suspension, electronics, and engine performance.

The Automotive Youth Educational Systems (AYES) mentorship program is offered between the first and second year of the program. Interested automotive students must meet certain criteria in order to be interns with selected mentors at local dealerships or other auto servicing businesses.

A dual enrollment agreement with Northern Virginia Community College allows students to earn up to ten college credits. Extended lab times outside of the school day are sometimes required to meet prescribed competency attainment.

863000

Auto Servicing Technology II

Grade 12 or Post-Graduate

Credits: 3

Prerequisite: Auto Servicing Technology I

This program builds upon the skills learned in Auto Servicing Technology I.

An industry standard curriculum, certified by ASE (Automotive Service Excellence) and NATEF (National Automotive Technician Educational Foundation), provides the student the training format to proceed from the basic to advanced level technician in brakes, engine repair, manual drive train and axles, automatic transmission and transaxles, and air conditioning.

A dual enrollment agreement with Northern Virginia Community College allows students to earn up to eight college credits.

Computer & Digital Animation

Grade 11 or 12

Credits: 3

Prerequisite: Competitive Application Process

Computer and Digital Animation is a one-year course for juniors and seniors. Students have the opportunity to use high-end software to produce computer-generated designs, characters, and animations. The content they create is suitable for use in film, television, and video games.

The course uses “3D Studio Max” and “Combustion” as its main tools. “3D Studio Max” is a program for character development and animation. “Combustion” is a unified paint, animation, and 2D/3D compositing program for editing and visual effects.

***Greenhouse Management /
Floriculture Operations***

Grade 11 or 12

Credits: 3

Prerequisite: Competitive Application Process

This is a one-year course wherein students are dual enrolled in Hort 100/Introduction to Horticulture at Northern Virginia Community College. Students explore careers in environmental systems related to greenhouse plant production, sales, and marketing; environmental conservation and management; the floral design industry; and specialty agriculture. They gain first hand knowledge of the effects plants have on our local and global environmental systems by learning how to grow, utilize, and market plant material and related products.

Students complete the VFGA Greenhouse Operator's Manual and receive two additional verified high school credits and their industry certification if they pass this industry examination given in May

FFA is an exemplary high school youth leadership organization, which is an integral part of the curriculum. It stresses premier leadership, personal growth, and career success. Students have the opportunity to participate in many enriching events and competitions at the local, state, and national level such as Forestry, Tractor Driving Envirothon, Horticulture, Public Speaking, etc.

Students may be eligible for horticulture credit with Virginia Tech.

***Nursery & Landscape /
Sports Turf Management***

Grade 11 or 12

Credits: 3

Prerequisite: Competitive Application Process

This is a one-year course wherein students are dual enrolled in Hort 100/Introduction to Horticulture at Northern Virginia Community College. The purpose of this course is to introduce students to career opportunities in horticulture related to nursery management; landscape design; installation and maintenance; sales and marketing; forestry and natural resource management; small engine maintenance and repair; and turf-sports turf management. Horticulture students produce a seasonal schedule of plant material and are actively engaged in landscape installation and maintenance, marketing and sales of their products, and services to the community.

Students complete the Virginia Nursery and Landscape Association Manual and receive their certification as a "Virginia Certified Horticulturist" if they pass the rigorous five-part industry examination given in May. Students are encouraged to test for a Registered Pesticide Technician Certification.

FFA is an integral part of the curriculum where students will participate in many enriching events and competitions at the local, state, and national level. Competitions include Forestry, Tractor Driving, Envirothon, Horticulture, Public Speaking, etc.

Introduction to Health and Medical Sciences

Grade 10, 11 or 12

Credits: 3

Prerequisite: Competitive Application Process

This course introduces students to a vast array of careers within the health and medical professions. Students learn basic medical skills necessary to function safely and efficiently within the medical community. Career exploration will allow students to make informed choices within related professions while preparing for future educational requirements.

Students are exposed to medical terminology; pharmacology; anatomy and physiology; and therapeutic and diagnostic interventions. Instruction also emphasizes professionalism, legal/ethical issues, and communication skills.

Numerous observational clinical rotations are offered in various healthcare settings to include medical clinics, radiology, laboratory, dietary, and physical therapy.

861400**Radiology Technology I**

Grades 11-12

Credits: 3

Prerequisite: Introduction to Health and Medical Sciences

This second year curriculum is designed to prepare students to produce diagnostic images of the human body through safe application of x-radiation. The radiographer is a central member of the health care team and assists the radiologist. Topics of study will include history of the radiological profession, ethics, conduct, concepts of imaging, radiographic procedures & quality, radiographic theory, and clinical procedures. Students will have the opportunity to shadow in a professional setting as well as participate in organized field experiences.

Criteria for admission may be based on a pre-assessment for program placement. Upon initial acceptance the student must undergo or obtain specific immunizations, medical clearance, CPR certification, and a criminal background check for final acceptance into the program.

861200**Laboratory Technology I**

Grades 11-12

Credits: 3

Prerequisite: Introduction to Health and Medical Sciences

This second year curriculum is designed to prepare students to become credentialed Medical Laboratory Technologists that will assist a Medical Lab Technician in a professional retail, doctor's office, or hospital setting. Topics of study will include apheresis technology, phlebotomy technology, and histotechnology. Students will have the opportunity to shadow in a professional setting as well as participate in organized field experiences.

Criteria for admission may be based on a pre-assessment for program placement. Upon initial acceptance the student must undergo or obtain specific immunizations, medical clearance, CPR certification, and a criminal background check for final acceptance into the program.

888000**Licensed Practical Nursing I/Certified Nurse Aide**

Grade 12

Credits: 3

Prerequisite: Competitive Application Process

Licensed Practical Nursing (LPNI) is the first year of a two-year practical nursing program that is accredited by the Virginia Board of Nursing. Students successfully completing both LPN I and II will be eligible to take the NCLEX-PN licensing exam and then be able to work as an LPN. LPN I students are also eligible to take the Certified Nurse Aide exam following their first year.

Class units taught are geriatric nursing, nursing skills, nutrition, growth and development, nursing fundamentals, administration of medication, anatomy, and physiology. There is a required 40-hour clinical experience at a long term care facility.

Criteria for admission are based on satisfactory scores on the Nurse Entrance Test (NET), satisfactory attendance, three references, and solid high school grades. A GPA at least 2.0 is recommended. All students must be able to provide their own transportation to clinical experiences. Upon initial acceptance the student must undergo or obtain specific immunizations, medical clearance, CPR certification, and a criminal background check for final acceptance into the program.

Applications are accepted January 1 through March 31 of each year. The student must call the nursing secretary at 703-771-6560 after January 2 to schedule a NET test date. There is fee required for the Net, payable on the test date.

889000

Licensed Practical Nursing II

Grade: Adult/Post-Graduate

Credits: 3

Prerequisite: Licensed Practical Nursing I

The Licensed Practical Nursing II units taught are medical and surgical nursing, psychiatric nursing, obstetrical and neonatal nursing, pediatric nursing, advanced nursing skills, and professional issues. The students have a rigorous schedule of 15 hours per week of classroom instruction and 16 hours a week of clinical experiences. During the clinical time the students give direct patient care under the supervision of the clinical instructors. Clinical experiences are at a long term care facility, hospital, and doctors' offices. All students must provide their own transportation daily to all clinical sites and to the school.

APPENDIX F
ADMISSIONS APPLICATION



THE LOUDOUN GOVERNOR'S CAREER AND TECHNICAL ACADEMY

APPLICATION FOR ADMISSION

(Please Print Legibly)

DO NOT WRITE IN THIS BOX. Date Received: _____

Program Desired: First Choice: _____ Second Choice: _____

Name: _____ Student Number: _____
Last First M.I.

Address: _____

Home Telephone: _____ Student Cell Phone: _____

Date of Birth: ____ / ____ / ____ Age: ____ Student E-Mail Address: _____
Month Day Year

Parent or Guardian Name: _____

Please circle the high school you attend:

BRH BWH DCS DMH FDH HTH LCH LVH PFH PVH SBH

Present Grade Level: _____ School Counselor: _____

Number of Absences through 1st Semester _____ If days absent exceed six, please explain:

Have you had a career assessment? YES NO

Did you attend this year's *Shadowing* for Academy programs? YES NO

If not, have you ever visited the program you are applying for? YES NO

If yes, when? _____

What are your career goals?

Please list any courses you have taken related to your program choice.

PLEASE COMPLETE AND SIGN THE BACK PAGE OF THIS APPLICATION.

Describe any job experience you have had.

Please list any extra-curricular activities or hobbies in which you are involved.

Why do you feel you are a good candidate for the technical program you are interested in?

Be specific.



Your guidance counselor and your parent or guardian must sign and date this application. Return this form to your guidance counselor.

Student Signature

Date

Parent or Guardian Signature

Date

Counselor Signature

Date

As required by federal laws and regulations, the Loudoun County School Board does not discriminate on the basis of sex, color, race, religion, handicapping conditions, or national origin in employment or its educational programs and activities.

APPENDIX G

COUNSELOR'S RECOMMENDATION



The Loudoun Governor's Career and Technical Academy Standardized Test Data & Counselor Recommendation

Student Applicant: _____

Standardized Test Data

	PSAT					
	Reading		Math		Writing	
	S	NP	S	NP	S	NP
Grade 9						
Grade 10						
Grade 11						

Stanford 10 – Grade 8

Total Reading		Total Math	
GE	NP	GE	NP

Please check the appropriate box:

	Some Reservations	Good	Excellent
Disciplined Work Habits			
Attendance			
Character/Integrity			
Self-Confidence			
Academic Ability			
Ability to Work with Others			
Leadership			
Commitment to Program			
Motivation			

Please share any information regarding this student you feel would be beneficial in the placement process.

Counselor Signature & Date

APPENDIX H
STATEMENT OF ASSURANCES

Appendix H

Governor's Career and Technical Academy

STATEMENT OF ASSURANCES

The authorized signature on this page certifies to the Virginia Department of Education that the authorized official assures that:

1. The planning committee has reviewed the provisions of *Administrative Procedures Guide for the Establishment of Governor's Career and Technical Academies* outlined in the Guidance Manual, and understands that an implementation proposal will need to address these criteria and/or others approved by the Virginia Board of Education.
2. The planning committee agrees to follow the guidelines set forth in the *Administrative Procedures for the Establishment of Governor's Career and Technical Academies* document.
3. If the Governor's Career and Technical Academy will be a jointly operated program, an ongoing governing board will be established or maintained to reflect current Board of Education regulations relative to jointly operated schools and programs.
4. A public, government entity will serve as the grant fiscal agent.

Certification by Authorized or Institutional Official:

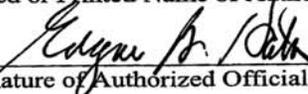
The applicant certifies that to the best of his/her knowledge the information in this application is correct, that the filing of this application is duly authorized by the partners participating in this process to establish a Governor's Career and Technical Academy, and that the applicant will comply with the statement of assurances.

Edgar B. Hatrick

Typed or Printed Name of Authorized Official

Superintendent

Title



Signature of Authorized Official

3/4/08

Date

APPENDIX I

**STATEMENT OF ASSURANCE, FUNDS, AND
FACILITIES**

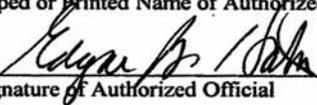
Appendix I

**The Loudoun Governor's Career and Technical Academy
Loudoun County Public Schools**

**STATEMENT OF OPERATING FUNDS AND FACILITIES
ASSURANCE**

The authorized signature on this page certifies to the Virginia Department of Education that the authorized official assures that:

1. Operating funds and facilities are available to support the Governor's Career and Technical Academy.
2. Operating funds and facilities are available to adequately support the needs of the programs at The Loudoun Governor's Career and Technical Academy.

Certification by Authorized or Institutional Official:	
The applicant certifies that to the best of his/her knowledge the information in this application is correct, that the filing of this application is duly authorized by the partners participating in this process to establish a Governor's Career and Technical Academy, and that the applicant will comply with the above statement of assurances.	
Edgar B. Hatrick	Superintendent
Typed or Printed Name of Authorized Official	Title
	3/4/08
Signature of Authorized Official	Date

APPENDIX J
PLANNING COMMITTEE

Loudoun County Public Schools
The Loudoun Governor's Career and Technical Academy
Planning Committee

Name E-mail Address	Business or Organization Represented Position or Title	Telephone FAX
Sharon D. Ackerman Sharon.Ackerman@loudoun.k12.va.us	Loudoun County Public Schools Assistant Superintendent for Instruction	(W)571-252-1300 (F)571-252-1801
Shirley L. Bazdar Shirley.Bazdar@loudoun.k12.va.us	Loudoun County Public Schools Director, Career and Technical Education	(W)571-252-1070 (F)571-252-1635
Debra Brown Debra.Brown@loudoun.k12.va.us	LCPS Monroe Technology Center Placement Coordinator	(W)703-771-6560 (F)703-771-6563
Charlotte Calobrisi ccalobrisi@nvcc.edu	Northern Virginia Community College Special Assistant for Dual Enrollment	(W)703-323-3040
Stephen Cohen scohen@jerrysflm.com	Jerry's Automotive Group Vice President	(W) 703-777-0000 (F) 703-777-6135
David Goldberg David.Goldberg@inova.org	INOVA Mount Vernon Hospital Chief Growth Officer/ Assistant Vice President, Operations	(W)703-664-7104 (F) 703-664-7235
Wagner B. Grier Wagner.Grier@loudoun.k12.va.us	LCPS Monroe Technology Center Principal	(W)703-771-6460 (F)703-771-6563
Milan Hayward mhayward@nvcc.edu	Northern Virginia Community College Special Assistant to Academic Services for Career and Technical Education	(W)703-845-6230 (F)703-845-6006
Julie Kelly Julie.Kelly@loudoun.k12.va.us	Loudoun County Public Schools Supervisor, Gifted Program	(W)571-252-1440 (F)571-252-1635
Cara LeGrys Cara.LeGrys@loudoun.k12.va.us	Loudoun County Public Schools Supervisor, Career and Technical Education	(W)571-252-1070 (F)571-252-1635
Kim Thomas Kim.Thomas@loudoun.k12.va.us	Loudoun County Public Schools Assistant Principal, Monroe Technology	(W)703-771-6560 (F)703-771-6563
Katherine Warehime Katherine.Warehime@loudoun.k12.va.us	LCPS Monroe Technology Center Guidance Counselor	(W)703-771-6560 (F)703-771-6563
Michael A. Zanin mazanin@hayeslarge.com	Hayes-Large Architects Principal Architect	(W) 703-779-9975 (F) 703-779-0302

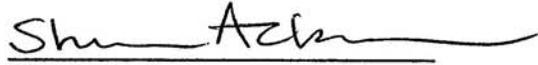
Planning Committee Certification
GOVERNOR'S CAREER AND TECHICAL ACADEMY

Partner Contact

Name: Sharon D. Ackerman
Title: Assistant Superintendent for Instruction
School/ Institution/Organization: Loudoun County Public Schools

My signature below certifies my willingness to be an active participant in the planning and implementation of the proposed Governor's Career and Technical Academy outlined in the accompanying application.

Sharon D. Ackerman
Typed Name


Signature

Assistant Superintendent
for Instruction
Position Title

February 14, 2008
Date

Planning Committee Certification
GOVERNOR'S CAREER AND TECHICAL ACADEMY

Partner Contact

Name: Shirley L. Bazdar
Title: Director, Career and Technical Education
School/ Institution/Organization: Loudoun County Public Schools

My signature below certifies my willingness to be an active participant in the planning and implementation of the proposed Governor's Career and Technical Academy outlined in the accompanying application.

Shirley L. Bazdar
Typed Name


Signature

Director, Career and
Technical Education
Position Title

February 14, 2008
Date

Planning Committee Certification
GOVERNOR'S CAREER AND TECHICAL ACADEMY

Partner Contact

Name: Debra Brown
Title: Placement Coordinator
School/ Institution/Organization: Loudoun County Public Schools, MTC

My signature below certifies my willingness to be an active participant in the planning and implementation of the proposed Governor's Career and Technical Academy outlined in the accompanying application.

Debra Brown
Typed Name


Signature

Placement Coordinator
Position Title

February 14, 2008
Date

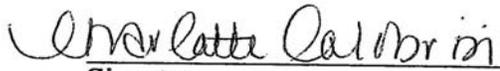
Planning Committee Certification
GOVERNOR'S CAREER AND TECHICAL ACADEMY

Partner Contact

Name: Charlotte Calobrisi
Title: Special Assistant for Dual Enrollment
School/ Institution/Organization: Northern Virginia Community College

My signature below certifies my willingness to be an active participant in the planning and implementation of the proposed Governor's Career and Technical Academy outlined in the accompanying application.

Charlotte Calobrisi
Typed Name


Signature

Special Assistant for
Dual Enrollment
Position Title

February 14, 2008
Date

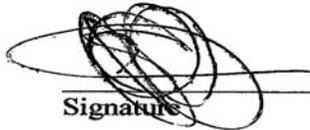
Planning Committee Certification
GOVERNOR'S CAREER AND TECHNICAL ACADEMY

Partner Contact

Name: Stephen Cohen
Title: Vice President
School/ Institution/Organization: Jerry's Automotive Group

My signature below certifies my willingness to be an active participant in the planning and implementation of the proposed Governor's Career and Technical Academy outlined in the accompanying application.

Stephen Cohen
Typed Name


Signature

Vice President, Jerry's Automotive Group
Position Title

March 5, 2008
Date

Planning Committee Certification
GOVERNOR'S CAREER AND TECHICAL ACADEMY

Partner Contact

Name: Wagner B. Grier
Title: Principal
School/ Institution/Organization: Loudoun County Public Schools, MTC

My signature below certifies my willingness to be an active participant in the planning and implementation of the proposed Governor's Career and Technical Academy outlined in the accompanying application.

Wagner B. Grier
Typed Name


Signature

Principal
Position Title

February 14, 2008
Date

Planning Committee Certification
GOVERNOR'S CAREER AND TECHNICAL ACADEMY

Partner Contact

Name: Julie Kelly
Title: Supervisor, Gifted Program
School/ Institution/Organization: Loudoun County Public Schools

My signature below certifies my willingness to be an active participant in the planning and implementation of the proposed Governor's Career and Technical Academy outlined in the accompanying application.

Julie Kelly
Typed Name


Signature

Supervisor,
Gifted Program
Position Title

February 14, 2008
Date

Planning Committee Certification
GOVERNOR'S CAREER AND TECHNICAL ACADEMY

Partner Contact

Name: Cara L. LeGrys
Title: Supervisor, Career and Technical Education
School/ Institution/Organization: Loudoun County Public Schools

My signature below certifies my willingness to be an active participant in the planning and implementation of the proposed Governor's Career and Technical Academy outlined in the accompanying application.

Cara L. LeGrys
Typed Name


Signature

Supervisor, Career
and Technical Education
Position Title

February 14, 2008
Date

Planning Committee Certification
GOVERNOR'S CAREER AND TECHICAL ACADEMY

Partner Contact

Name: Kim Thomas
Title: Assistant Principal
School/ Institution/Organization: Loudoun County Public Schools, MTC

My signature below certifies my willingness to be an active participant in the planning and implementation of the proposed Governor's Career and Technical Academy outlined in the accompanying application.

Kim Thomas
Typed Name


Signature

Assistant Principal
Position Title

February 14, 2008
Date

Planning Committee Certification
GOVERNOR'S CAREER AND TECHICAL ACADEMY

Partner Contact

Name: Katherine Warehime
Title: Guidance Counselor
School/ Institution/Organization: Loudoun County Public Schools, MTC

My signature below certifies my willingness to be an active participant in the planning and implementation of the proposed Governor's Career and Technical Academy outlined in the accompanying application.

Katherine Warehime
Typed Name

Katherine Warehime
Signature

Guidance Counselor
Position Title

February 14, 2008
Date

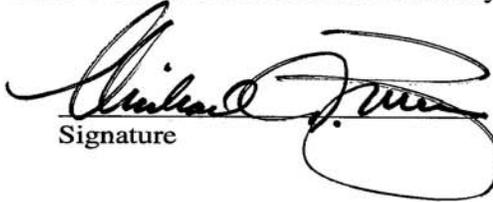
Planning Committee Certification
GOVERNOR'S CAREER AND TECHNICAL ACADEMY

Partner Contact

Name: Michael A. Zanin, AIA
Title: Principal
School/ Institution/Organization: Hayes-Large Architects

My signature below certifies my willingness to be an active participant in the planning and implementation of the proposed Governor's Career and Technical Academy outlined in the accompanying application.

Michael A. Zanin
Typed Name


Signature

Principal Architect, Hayes-Large Architects
Position Title

March 14, 2008
Date

APPENDIX K
ADVISORY COMMITTEE

Appendix K
Advisory Committee
The Loudoun Governor's Career and Technical Academy

Name	Business / Organization	Position / Title
Allenson, Patricia	Loudoun County Public Schools	Supervisor, Guidance and Health Services
Bazdar, Shirley	Loudoun County Public Schools	Director, Career and Technical Education
Calobrisi, Charlotte	Northern Virginia Community College	Special Assistant for Dual Enrollment
Cornell, Andrew	Northern Virginia Community College	Dean, Allied Health
Eftekhari, Abe	Northern Virginia Community College	Dean, Math, Science, and Engineering
Evans, Andrew	REHAU, Inc.	Human Relations Specialist
Grier, Wagner	Loudoun County Public Schools	Principal, Monroe Technology Center
Hamberger, Scott	Fortessa, Inc.	Co-President/ CEO
Hayward, Milan	Northern Virginia Community College	Special Assistant to Academic Services for CTE
LeGrys, Cara	Loudoun County Public Schools	Supervisor, Career and Technical Education
Lewis, Anne	Loudoun County Public Schools	Director, Guidance and Health Services
Linebaugh, Dr. Craig W.	The George Washington University	Chief Academic Operating Officer
Marin, Cheryl	Lockheed Martin	Program Manager
McKay, Alan B.	Shenandoah University	Dean, Bernard J. Dunn School of Pharmacy
Morgan, Danielle	Metropolitan-Washington Airports Authority	Tour and Education Programs Coordinator

Name	Business / Organization	Position / Title
Neufer, JoAnn	Inova Health Systems	Director of Pharmacy, Inova Loudoun Hospital
Nielsen, Al	American Online, LLC	Vice President, Corporate Services
Poisson, David E.	Virginia General Assembly	Delegate
Rosenstrauch, Larry	Loudoun County Economic Development	Director
Sanders, Mark	Virginia Tech	Professor, Intergrative STEM Education
Scheid, David	Northern Virginia Community College	Program Director, Horticulture
Tadlock, Lynn	The Claude Moore Charitable Foundation	Director of Grants, The Claude Moore Charitable Foundation
Thomas, Kim	Loudoun County Public Schools	Assistant Principal, Monroe Technology Center
Tracy, Richard	TELOS/ Xacta Corporation	Senior Vice-President & Chief Security Officer
Wolfe, George	Loudoun County Public Schools	Science Academy Director
Zanin, Michael	Hayes-Large Architects	Principal Architect

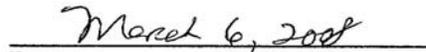
Advisory Committee Certification
GOVERNOR'S CAREER AND TECHNICAL ACADEMY

Advisory Committee Member

Name: Patricia L. Allenson
Title: Supervisor, Guidance and Health Services
School/ Institution/Organization: Loudoun County Public Schools

My signature below certifies my willingness to be an active participant on the Advisory Committee for the proposed Loudoun Governor's Career and Technical Academy outlined in the accompanying application.


Signature

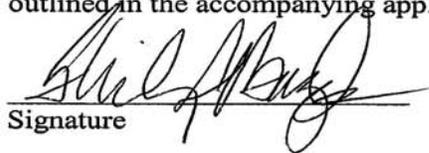

Date

Advisory Committee Certification
GOVERNOR'S CAREER AND TECHNICAL ACADEMY

Advisory Committee Member

Name: Shirley Bazdar
Title: Director, Career and Technical & Adult Education
School/ Institution/Organization: Loudoun County Public Schools

My signature below certifies my willingness to be an active participant on the Advisory Committee for the proposed Loudoun Governor's Career and Technical Academy outlined in the accompanying application.


Signature

3/5/08
Date

Advisory Committee Certification
GOVERNOR'S CAREER AND TECHNICAL ACADEMY

Advisory Committee Member

Name: Charlotte Calobrisi
Title: Special Assistant for Dual Enrollment
School/ Institution/Organization: Northern Virginia Community College

My signature below certifies my willingness to be an active participant on the Advisory Committee for the proposed Loudoun Governor's Career and Technical Academy outlined in the accompanying application.

Charlotte M Calobrisi
Signature

3-7-08
Date

Advisory Committee Certification
GOVERNOR'S CAREER AND TECHICAL ACADEMY

Advisory Committee Member

Name: Andrew Cornell
Title: Dean, Allied Health
School/ Institution/Organization: Northern Virginia Community College

My signature below certifies my willingness to be an active participant on the Advisory Committee for the proposed Loudoun Governor's Career and Technical Academy outlined in the accompanying application.

Andrew B. Cornell, Sr
Signature

5 March 2008
Date

Advisory Committee Certification
GOVERNOR'S CAREER AND TECHNICAL ACADEMY

Advisory Committee Member

Name: Dr. Abe Eftekhari
Title: Dean; Mathematics, Science & Engineering
School/ Institution/Organization: Northern Virginia Community College

My signature below certifies my willingness to be an active participant on the Advisory Committee for the proposed Loudoun Governor's Career and Technical Academy outlined in the accompanying application.



Signature

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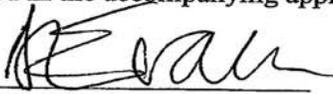
Date

Advisory Committee Certification
GOVERNOR'S CAREER AND TECHNICAL ACADEMY

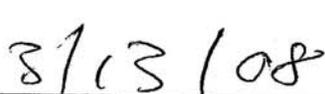
Advisory Committee Member

Name: Andrew Evans
Title: Human Relations Specialist
School/ Institution/Organization: REHAU, Inc.

My signature below certifies my willingness to be an active participant on the Advisory Committee for the proposed Loudoun Governor's Career and Technical Academy outlined in the accompanying application.



Signature



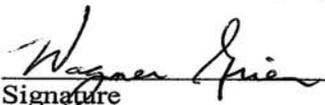
Date

Advisory Committee Certification
GOVERNOR'S CAREER AND TECHNICAL ACADEMY

Advisory Committee Member

Name: Wagner Grier
Title: Principal, Monroe Technology Center
School/ Institution/Organization: Loudoun County Public Schools

My signature below certifies my willingness to be an active participant on the Advisory Committee for the proposed Loudoun Governor's Career and Technical Academy outlined in the accompanying application.


Signature

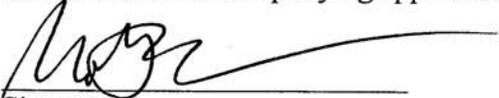
3/12/08
Date

Advisory Committee Certification
GOVERNOR'S CAREER AND TECHNICAL ACADEMY

Advisory Committee Member

Name: Scott M. Hamberger
Title: Co-President & Chief Executive Officer
School/ Institution/Organization: Fortessa, Inc.

My signature below certifies my willingness to be an active participant on the Advisory Committee for the proposed Loudoun Governor's Career and Technical Academy outlined in the accompanying application.



Signature

3/5/08

Date

Advisory Committee Certification
GOVERNOR'S CAREER AND TECHNICAL ACADEMY

Advisory Committee Member

Name: Mr. Milan S. Hayward
Title: Special Assistant for Career and Technical Education
School/Institution: Northern Virginia Community College

My signature below certifies my willingness to be an active participant on the Advisory Committee for the proposed Loudoun Governor's Career and Technical Academy outlined in the accompanying application.


Signature


Date

Advisory Committee Certification
GOVERNOR'S CAREER AND TECHNICAL ACADEMY

Advisory Committee Member

Name: Cara L. LeGrys
Title: Supervisor, Career and Technical Education
School/ Institution/Organization: Loudoun County Public Schools

My signature below certifies my willingness to be an active participant on the Advisory Committee for the proposed Loudoun Governor's Career and Technical Academy outlined in the accompanying application.


Signature

3/5/08
Date

Advisory Committee Certification
GOVERNOR'S CAREER AND TECHNICAL ACADEMY

Advisory Committee Member

Name: Anne Lewis
Title: Director, Guidance and Health Services
School/ Institution/Organization: Loudoun County Public Schools

My signature below certifies my willingness to be an active participant on the Advisory Committee for the proposed Loudoun Governor's Career and Technical Academy outlined in the accompanying application.



Signature

03-12-08

Date

Advisory Committee Certification
GOVERNOR'S CAREER AND TECHNICAL ACADEMY

Advisory Committee Member

Name: Craig W. Linebaugh
Title: Chief Academic Operating Officer
School/ Institution/Organization: The George Washington University
Virginia Campus

My signature below certifies my willingness to be an active participant on the Advisory Committee for the proposed Loudoun Governor's Career and Technical Academy outlined in the accompanying application.


Signature

4 March 2008
Date

Advisory Committee Certification
GOVERNOR'S CAREER AND TECHNICAL ACADEMY

Advisory Committee Member

Name: Alan B. McKay
Title: Dean
School/ Institution/Organization: Bernard J. Dunn School of Pharmacy
Shenandoah University

My signature below certifies my willingness to be an active participant on the Advisory Committee for the proposed Loudoun Governor's Career and Technical Academy outlined in the accompanying application.

Signature Alan B. McKay

Date 3/14/08

Advisory Committee Certification
GOVERNOR'S CAREER AND TECHNICAL ACADEMY

Advisory Committee Member

Name: Cynthia "Cheryl" Marin
Title: Program Manager
School/ Institution/Organization: Lockheed Martin

My signature below certifies my willingness to be an active participant on the Advisory Committee for the proposed Loudoun Governor's Career and Technical Academy outlined in the accompanying application.

Cynthia Cheryl Marin
Signature

3/13/2008
Date

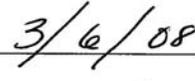
Advisory Committee Certification
GOVERNOR'S CAREER AND TECHNICAL ACADEMY

Advisory Committee Member

Name: Danielle Morgan
Title: Tour and Education Program Coordinator
School/ Institution/Organization: Metropolitan-Washington Airports Authority

My signature below certifies my willingness to be an active participant on the Advisory Committee for the proposed Loudoun Governor's Career and Technical Academy outlined in the accompanying application.


Signature


Date

Advisory Committee Certification
GOVERNOR'S CAREER AND TECHNICAL ACADEMY

Advisory Committee Member

Name: Jo Ann Neuffer, R.Ph.
Title: Director of Pharmacy
School/ Institution/Organization: Inova Loudoun Hospital

My signature below certifies my willingness to be an active participant on the Advisory Committee for the proposed Loudoun Governor's Career and Technical Academy outlined in the accompanying application.


Signature

3-5-08
Date

Advisory Committee Certification
GOVERNOR'S CAREER AND TECHNICAL ACADEMY

Advisory Committee Member

Name: Al Nielsen
Title: Vice President, Corporate Services
School/ Institution/Organization: AOL LLC

My signature below certifies my willingness to be an active participant on the Advisory Committee for the proposed Loudoun Governor's Career and Technical Academy outlined in the accompanying application.


Signature

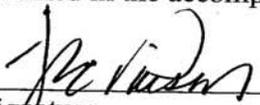
3/7/08
Date

Advisory Committee Certification
GOVERNOR'S CAREER AND TECHNICAL ACADEMY

Advisory Committee Member

Name: David E. Poisson
Title: Delegate
School/ Institution/Organization: Virginia General Assembly

My signature below certifies my willingness to be an active participant on the Advisory Committee for the proposed Loudoun Governor's Career and Technical Academy outlined in the accompanying application.



Signature

March 4, 2008

Date

Advisory Committee Certification
GOVERNOR'S CAREER AND TECHNICAL ACADEMY

Advisory Committee Member

Name: Larry Rosenstrauch
Title: Director
School/ Institution/Organization: Loudoun County Economic Development

My signature below certifies my willingness to be an active participant on the Advisory Committee for the proposed Loudoun Governor's Career and Technical Academy outlined in the accompanying application.

Larry Rosenstrauch
Signature

3/14/08
Date

Advisory Committee Certification
GOVERNOR'S CAREER AND TECHICAL ACADEMY

Advisory Committee Member

Name: Mark Sanders, Integrative STEM Education
name here)

(Type

Title: Professor & Program Leader, Technology Education Program and Integrative
STEM Education Program

School/ Institution/Organization: Virginia Tech

My signature below certifies my willingness to be an active participant on the Advisory
Committee for the proposed Loudoun Governor's Career and Technical Academy
outlined in the accompanying application.



Signature

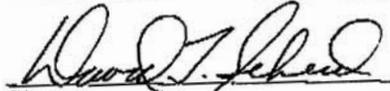
3/08/08
Date

Advisory Committee Certification
GOVERNOR'S CAREER AND TECHNICAL ACADEMY

Advisory Committee Member

Name: David Scheid
Title: Program Director, Horticulture
School/ Institution/Organization: Northern Virginia Community College

My signature below certifies my willingness to be an active participant on the Advisory Committee for the proposed Loudoun Governor's Career and Technical Academy outlined in the accompanying application.


Signature

5/19/08
Date

Advisory Committee Certification
GOVERNOR'S CAREER AND TECHNICAL ACADEMY

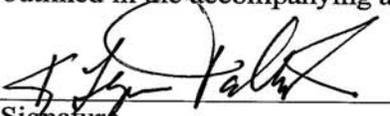
Advisory Committee Member

Name: K. Lynn Tadlock

Title: Director of Grants and Special Projects

School/ Institution/Organization: Claude Moore Charitable Foundation

My signature below certifies my willingness to be an active participant on the Advisory Committee for the proposed Loudoun Governor's Career and Technical Academy outlined in the accompanying application.


Signature


Date

Advisory Committee Certification
GOVERNOR'S CAREER AND TECHNICAL ACADEMY

Advisory Committee Member

Name: Kim Thomas
Title: Assistant Principal, Monroe Technology Center
School/ Institution/Organization: Loudoun County Public Schools

My signature below certifies my willingness to be an active participant on the Advisory Committee for the proposed Loudoun Governor's Career and Technical Academy outlined in the accompanying application.



Signature

3-12-08

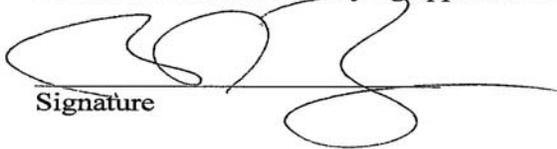
Date

Advisory Committee Certification
GOVERNOR'S CAREER AND TECHNICAL ACADEMY

Advisory Committee Member

Name: Richard Tracy
Title: Senior Vice-President & Chief Security Officer
School/ Institution/Organization: TELOS/ Xacta Corporation

My signature below certifies my willingness to be an active participant on the Advisory Committee for the proposed Loudoun Governor's Career and Technical Academy outlined in the accompanying application.


Signature

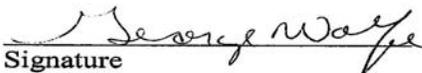
14 March 2008
Date

Advisory Committee Certification
GOVERNOR'S CAREER AND TECHNICAL ACADEMY

Advisory Committee Member

Name: George Wolfe
Title: Director, Academy of Science
School/ Institution/Organization: Loudoun County Public Schools

My signature below certifies my willingness to be an active participant on the Advisory Committee for the proposed Loudoun Governor's Career and Technical Academy outlined in the accompanying application.


Signature

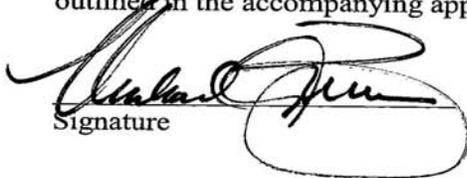

Date

Advisory Committee Certification
GOVERNOR'S CAREER AND TECHNICAL ACADEMY

Advisory Committee Member

Name: Michael A. Zanin, AIA
Title: Principal
School/ Institution/Organization: Hayes Large Architects
203-J Harrison Street
Leesburg, Virginia 20175

My signature below certifies my willingness to be an active participant on the Advisory Committee for the proposed Loudoun Governor's Career and Technical Academy outlined in the accompanying application.


Signature

05 MARCH 08
Date

APPENDIX L

DOCUMENTATION OF INSURANCE



Appendix L
**VIRGINIA MUNICIPAL LIABILITY POOL
 CERTIFICATE OF INSURANCE**

SERVICE AGENT VML Insurance Programs P.O. Box 12164 Richmond, VA 23241 1-800-963-6800		This Certificate is issued as a matter of information only and confers no rights upon the Certificate Holder. This Certificate does not amend, extend or alter the Membership Agreement afforded by the policies below, nor guarantees the solvency of the Virginia Municipal Liability Pool.								
MEMBER Loudoun County Public Schools 21000 Education Court, Suite 304 Ashburn, VA 20148		CERTIFICATE DATE: 4/14/08								
COVERAGES This is to certify that the coverage listed below has been issued to the Member named above for the policy period indicated, notwithstanding any requirement, term or condition of any contract or other document with respect to which this Certificate may be issued or may pertain, the coverage afforded by the policies described herein is subject to all the terms, exclusions and conditions of the Member Agreement. Limits shown may have been reduced by paid claims.										
TYPE OF COVERAGE	MEMBER NUMBER	EFF. DATE	EXP. DATE	LIMITS OF COVERAGE						
LOCAL GOVERNMENT LIABILITY <input checked="" type="checkbox"/> General Liability, Public Officials, Law Enforcement Liability (Occurrence)	VMLPLGL000611	07/01/07	07/01/08	Each Occurrence \$1,000,000 Damage to premises rented to you \$100,000 Medical Expense-Any One Person \$10,000						
<input checked="" type="checkbox"/> AUTO LIABILITY	VMLPAL000611	07/01/07	07/01/08	\$1,000,000 Combined Single Limit						
<input checked="" type="checkbox"/> UNINSURED MOTORISTS	VMLPUM000611	07/01/07	07/01/08	\$50,000/\$200,000/\$20,000						
<input checked="" type="checkbox"/> AUTO PHYSICAL DAMAGE Collision Comprehensive	VMLPAP000611	07/01/07	07/01/08	<table border="1"> <thead> <tr> <th>SYMBOL</th> <th>DEDUCTIBLE</th> </tr> </thead> <tbody> <tr> <td>2,8</td> <td>\$2,500</td> </tr> <tr> <td>2,8</td> <td>\$2,500</td> </tr> </tbody> </table>	SYMBOL	DEDUCTIBLE	2,8	\$2,500	2,8	\$2,500
SYMBOL	DEDUCTIBLE									
2,8	\$2,500									
2,8	\$2,500									
<input type="checkbox"/> EXCESS LIABILITY	VMLPEX000611	07/01/07	07/01/08	Each Occurrence \$10,000,000						
PROPERTY <input checked="" type="checkbox"/> SPECIAL FORM	VMLPPR000611	07/01/07	07/01/08	Blanket Building & Contents Limit \$961,120,074 Deductible: \$5,000 per occurrence						
WORKERS' COMPENSATION	SELF-INSURED									
DESCRIPTION OF OPERATIONS/LOCATIONS/RESTRICTIONS/SPECIAL TERMS RE: Evidence of coverage for Monroe Technology Center/Governor's Career & Technical Academy Application										
CERTIFICATE HOLDER Loudoun County Public Schools 21000 Education Court, Suite 304 Ashburn, VA 20148		CANCELLATION: Should the above described Member Agreement be cancelled before the expiration date thereof, the Virginia Municipal Liability Pool will endeavor to mail written notice within 30 days to the Certificate Holder named to the left, but failure to mail such notice shall impose no obligation of any kind upon the Virginia Municipal Liability Pool, its agents or representatives.								
AUTHORIZED REPRESENTATIVE  Crystal Griffin										

APPENDIX M

BUDGET

Appendix M

GOVERNOR'S CAREER AND TECHNICAL ACADEMY**BUDGET**

A. Direct Costs	State Funds	Perkins Funds	Other Funds (Describe Source in Budget Narrative)	In-Kind
1. Personnel---1000		Tech Prep \$26,000.00	\$50,500.00	
2. Employee Benefits---2000			\$20,916.00	
3. Purchased/Contractual Services--- 3000				
4. Internal Services---4000				
5. Staff Development---5000			\$15,000.00	
6. Summer Component Activities--- 5000			\$5,000.00	
7. Travel---5000			\$10,000.00	
8. Contractual Services---5000			\$10,000.00	
9. Materials and Supplies---6000			\$30,000.00	
10. Equipment---8000			\$30,000.00	
11. Facilities---8000				\$37,500.00
B. Indirect Costs*				
Total		\$26,000.00	\$171,416.00	\$37,500.00

*If recovering indirect costs, the rate must not exceed the federally approved indirect cost rate of the fiscal agent.