Chesterfield County Public Schools

Governor's Health Sciences Academy
Executive Summary
April 2, 2013

Partnership: Chesterfield County Public Schools, Chippenham-Johnston Willis Medical Center, Virginia Commonwealth University, John Tyler Community College, Virginia Tech, ECPI, Bon Secours Sports Medicine, Sheltering Arms Hospital, St. Francis Hospital, St. Mary's Hospital, Memorial Regional and Richmond Community Hospital, Central Virginia Health Planning Agency, Brandermill Woods Retirement Facility, West End Orthopedic, Medical College of Virginia and Wauford Group.

Lead/Fiscal Agent: Chesterfield County Public Schools

Lead Contact Person:
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Academy Locations:
Chesterfield Technical Center
Cosby High School
Monacan High School

Number Students: The Governor's Health Sciences Academy will have the capacity to enroll 400 students, grades 9-12. During the initial school year (2013-2014) applications will be accepted for 125 students.

Career Pathways:
Diagnostic Services (2013-2014)
Therapeutic Services (2013-2014)
Health Informatics (2014-2015)
Support Services (2014-2015)
Biotechnology Research and Development (2014-2015)

Academy Goals and Description: The overall goals of the Governor's Health Sciences Academy are to provide expanded options for students' health science literacy and other critical knowledge, skills, and credentials that will prepare them for high-demand, high-wage, and high-skills health sciences careers in Virginia.

Specific Governor's Health Sciences Academy objectives include:

- Improve academic achievement of students in the Academy;
- Increase completion of dual enrollment courses;
- Provide work-based experiences for students through strong partnerships with businesses and health care institutions;
- Increase high school graduation rates;
- Reduce dropout rates; and
- Increase enrollment and retention in postsecondary education.

Program Highlights:

As a result of participating in the Governor's Health Sciences Academy, students will:

- Gain a deeper understanding of the skills and knowledge incorporated in their health sciences fields of study;
- Benefit from specialized, project-based courses which develop critical-thinking, problem-solving, and decision-making skills, preparing them for the 21st century world;
- Acquire greater communication and collaborative skills;
- Develop workplace readiness skills;
- Receive opportunities to earn industry certifications preparing them to be more competitive in the work force and when applying to advanced training schools or postsecondary institutions;
- Obtain meaningful hands-on experiences in their career pathway studies; and
- Benefit from opportunities for internships, mentorships, clinical, and cooperative experiences, providing the student with an advantage when entering postsecondary education and/or the workplace.

Attachment B

The State Council of Higher Education for Virginia (SCHEV)

Review of the Chesterfield County Proposal to Establish a Governor's Health Sciences Academy

NOTE: The SCHEV staff is currently reviewing the proposal. Their report and recommendation is expected prior to the second review of the proposal by the Board of Education.

Virginia Department of Education
Governor's Health Sciences Academy
Planning Grant
Proposal Review Checklist

For

Chesterfield County Public Schools

Governor's Health Sciences Academy

Virginia Department of Education
Governor's Academy for Health Sciences
Planning Grant Proposal Review Checklist

I. Partnership Capacity

Partnerships desiring to implement a Governor's Academy for Health Sciences 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 regional K-12 education (superintendents or designee), higher education, healthcare agencies, 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 the 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 Academy for Health Sciences to broaden the scope of students' educational experiences.	X			
D. A statement of assurances that the Governor's Academy for Health Sciences Planning Committee has reviewed provisions of *Administrative Procedures Guide for the Establishment of Governor's Academies for Health Sciences* and agrees to follow the guidelines set forth in the document (see appendix).	X			

Criteria	Documentation			Comments
	Full	Partial	None	
E. A statement of assurances that an ongoing Governing Board will be established to reflect current Board of Education regulations relative to jointly operated schools and programs (see appendix).				N/A
Comments:				

II. Need/Rationale for the Academy

Partnerships desiring to implement a Governor's Academy for Health Sciences 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 Academy for Health Sciences, including need at the state, regional, and local levels.	X			
B. A description of the enhanced or additional offerings in health sciences as well as in career and technical education that will meet the need described above.	X			
C. A fiscal agent that is a school division, including a certification that the division is willing and able to serve in that capacity.	X			
Comments:				

III. Program Description

Each regional Governor's Academy for Health Sciences planning committee shall develop cooperatively with at least two or more school divisions, business and industry, community, healthcare agencies, and higher education partners and have available for review and dissemination, a program description.

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

Criteria	Documentation			Comments
	Full	Partial	None	
1. Rigorous academic content with career and technical instruction.	X			
2. For year one of implementation, at least two of the five pathways for health sciences are well articulated and fully developed and available to students. The remaining three pathways must be fully articulated and implemented within the next three years.	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 career readiness curriculum for a particular health science career pathway.	X			
5. Incorporation of *Virginia's Workplace Readiness Skills for the Commonwealth*.	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-based 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 career readiness 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			
10. Increase the number of graduates employed in high-wage, high-demand and high-skill careers.	X			
Comments:				

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. Curriculum design including CTE and academic;	X			
5. List of courses to be delivered;				
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			
Comments:				

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

Evidence	Documentation			Comments
	Full	Partial	None	
	X			
Comments:				

E. Program and course descriptions:

E.1. For year one of implementation, at least two of the five well-articulated career pathways in health sciences must be available for students. The remaining three health sciences pathways must be implemented within the next three years.

Each of the five health science pathways must meet the following criteria:

Criteria	Documentation			Comments
	Full	Partial	None	
Pathway #1 – Therapeutic Services				
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, bachelors and graduate levels.		X		Specific courses for the sample plans of study must show opportunities for students to complete a program sequence.
b. Must be in a high demand health science field identified by a statewide authority or organization, such as the Virginia Economic Development Partnership as a strategic growth area for Virginia, or		X		Specific courses for the sample plans of study must show opportunities for students to complete a program sequence.
c. Must address regional and local work force demand in high-wage, high-skill occupations as identified by employers and work force officials.		X		Specific courses for the sample plans of study must show opportunities for students to complete a program sequence.
d. This career pathway should drive the innovative capacity of the region and/or state.		X		Specific courses for the sample plans of study must show opportunities for students to complete a program sequence.
Comments:				

Criteria	Documentation			Comments
	Full	Partial	None	
Pathway #2 – Diagnostic Services				
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, bachelors and graduate levels.		X		Specific courses for the sample plans of study must show opportunities for students to complete a program sequence.
b. Must be in a demanded health science field identified by a statewide authority or organization, such as the Virginia Economic Development Partnership as a strategic growth area for Virginia, or		X		Specific courses for the sample plans of study must show opportunities for students to complete a program sequence.
c. Must address regional and local work force demand in high-wage, high-skill occupations as identified by employers and work force officials.		X		Specific courses for the sample plans of study must show opportunities for students to complete a program sequence.
d. This career pathway should drive the innovative capacity of the region and/or state.		X		Specific courses for the sample plans of study must show opportunities for students to complete a program sequence.
Comments:				

Criteria	Documentation			Comments
	Full	Partial	None	
Pathway #3 – Health Informatics				
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, bachelors and graduate levels.		X		Specific courses for the sample plans of study must show opportunities for students to complete a program sequence.
b. Must be in a demanded health science field identified by a statewide authority or organization, such as the Virginia Economic Development Partnership as a strategic growth area for Virginia, or		X		Specific courses for the sample plans of study must show opportunities for students to complete a program sequence.
c. Must address regional and local work force demand in high-wage, high-skill occupations as identified by employers and work force officials.		X		Specific courses for the sample plans of study must show opportunities for students to complete a program sequence.
d. This career pathway should drive the innovative capacity of the region and/or state.		X		Specific courses for the sample plans of study must show opportunities for students to complete a program sequence.
Comments:				

Criteria	Documentation			Comments
	Full	Partial	None	
Pathway #4 – Support Services				
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, bachelors and graduate levels.		X		Specific courses for the sample plans of study must show opportunities for students to complete a program sequence.
b. Must be in a demanded health science field identified by a statewide authority or organization, such as the Virginia Economic Development Partnership as a strategic growth area for Virginia, or		X		Specific courses for the sample plans of study must show opportunities for students to complete a program sequence.
c. Must address regional and local work force demand in high-wage, high-skill occupations as identified by employers and work force officials.		X		Specific courses for the sample plans of study must show opportunities for students to complete a program sequence.
d. This career pathway should drive the innovative capacity of the region and/or state.		x		Specific courses for the sample plans of study must show opportunities for students to complete a program sequence.
Comments:				

Criteria	Documentation			Comments
	Full	Partial	None	
Pathway #5 – Biotechnology Research and Development				
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, bachelors and graduate levels.		X		Specific courses for the sample plans of study must show opportunities for students to complete a program sequence.
b. Must be in a demanded health science field identified by a statewide authority or organization, such as the Virginia Economic Development Partnership as a strategic growth area for Virginia, or		X		Specific courses for the sample plans of study must show opportunities for students to complete a program sequence.
c. Must address regional and local work force demand in high-wage, high-skill occupations as identified by employers and work force officials.		X		Specific courses for the sample plans of study must show opportunities for students to complete a program sequence.
d. This career pathway should drive the innovative capacity of the region and/or state.		X		Specific courses for the sample plans of study must show opportunities for students to complete a program sequence.
Comments:				

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

Requirement for Program Completion	Documentation			Comments
	Full	Partial	None	
	X			
Comments:				

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**			N/A	
b. Internships; **or**	X			
c. Job Shadowing; **or**	X			
d. Mentorships; **or**	X			
e. Project-based learning; **or**	X			
f. Service learning; **or**	X			
g. A combination of the above.				
Comments:				

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

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

G. Assurance from the fiscal agent that on-going operating funds and facilities are available to support the Governor's Academy for Health Sciences and are adequate to meet the needs of the program.

Evidence	Documentation			Comments
	Full	Partial	None	
	X			

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

Evidence	Documentation			Comments
	Full	Partial	None	
	X			

I. A brief description of the proposed program, 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:				

IV. Administrative Procedures

Each Governor's Academy for Health Sciences must develop and maintain procedures developed cooperatively with participation partners. There should be evidence of procedures in the seven areas that follow:

A. Partnerships – The role of business and industry, public school divisions, health science related agencies, and postsecondary institutions in the partnership, and where appropriate, should include the role of work force and economic development entities.

Evidence	Documentation			Comments
	Full	Partial	None	
	X			
Comments:				

B. Student recruitment, selection criteria, and admissions.

Evidence	Documentation			Comments
	Full	Partial	None	
	X			
Comments:				

C. Code of student conduct and attendance.

Evidence	Documentation			Comments
	Full	Partial	None	
	X			
Comments:				

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

Evidence	Documentation			Comments
	Full	Partial	None	
	X			
Comments:				

E. Staff recruitment, selection, and assignment – The Governor's Academy for Health Sciences 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.

Evidence	Documentation			Comments
	Full	Partial	None	
	X			
Comments:				

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

Evidence	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 employment Academy personnel.

Evidence	Documentation			Comments
	Full	Partial	None	
	X			
Comments:				

H. Parent, student and community involvement

Criteria	Documentation			Comments
	Full	Partial	None	
1. Preparation for entering the Academy should begin by eighth grade.	X			
2. Students, parents, teachers, and school counselors should work collaboratively to: a. Complete career interest inventories;	X			
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 health science pathway; and	X			
e. Discuss available diplomas, seals and other recognitions including admission to specialized programs such as Governor's Academies.	X			
Comments:				

V. Documentation of insurance, budget, and other fiscal information:

Criteria	Documentation			Comments
	Full	Partial	None	
Insurance		X		Documentation will be provided prior to the 2nd review of the proposal.
Budget (from appendix)	X			
Budget Narrative	X			
Other				
Comments:				

Attachment D

GOVERNOR'S HEALTH SCIENCES ACADEMY PROPOSAL FROM CHESTERFIELD COUNTY PUBLIC SCHOOLS

Submitted April 25, 2013

Governor's Health Sciences Academy
Board of Education Proposal

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Introduction

Starting in school year 2013-14, Chesterfield County Public Schools are hoping to improve upon the broad and often disjointed student exposure to health science fields which currently exists. The plan that is being provided to accomplish this would be centered around developing and implementing clear career pathways which students may elect to take through one of the two high school sites (which will offer a specialized health science program) in conjunction with the specialized Career and Technical Education courses of study offered through the Chesterfield Technical Center. Through the coordination of these three sites, the school system would see an eventual structure that would provide five health science career pathway options available for students for the over 15,000 high school age students Chesterfield County serves. The hope is to offer this opportunity under the umbrella of the Virginia Governor's Health Sciences Academy.

Chesterfield County Public Schools (CCPS) currently support specialized programs of interest at each of its ten comprehensive high schools. These programs allow students to pursue their high school studies while exploring an area of interest (such as engineering, leadership, or performing arts) in greater depth. In addition to specialized centers of study at each high school, students may also pursue specific courses to study at the Chesterfield Technical Center.

With an increased emphasis on Career and Technical Education course options and student and parent requests for students to be exposed to courses in the health science field, Chesterfield County has taken initial steps to try and meet this demand. Due to increased student interest in Career and Technical Education coursework the school division has committed funding to open a second technical center campus (projected to open in the fall of 2014) to further expand the opportunities and access for students. In addition, as student

requests to enter the existing specialty center program at Cosby High School has exceeded current slots (over 350 applicants for 50-75 seats), the school system has designated opening a second specialty center program at Monacan High School in the immediate future with a health science theme.

Chesterfield students have demonstrated a high interest in the health science field. The division currently offers a health science-related specialty center at Cosby High School where over the past three years student requests for this program have run between 350 to 400 applications for the 50 to 75 available seats. Due to this demand from the school system's population a second site is planned to open at Monacan High School. Both locations will offer a unique, rigorous, college-preparatory, and career-readiness curricula designed to give students exposure to opportunities in health science-related fields while also giving students the skill sets to be successful in these fields. With the opening of a second site, coordination of course offerings has been required and, while both sites will offer common introductory coursework to provide students with background information pertinent to all career pathways in the health science field, each site will also have unique course offerings and program emphasis. The plan is to have Cosby High School focus primarily on medical care through direct-care professions, such as nursing, while Monacan High School will focus more on preventive care professions, such as physical therapy and sports medicine.

While each campus will provide coursework to allow for a Pathway Completion at their own school location (for example: Therapeutic Pathway completed by a student taking all classwork including Physical/Occupational Therapy Technician (8365) coursework and meeting all other program requirements entirely at Monacan), the new structure being proposed would allow for students to complete additional Pathways through courses taken in conjunction with

part-time enrollment at the Chesterfield County Technical Center. Each site will provide avenues for students to pursue the additional pathways, such as health informatics, health support services, and health therapeutics through a combination of coursework at their base school (Cosby or Monacan) and through specialized Career and Technical Education courses offered at the Chesterfield Technical Center (for example: a student could complete Health Science themed English and Biology/Chemistry courses and a Health Explorations Course during their freshman and sophomore years, nine college credits with dual enrollment and/or Advanced Placement coursework at Cosby and enroll at the Chesterfield Technical Center to complete the Dental Occupations (8328) coursework to complete the Diagnostic Services Pathway by the end of their senior year).

Chesterfield County Public Schools is proposing a multi-campus model for the Governor's Health Sciences Academy which will combine the resources from our Specialty Center program with the course options that would be enhanced through our Technical Center to provide a more rigorous and relevant course of studies for students interested in a health science field. Rather than a regional-type model, where students attend a technical school to take coursework in isolation of their comprehensive high school curriculum, CCPS proposes a Health Sciences Academy that spans two core campuses (Monacan and Cosby High Schools), each offering pathways that focus on a specific theme within the health science field. Both campuses would partner with the Chesterfield Technical Center (where the fiscal entity and Governing Board for the Academy would be placed) to take advantage of health science courses already in existence. In other words, working together, three campuses will offer students (selected from the ten comprehensive Chesterfield high schools) a much richer experience as they pursue one of the health science career pathways. This multi-campus model increases the

variety of student opportunities and allows CCPS to provide specialized health science courses to more students than the traditional, stand-alone high school or technical center could serve.

Partnership Capacity

A planning committee focused on the design and development of the Chesterfield County Governor's Health Sciences Academy was started in the summer of 2012. The team (membership names and signed certificates found in the Appendix) reviewed the existing courses and structures within the current Specialty Center for Health Sciences at Cosby High School and the Chesterfield Technical Center on Courthouse Road. Their initial findings helped with the development and design of a proposed second site for a Specialty Center with a health science theme to be housed at Monacan High School and provided input in the designing of a possible second technical center location in Chesterfield.

The planning committee membership included various school site staff (from Monacan High School, Cosby High School, and the Chesterfield Technical Center) along with division level staff. With the initial charge from the Superintendent, various local college, university, and related business personnel were invited to participate (the list of names and school/business associations are noted in the Appendix). The initial planning committee has also agreed to serve in an advisory role for the preliminary work that is required for the start-up and eventual implementation of all five health science pathways. There are also individual advisory committees (list of each in the Appendix) which represent each school site (Monacan High School, Cosby High School, and the Chesterfield Technical Center) and an overall advisory which operates over all Career and Technical Education programs within the Chesterfield School system. This advisory fully meets the make-up and meeting expectations of an ongoing board to govern these three school locations and the terms of the program for a Governor's

Health Sciences Academy in Chesterfield County. The structure and work of this advisory role is expanded upon in a later portion of this application (Section: Administrative Procedures).

Building on prior work in establishing business and community partners, various groups have approved agreements with Chesterfield to assist with the development of high school age students both academically with advanced coursework and through work-related experiences within the field. These agreements range from an agreement for dual enrollment coursework (between John Tyler Community College and Chesterfield Public Schools) to a commitment from local dental practices to allow students to visit and participate in work environment settings.

Rationale

The planning committee analyzed where there could be changes to the existing structures with how programs and options were being delivered to students in the Chesterfield County Public School system. From this work, the initial concept for the Chesterfield County Governor's Health Sciences Academy evolved. Key to this new concept was the ability for a clear delineation on how a student could enter a program of studies related to the health science curriculum in the ninth grade and exit having met the components of one of five health science career pathways. This new initial model (first year of program) calls for a Therapeutic Pathway which could be completed through coursework completed entirely on the Monacan High School campus. It also calls for a Diagnostic Pathway which could be completed by attending either Monacan High School or Cosby High School while finishing specific coursework while enrolled at the Chesterfield Technical Center every other day during a student's eleventh-grade and/or twelfth-grade year.

The addition of a second high school location, the inclusion of a program of studies delineating a progression from middle school beyond high school, the coordination of course offerings between Specialty High School programs and the Chesterfield Technical Center, and the development eventually of five different career pathways in the health science cluster represents a major change for the manner in which and the opportunity for health science course offerings will be available for students. This work was anchored in the research on market needs in health science-related fields (both regionally and statewide as well as on a national level) and the demand from students and parents for health science-related coursework during a student's high school career (as demonstrated by the number of applications annually for admission to the Cosby Health Science Specialty Center).

The 2010-2011 Edition of the Bureau of Labor Statistics Career Guide to Industries (www.bls.bov/oco/cg/cgs035.htm) reports the health care field will generate 3.2 million new wage and salary jobs between 2008 and 2018. The rate of employment in health care is expected to be approximately 22 percent versus 11percent for all other industries combined. There is a growing demand for health services personnel. In 2006, Cathy Allman, executive director for the National Association for Health Care Recruiters, said, "In order to meet the country's health care needs we must continue to engage young students' interest in a career in health care and provide an educational track for them to enter college programs and pursue health care careers." (Breaking Human Resource News, "New Survey Underscores Crisis in Shortage of Health Care Professionals" Thursday, August 24, 2006). The proposed Chesterfield County Public School Governor's Health Sciences Academy is poised to address this need in central Virginia and be a valuable resource to prepare students to pursue health care careers to meet the Commonwealth's demand.

For the state and metro Richmond area, the demand for health care employment appears to be as strong as the national forecasts. One of the premier regional economic forecast teams for the state, Chmura Economics & Analytics, were cited in the presentation by the State Secretary of Education Laura Fornash when noting the predicted growth in the health service sector in the state over the next ten year period. In this June 27, 2012, report (*Demand for STEM-H Skills Outpace Overall Growth*) Chmura Economics & Analysts forecast a trend of 3.1% growth for this area in the Commonwealth of Virginia compared with a 1.7% average growth for all other industries. According to their projection, the health care and social assistance industry along with the professional, scientific, and technical services industry were the two highest growth sectors among the 21 industry categories they use. Specifically in the Richmond area, Chmura also forecast that health care jobs will grow faster than the regional average for other job areas that are monitored (TimesDispatch.com, October 1, 2012).

Chesterfield County, being in the heart of Virginia and part of the Richmond Metropolitan Area, is a prime location for the health science field. The Richmond Metropolitan Area is home to the Virginia Commonwealth University and Medical College, as well as the Virginia Biotechnology Research Park. Additionally, with our numerous hospitals and urgent care centers in the metropolitan area, the rise in sports medicine and personal fitness, CCPS acknowledges the need to provide well-prepared students who have the academic prerequisites to successfully complete postsecondary training designed to prepare them for the specialized jobs to fill Virginia's health science needs. These local assets make the proposed Governor's Health Sciences Academy uniquely situated to capitalize on the advantages of location and enhance students' opportunities to prepare for health science careers.

The administrative staff of the two health science centers at Cosby High and Monacan High School, in partnership with the Chesterfield Career and Technical Center, is seeking the designation of Chesterfield County's Governor's Health Sciences Academy to further establish these campuses as leading secondary school programs for health science and move each existing program to an even higher level of rigor and relevance to help support the regional, statewide, and national need. Building on courses offered at the Chesterfield Technical Center, the already established program at Cosby and a new program at Monacan, this proposal intends to address state and regional needs for well-trained and highly qualified health science workers.

Seeking the designation as a Governor's Health Sciences Academy is a natural step towards enhancing the opportunities for students who desire more knowledge and preparation for further study of the health science fields. The faculty and administrative staff at the Chesterfield Technical Center, Cosby High School and Monacan High School, with the endorsement of central office personnel, believe the existing programs rise to the criteria of a Governor's Health Sciences Academy; however, it is also recognized that meeting the expectations for this designation requires the program to move above and beyond the existing curriculum and provide a program of study that is more rigorous and relevant while aligning with intentional career pathways. Receiving said designation would enhance the school's ability to offer students a rigorous and relevant curriculum which is aligned to the career pathways and will ultimately address the need for highly qualified health science personnel for tomorrow's work force.

Chesterfield County Public Schools has also made a significant investment in the current Career and Technical Education program and has committed resources (including financial, personnel, and time) in expanding health science programs in the future. The Superintendent of

Chesterfield County Public Schools has committed these resources and extended both a desire and willingness to have the school division involved in this opportunity for hosting a Governor's Health Sciences Academy.

Program Description

Statement of Goals

The goal of the Chesterfield Governor's Health Sciences Academy is to provide a program of studies that allows students to explore a wide range of health science-related fields, while building an understanding of the core skills necessary to enhance students' ability to find success in higher education and the 21st century workplace. The rigorous academic curriculum is centered around hands-on classroom and lab experiences to better prepare students for the rapidly changing, technologically enhanced health science field. It also includes an expectation that students will complete all core academic course requirements associated with an Advanced Studies Diploma and that a student will complete Algebra 1 in Grade 8 and continue in a mathematics sequence in high school with Geometry, Algebra 2 and higher level mathematics coursework.

In the first year of the implemented new Governor's Health Sciences Academy, students will be provided delineated plans related to courses of study to complete either a Diagnostic Services Pathway or a Therapeutic Pathway. The Therapeutic Pathway will be available for students to complete through coursework entirely offered at Monacan High School while the Diagnostic Services Pathway will require students to attend the Chesterfield Technical Center while enrolled in either the Monacan High School or Cosby High School Specialty Centers (sample student course schedules can be found in the Appendix). Within the three year period

designated by the terms of the Governor's Health Sciences Academy three additional health science pathways will be operational.

The objectives of the health science program are to provide:

- an opportunity to take advanced classes in mathematics, science and other core-content courses that will result in college credit while in high school
- a constant utilization of integrated computer skills
- a basis of practical understanding through relevant coursework
- a detailed overview of expectations in the health science field
- opportunities for field experiences to foster a deeper understanding of the correlation between classwork and the work environment
- information to help students make a more informed decision about their future educational and career plans.

As a result of this health science program, students will graduate with:

- an Advanced Studies Diploma
- at least nine transferable college credits and/or an industry certification
- an understanding of the various health science fields and the blended use of technology
- an appreciation of the correlations between classroom, lab, and field studies as it relates to health science careers
- greatly enhanced written and oral communication skills
- a solid basis of problem solving and teamwork skills
- a unique background that enables students to make a more informed choice about their future goals
- a keen understanding of ethical decision making in the health science field

- an advantage over other students who would be entering the health science educational track at the community college or university level and taking health science-related courses for the first time.

Program Objectives

The proposed Governor's Health Sciences Academy is designed to support the goals of the Virginia Department of Education. Specifically, the health science programs provide a program of study that allows students to explore a wide range of health science fields while building an understanding of the core skills necessary to enhance the ability to find success in higher education and the 21st century workplace. The academic curriculum is both rigorous and centered around lab experiences to better prepare students for a rapidly changing technologically-based field. The Virginia Department of Education's goals and the methods by which the Academy addresses these goals are specified as follows:

1) To maximize opportunities in preparing students for targeted careers, by breaking down barriers between traditional core academics and career and technical education (CTE); between high school and postsecondary education and training; and between education and the workplace.

- The Governor's Health Sciences Academy incorporates concepts learned in core academic areas of instruction into the introduction to health science courses and into selected projects and activities in their advanced studies in health science. Furthermore, oral and written presentation skills are emphasized in all courses, allowing students to put to use those skills learned in English class. Finally, the history and ethics of health science, and the effect of these developments on the world, are emphasized within the curriculum, connecting history and science classes.

Written reports and oral presentations allow students to strengthen presentation skills emphasized in English class.

2) To raise student aspirations and attract more students to postsecondary education in preparation for technical careers.

- The Governor's Health Sciences Academy provides a rigorous, college-preparatory curriculum. The opportunity to earn at least 18 community college credits provides students with a strong incentive to continue into higher education. Articulation agreements with John Tyler Community College, and other state universities, give students an affordable option when considering higher education. Furthermore, whether seeking a two-year degree or a four-year degree, students will reap the benefit of taking dual enrollment classes by reducing the amount of time and financial commitment needed to earn a degree. At the same time, success in dual enrollment classes will help students realize that they have the ability to be successful in college.

3) To provide well-trained workers to support the recruitment of new businesses and industries to the Commonwealth and to meet the work force needs of existing business and industry.

- Infused with practical workplace readiness skills, the Governor's Health Sciences Academy also provides students opportunities to develop the soft skills necessary to find success in the workplace, whether at the completion of a higher educational program or entering the work force after high school.
- Feedback from business partners, through work/study experiences with students, will enable the Governor's Health Sciences Academy to address work force needs.

At this time, specialty center programs at Cosby High School and Monacan High School will be allowed to enroll 50 to 75 students at each location each school year. Once each school has students at all four grade levels, approximately 400 students will have access to the coursework needed to complete the Health Science sequence to attain a Governor's Health Sciences Academy Diploma Seal.

Performance Measures

The following data will be collected annually for each program to establish a baseline of positive measures for future comparison:

- Grade level break down of students by ethnicity and gender
- Percentage of students enrolled yearly in dual enrollment and advanced placement courses by grade level
- Percentage of students who complete the requirements to attain the Governor's Health Sciences Academy Diploma Seal
- Percentage of students entering higher education immediately after graduation
- Number of students majoring or working in a health science-related field after graduating from high school

Data will be analyzed for trends and should declines in positive measures be noted, a review of admission policies and the program content will be conducted to determine the best way to reverse the trend. Additional data may be collected as opportunity and need arises.

Proposed Program Overview

Site Location

The Governor's Health Sciences Academy will enroll students, starting in the ninth grade, at either the Monacan or Cosby High School campus. Students will remain in one of

these two school locations for their four years of high school. In addition, if a student is pursuing enrollment in a pathway in which there are required courses in Career and Technical Education during their eleventh- and/or twelfth-grade years, they will attend the Chesterfield Technical Center on an every-other-day arrangement.

Number of Students

The proposed Chesterfield Governor's Health Sciences Academy program has the potential to serve up to 400 students between both the Cosby and Monacan campuses once all five pathways are fully implemented. It should be noted that several health science elective classes will not be restricted to just students enrolled in the program but open to the general school population where space is available. In addition, students enrolled in the health science program will have the opportunity to take CTE classes.

Grade Levels

Eighth-grade students apply for admission to the campus of their choice (Cosby or Monacan). They are evaluated using a rubric which includes grade point average (set at a minimum of 2.5 at the end of the seventh-grade year), teacher recommendations, writing sample, and personal career interest interviews. The top 50 to 75 candidates are offered a seat in the incoming freshmen class at each campus.

The four-year curriculum starts for students in the ninth grade. Students who elect to take courses offered through the Chesterfield Technical Center will attend that facility starting their junior year on an every-other-day basis. Students follow a prescribed curriculum that provides a comprehensive course of study to give each grade level a balance of elective coursework and health science courses in addition to required core-content courses.

Program and Course Descriptions

The health science program is a comprehensive secondary curriculum that gives students an opportunity to learn health science concepts and principles through specialized health science classes while applying health science concepts in the selected core academic classes. Students enroll in a series of increasingly challenging classes geared toward obtaining, at minimum, the Board of Education's Career & Technical Education Seal or the Early College Scholars certificate. Students entering the program will have completed Algebra I in the eighth grade (current school system initiative is Algebra for all students in middle school) and continue through a required sequence of Geometry, Algebra II, and other college preparatory mathematics coursework. In addition to completing coursework required for a high school diploma, students will select appropriate electives that will round out their comprehensive secondary education as well as further their progress toward their chosen career pathway. (See Appendix A).

Rigor and Relevance

The health science program is structured to link key concepts from health science classes to core content classes. This takes place in various academic areas. For example, biology teachers and English 9 teachers work closely with health science teachers to help students see the relevance and application of science concepts in health science classes and these teachers, in turn, use related health science materials in their CORE class lessons. Additionally, students are encouraged to take dual enrollment classes wherever possible, according to students' interests and abilities. All students will be expected to complete upper level academic coursework (specific courses depending on pathway) and must complete an advanced placement or dual enrollment class during their high school experience.

Health Science Career Pathways

An increased emphasis is placed on health science careers through the Health Sciences Program. Within each program of study, students have opportunities to explore various health science fields. This includes health science applications that require the use of science, mathematics and technology. Through the introduction to health science classes, students learn about occupations in the health science field in general. Additionally, core classes are infused with health science and technology-based applications to help students see the connection between these content areas.

Course Selections and Potential Careers

Students enter the current program with an established interest in health science. All middle school students in Chesterfield County are made aware of all the specialty center offerings through specialty center fairs. Specific information about health science coursework and options are highlighted through individual open house activities held at both the Monacan and Cosby campuses.

The curriculum for the health science program allows students to explore potential careers, examining not just the working conditions and job opportunities but also the educational requirements for a given field. Additionally, students meet with school counselors to develop an educational plan to help students determine their academic and career goals. As students progress through the first two years of the curriculum, they narrow their field of study and focus on specific pathways within the health science field. By the twelfth grade, internships, job shadowing, or work-study are available where appropriate.

College Readiness

Students completing the health science program will have fulfilled the requirement to earn the Board of Education's Advanced Studies Diploma with the Career and Technical Education Seal.

Dual enrollment and advanced placement classes will expose students to the rigor of college work and prepare students for higher education. Upper level core content classes and upper level health science courses give students confidence in their ability to tackle the challenge of university studies. Working with the community college system, through the strong presence of dual enrollment opportunities, gives students a head start on college studies and the potential to complete health science degrees from major universities in Virginia.

Virginia's Workplace Readiness Skills

Interwoven through all health science content classes are Virginia's Workplace Skills for the Commonwealth. Each course is designed to incorporate opportunities for teamwork, project-based learning, and presentations. This ensures students develop core academic skills such as reading, writing, mathematics, science, and computer literacy, and demonstrate speaking, self-presentation, reasoning, problem solving, ability to work as a group or team member to accomplish goals, and other workplace readiness skills standards. Workplace readiness skills will be measured by the Virginia Board of Education approved assessment provider. Where applicable, additional health science credentialing assessments may be given to students.

Proposed Program

The Chesterfield County Governor's Health Sciences Academy will start with two health science pathways: Therapeutic and Diagnostic Services. These two pathways will

provide students the opportunity for work in a related field upon successful completion of a student's high school career and/or with some postsecondary training. CNN, Fortune and Money all predict that the field of Physical Therapy will show national growth trends at above 25 percent. With states across the nation facing an aging population, physical therapy is ranked as one of the "seven best jobs" for future potential for growth in every state. Dental careers, including dental assistants and hygienists, are also areas for statewide growth. Virginia Career View sees a growth of 15 percent statewide in dental fields. According to Virginia Tech's Virginia View on Careers, specialty areas, such as orthodontics, will see a 21 percent national growth with a similar 20 percent statewide growth.

While enrolled in either pathway, students will have access to various advanced placement courses as well as dual enrollment opportunities to accrue both the baseline nine college credit expectation and the opportunity to attain an Advanced Studies Diploma.

The Governor's Health Sciences Academy also has coursework developed or in planning to complete the implementation of three additional pathways in health science within the next three years.

Governor's Exemplary Standards Award Program

The Virginia Governor's Health Sciences Academy will participate in the Governor's Exemplary Standards Award Program.

Program Completion Requirements

By graduation, students will have completed a common core of health science electives in addition to coursework focused on their specific pathway. If the world language requirement is also met, students will earn an advanced studies diploma. Both campuses offer opportunities

to earn dual enrollment credit in English, mathematics, and history, giving students a start on a college degree while in high school. Advanced placement credit is available at both campuses, exposing students to the advanced rigor of university studies.

Benchmarks

College Credit and Industry Certification

By graduation, students will have earned at least nine transferable college credits, as defined in the Early College Scholars program and/or earned at least one or more industry certifications. A variety of AP and dual enrollment courses are offered on each campus. All students will be expected to take the Virginia's Workplace Readiness Skills assessment.

Work-based Experience

Additionally, students at both Cosby and Monacan have a community service component requirement for each year they are enrolled in high school. These community service activities may be related to the health science workplace. In addition, students may seek additional high school credit through completion of a summer internship with local hospitals or health science-related businesses. If a student elects to take this option, this internship requires a minimum of 80 hours of work, documented through a work log and periodic evaluations. In addition to opportunities for direct work-based experience, students will be exposed to workplace norms and expectations through guest speakers, volunteer opportunities, and field trips to local businesses. Students attending the Chesterfield Technical Center for a two-year course of study will be placed in a work setting for a portion of their field experience, depending on the specific area of study the student is pursuing. The health science elective curricula is designed to model the workplace through the use of teamwork and projects. In these simulated workplace experiences, students learn to hold themselves accountable as well as

hold team members accountable for the work to be done, thus reinforcing leadership skills and instilling work ethic.

Length of Program and Daily Schedule

As a full-day academic-year program, the student daily schedule and academic year will be determined by county policy in keeping with requirements by the Virginia Department of Education. In Chesterfield County Public Schools, high school students follow an alternating block schedule with students taking a minimum of seven courses per academic year. Additional optional credits may be earned through the summer school, night school, and online course offerings.

Programs at both the Monacan High School and Cosby High School campuses follow the academic requirements as set by the county and state. The sequence of courses for both programs requires four years of science, mathematics, history and English. Health science electives as well as electives such as world language, economics and personal financial literacy, fine arts, and health and physical education are required. Career and Technical Education electives are available and taken according to student interests. Upper level mathematics, English, and history classes are offered as dual enrollment allowing students to earn at least nine transferable credits. All students completing the health science program of studies will qualify for the Advanced Studies Diploma with the successful completion of three years of study in a world language.

Sustainability of Academy - Assurance from Fiscal Agent

The concept of Specialty Centers in Chesterfield County started in 1998. Since then graduating classes have moved on to higher education or the work force. Interest in these

programs has grown steadily since its inception with each subsequent class growing in size. At the same time, enrollment in the Chesterfield Technical Center has grown to over 1,300 students. At this time, Chesterfield has developed plans for an expansion of a second technical center location to be housed in the western part of the county. Interest in this program appears to be growing with frequent inquiries from parents and students to discuss possible admission for next year.

Because the program has already been established, funding has been secured from the division. The establishment of an advisory committee will further support the program though business contacts and resources. These additional resources will further increase the ability of the Academy to serve the needs of the students and sustain interest in the years to come.

Materials and Equipment

Cosby High School and Monacan High School are comprehensive high schools with fully equipped classrooms, science labs, and other rooms and equipment needed to support a comprehensive secondary academic program. Cosby High School was opened in 2005 and was built with a large forum area for general demonstration classes. Though the original building at Monacan was completed in the late 1970s, the physical plant is well maintained. At Monacan High School, several science labs and classrooms are being renovated to accommodate physical therapy and other health science courses.

For the past three school years Monacan High School and Cosby High School have been granted funding through the Virginia Advanced Study Strategies Grant. This grant is sponsored by the National Math & Science Initiative (NMSI). With these funds they were able to update the equipment in science labs to meet the College Board standards established for lab settings in science Advanced Placement courses. The existing equipment is compatible with CTE

equipment for planned course offering; CTE equipment requirements will be followed for any additional equipment purchased for future course offerings.

The Chesterfield Technical Center currently operates at a location on Courthouse Road in Chesterfield County and houses each of the CTE health science-related courses. In 2014, Chesterfield hopes to open a second technical center facility on Hull Street in the western corridor of the county, which may add additional courses at that time related to the health science fields.

Internal Evaluation Process

A Planning Committee at each high school location has assisted in the initial planning and development of each program and assisted in the embedding of CTE concepts and career-connected experiences for students as related to the health science fields of study. Each location will maintain an independent advisory board to assist with site specific programmatic reviews and help evaluate and suggest new activities run independently on each campus. The advisory board for each campus will handle logistical issues specific to the site and provide input to the CTE advisory board. The CTE advisory board will serve as a central advisory board for the Governor's Health Sciences Academy.

The CTE advisory board will be tasked with coordinating efforts between the three school locations and assist with helping provide a centralized setting for discussion and review set within the domain of the Chesterfield CTE oversight body. The CTE advisory board will include representation from each of the three localized advisory boards (health science coordinators from Monacan and Cosby as well as administrative membership from the Chesterfield Technical Center). The CTE advisory board, made up of representatives from K-12 educators, higher education, business, and industry representatives, will have final say as it

relates to the evaluation of the current curriculum and oversee any enhancements or changes as determined by the academic needs of the students or work force needs of local businesses. The priority of the advisory committee is to evaluate established curricula to maximize students' opportunities to make a smooth transition into higher education and develop workplace readiness skills. To this end, the board will evaluate the Governor's Health Sciences Academy policies, procedures, and outcomes. Survey evaluations from students, alumni, parents, faculty, and associated businesses will be used to further inform the board of the Academy's strengths and weaknesses.

These advisory boards will convene at least twice a year to review the program inputs and outcomes, while the local advisory boards may meet more frequently to provide input to the CTE advisory board. Our partners (see section on Administrative Procedures and signed agreements in the Appendix) each play a crucial role on our advisory and planning committees. An annual review will be conducted, analyzed, and reported to the Virginia Department of Education noting student achievement, accomplishment of the Academy's goals, and the growing needs of the community.

Administrative Procedures

Partnerships

The Chesterfield County Public School system has been fortunate in its geographic proximity to universities and community colleges as well as businesses that are directly connected with the health professions industry. Regionally, there are several hospitals and centers for physical therapy, which will allow student access to see operational activity first-hand while also providing resources like guest speakers and individuals with expertise to help design and develop the health science program within the school system. While many of these

institutions and health professionals play a critical part in supporting the schools there are several active and developing partnerships of note.

The first is with Virginia Commonwealth University. As a state university with a teaching medical hospital, VCU has assisted with the design of courses and the willingness to provide direct student access to their grounds and facilities to enhance student learning. In addition to this support, VCU also provides guest speakers for students at each campus. CCPS has an active agreement (MOU) which allows students to take a health science course at VCU while still enrolled in high school.

Chesterfield County has an active agreement (MOU) with John Tyler Community College. John Tyler Community College has two campuses in Chesterfield County. The agreement with John Tyler allows for a dual enrollment opportunity for students who are still enrolled in high school to earn college credit for courses taught in our high schools by teachers who meet the increased terms of the agreement.

Another active partner is Chippenham Sports Medicine. In addition to their support in the development phase and the advisory role of each health science program, they have allowed a staff member to assist in teaching introductory coursework at the high school level. This group provides athletic trainers to work within the school system and plays an active role in exposing students to field experiences as well as assists staff to provide input on current topics in the health science field (such as concussion management).

Chippenham-Johnston Willis Medical Center is also involved in the design and advisory role of the program, through their outreach and access students have been able to volunteer in hospital settings, and speakers and field trips have been established with this group.

Other partners have assisted in the design of the program beyond the typical advisory role. For example, Sheltering Arms met with members of the CCPS staff as well as with architects to provide input on the use of building space and equipment needed with the development of possible physical therapy coursework in the high school setting.

Student Recruitment, Selection Criteria, and Admissions

Students in all 12 middle schools are provided with information at the start of their eighth-grade year about the specialty center options in the Chesterfield County high schools. Along with general literature and Web site references, two specialty center fairs are held in October for students and parents to meet with school staff and students and have an opportunity to learn about the program. In late October and November, each school hosts an open house for prospective students and parents, during which a more specific review of the course of studies and expectations can be undertaken.

Students not initially offered admission are often placed on a wait list and may be offered admission during the summer if an admitted student elects not to attend.

Selection Criteria and Admission

Both Monacan High School and Cosby High School require students to complete an application expressing interest and submit this completed application with the student's middle school transcript and two letters of recommendation. All students who submit the completed application and supporting documents are invited to personal interviews at the school location to which they applied. This interview provides an opportunity for the student to express his/her desire to pursue a course of study in the health science area.

Once all interviews are completed, each center generates a score for each student on a rubric that details prior courses taken, grades, strength of recommendations, essays, and

interviews. Students are then ranked on the basis of their scores, with those attaining the highest scores being given the first options for admission to the program. The top 50 to 75 candidates are offered a seat in the incoming freshman class at each campus.

Students will be encouraged to select an initial pathway of interest within the Health Science cluster upon applying to both Cosby and Monacan for the ninth-grade year. The students will then engage in introductory coursework during their first two years in high school which will expose them to different opportunities within the health science field and broaden their awareness and depth of understanding about the future careers which exist. At the end of their first semester in the tenth-grade year, students will be allowed to finalize which pathway they will pursue for more comprehensive study during their last two years in high school. These choices will determine whether a student will remain full-time at their main school campus, Monacan or Cosby High School, or attend the Chesterfield Technical Center for designated coursework.

To provide students with enhanced information about course offerings and pathway options at the Chesterfield Technical Center, during the student's tenth-grade year, staff from the Chesterfield Technical Center will come to both Monacan and Cosby High School and explain the health science pathways offered at the Technical Center. A follow-up shadow day will be hosted each year where students visit the Chesterfield Technical Center. Additionally, the Chesterfield Technical Center hosts an open house, typically on a Sunday afternoon, so parents and students have an opportunity to meet with staff and ask questions about possible course offerings.

During the first semester of the tenth-grade year, each student's academic progress will be reviewed by the school counseling staff at Monacan and Cosby High School to help advise

students and answer questions for students and parents about their eleventh- and twelfth-grade academic plans. Counselors at Monacan and Cosby will assist students who have designated a pathway in which the course(s) requires attendance at the Chesterfield Technical Center.

Code of Conduct and Attendance

Chesterfield County Public Schools has a well-established code of conduct and attendance policy. The full student conduct and attendance policy for the division (which is updated annually) may be found at http://www.chesterfield.k12.va.us/CCPS/About_CCPS/files/student_conduct.pdf. The code of conduct reinforces behaviors necessary for success in school and 21st century workplace readiness skills that promote ethics, punctuality, and attendance. All students in the Governor's Health Sciences Academy will be held to the conduct and attendance standards established by the division.

Transportation

Transportation for students living outside the Cosby and Monacan high school attendance zones is already established through specialty center routes. Hub sites are within three miles of students' homes. Students living within the attendance zones of Cosby and Monacan high school will use the regular bus routes for transportation. In addition, bus transportation from Cosby and Monacan High School is currently provided to and from the Chesterfield Technical Center.

Staff Recruitment, Selection, Assignment

All faculty members will hold Virginia teaching licenses. All teachers will hold endorsements in the content taught and meet the standards for highly qualified teachers as set in

the federal No Child Left Behind legislation. All teachers of dual enrollment courses will meet the same criteria as faculty teaching the comparable course on the associated college campus.

Staff Development

The division has a well-developed staff development program designed to keep instructors up-to-date in best practices and current educational research. Over the past three years, this training has included national instructional presenters such as William Daggett providing all staff with the structure of rigor, relevance, and relationships - to local staff like VDOE Technology Leader of the Year Adam Seldow on the aspects of blended learning. As a result of a recent agreement with the Buck Institute for Education, headquartered in California, staff in Chesterfield will be systematically trained in project-based learning (PBL), an instructional format that matches the curricular designs of a health science course of studies. Instructional specialist Barbara Hancock-Henley has worked closely with school site leadership teams to help establish the criteria to connect core content classes to CTE standards. Regular staff development is required by the division, and additional staff development will be scheduled as the program reviews indicate.

Staff Evaluation

The instructors and staff involved in the Governor's Health Sciences Academy will be evaluated using the guidelines and procedures outlined in the Chesterfield County Public Schools policy manual. This evaluation system is in compliance with state mandates that incorporate student growth measures in evaluating teacher performance.

Parent, Student, and Community Involvement

All Chesterfield County Public School students, while enrolled in middle school, are engaged in a process that assists them in helping explore various career and educational

opportunities. These supports range from monthly college and career awareness days to individualized counseling sessions where students work one-on-one and in small groups with school counselors discussing different career options and academic steps needed to attain them.

Starting in seventh grade, each student completes a program planning process which outlines a future course of studies aligned to personal career and college targets. The use of Virginia View is supplemented by career and educational planning discussions with school counselors. Parents are encouraged to assist their student in the review and completion of this initial plan, with support from a student's school counselor. These individual student academic and career plans detail the courses which a student is required to take and other courses the student may elect to take while in high school. While this plan is developed to provide the student with a direction over a several year time span, the plan is reviewed annually and flexibility is allowed as student and parent input change over time.

In the fall of a student's eighth-grade year, the school system conducts two specialty center fairs where interested students and parents are invited to explore different options for high school. Along with the specialty center presentations, representatives from the Chesterfield Technical Center, the regional Governor's Schools, and the Chesterfield Online program are on hand to provide parents, students, and community information about additional options.

Throughout a student's high school career school counselors annually review the progress a student is making in completing their initial plans. Periodically students who are not achieving success are encouraged to pursue academic supports when skill deficiencies or weaknesses are seen. This support may range from remedial sessions in Standards of Learning-based courses where a student is underperforming on benchmark tests, to the use of Virginia

Wizard. The Virginia Wizard Career Interests, Abilities, and Values Inventory is administered to all tenth-grade students to determine progress within a pathway selection as well as adjust specific academic and career targets that may have changed as the student matured.

Each campus program has a highly involved parent and community base that assists students by providing supports both within the classroom and beyond the school day. As all students are part of the comprehensive high school, these opportunities include access to co-curricular groups such as band and chorus, and extra-curricular activities such as athletics and clubs. There are active parent booster groups that directly support these student activities. In addition, each school is connected through the school system's involvement with business groups such as the Chesterfield Chamber of Commerce, as well as community groups such as faith-based leaders, Rotary, and Kiwanis, that provide direct supports for students.

Both Cosby and Monacan will have parent support groups established to assist with the activities unique to the health science program. At Cosby, the parent group is known as the "Booster Shots." In addition, advisory groups made up of members of the staff, the community at-large, and university/professional establishments assist in the visioning and review of the program.

Budget Narrative

The initial coursework at Cosby High School with a Health Science Specialty Center started with students entering Cosby in 2006. Career and Technical Education courses in health-science fields have been offered at the Chesterfield Technical Center since the school's 1977 inception. The county provided the start-up funds for the Cosby High School program and funded the additional costs of equipment and supplies through the first four years. Currently, the county provides instructional funding for the specialty center program through

instructional funds at a rate of approximately $60 per pupil enrolled in the program. Student transportation is a part of the total transportation budget of the county and not an expense incurred by the specialty center.

The proposed Governor's Health Sciences Academy would absorb students from the existing student specialty center population at Cosby, eliminating the need for additional staffing at Cosby. Monacan's staffing would adjust to accommodate rising ninth-grade students from across the division who enter this health science program. Since the Governor's Academy would operate within the comprehensive school program, staffing is calculated for the entire school based on overall student enrollment at each school location. A coordinator for each campus of the Governor's Academy would be funded at the equivalent of .2 FTE (for one duty-assigned class period) as well as for 10 additional days of summer work with program responsibilities.

Initial funding for teachers to write pacing guides, suggested course of studies, and skeletal curriculum for some specialized classes at Monacan was covered through school division funding. In addition, continued funding is required for summer curriculum writing to complete the work. This amount is designated in the personnel column in the following budget table below (approximately $3,800). The majority of textbooks and curriculum support materials for classes associated with the new courses offered at Monacan High School will be ordered with regular system funding for textbook allocations and will be supplemented from the funding supplied by the initial start-up grant from VDOE.

All other expenses associated with the pathways within the proposed Governor's Health Sciences Academy will be met through existing specialty center funding as provided by the county annually. The division will incur additional costs at the Monacan campus as that

program grows. Each subsequent year, for the next four years, new courses will be developed for students rising through the four-year program. Therefore, there will be a cost for the purchase of future materials, supplies, and textbooks for those new courses. Additionally, curriculum writing will continue as courses are expanded to reflect the health science pathways within them (where existing classes need to be modified) or new electives are added. At this time, it is predicted that future budget needs for the proposed Governor's Health Sciences Academy will be met through instructional funds provided by the division for the current programs.

Governor's Health Sciences Academy Budget

A. Direct Costs	***TOTAL***			
	State Funds	***Perkins Funds***	***Other funds*** ***(Local or grant funds to be described in Budget Narrative)***	***In-Kind***
1. Personnel---1000			*$3800*	
2. *Employee Benefits---2000*			*$0*	
3. *Purchased/Contractual Services----3000*			*$0*	
4. *Internal Service---4000*			*$0*	
5. *Staff Development---5000*			*$0*	
6. *Summer Component Activities---5000*			*$0*	
7. *Travel---5000*			*$0*	
8. *Contractual Services ---5000*			*$0*	
9. *Materials and Supplies---6000*	$10,000		*$48,000*	
10. *Equipment---8000*			*$0*	
11. *Facilities---8000*			*$0*	
B Indirect Costs			*$0*	
Total	$10,000		*$51,800*	

Appendices

Appendix A: Plan of Study for Governor's Health Sciences Academy

General Program Overview
For
Students to Earn the Governor's Academy Health Science Diploma Seal

At end of 8th Grade Year, a student who applied is accepted to either
Cosby or Monacan High School Site

Monacan High School	Cosby High School
Each student completes health science coursework during Grades 9 and 10 at Monacan HS This coursework includes embedded health science units of study within their English and Science classes. This coursework includes a Health Science Exploration class. This coursework includes a course in Health Assistant Careers. Community Service and/or mentoring required each year	Each student completes health science coursework during Grades 9 and 10 at Cosby HS This coursework includes embedded health science units of study within their English and Science classes. This coursework includes a Health Science Exploration class. This coursework includes a second course in Health Science taught through VCU. Community Service required each year
At the start of the Junior Year a student may elect one of two options to attain the Governor's Academy Diploma Seal. Either:	At the start of the Junior Year a student may elect one of two options to attain the Governor's Academy Diploma Seal Either:
1. Complete coursework for Physical/Occupational Therapy Technician which is offered at the Monacan HS campus to meet the Therapeutic Pathway option	1. Complete coursework in Health-Science Physics, AP Biology or Chemistry, and two additional health science elective sequential courses (see Cosby chart as to which courses relate to each Pathway option: Biotechnology, Research & Development; Support Services; or Therapeutic)
2. Complete coursework at the Technical Center for the Biotechnology, Research & Development; Support Services; Infomatics; Therapeutic; or Diagnostic Services Pathway	2. Complete coursework at the Technical Center for the Biotechnology, Research & Development; Support Services; Infomatics; Therapeutic; or Diagnostic Services Pathway

*In addition to listed coursework, all students must complete 9 college hours (3 high school courses) at the Dual Enrollment and/or Advanced Placement level, successfully pass the Workplace Readiness Test, and meet all other requirements for a VDOE sanctioned Advanced Studies Diploma to attain the Governors Academy Diploma Seal

CareerClusters™
PATHWAYS TO COLLEGE & CAREER READINESS
Health Science

Commonwealth of Virginia Sample Plan of Study

Rev: 6/12

Student Name: DRAFT
School: Cosby High School
Date: _____

Cluster: Health Science **Pathway:** Diagnostic Services

This Career Pathway Plan of Study 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	Recommended Electives *Use state course titles*	Recommended Career and Technical Courses Source: Administrative Planning Guide http://www.cteresource.org/apg/	SAMPLE – Occupations Relating to This Pathway: http://www.doe.virginia.gov/instruction/career_technical/career_clusters/sample_plans_study/index.shtml http://www.careerclusters.org http://www.cteresource.org/cpg/
		NOTE: Indicate State Course Titles and Codes						
Graduation Requirements: http://www.doe.virginia.gov/instruction/graduation/index.shtml								
MIDDLE	7	EN 107 English 7 (1110)	MA 307 Math 7 (3111)	SC 407 Life Science (4115)	SS 207 U S History (2354)		Exploratory Health and Medical Sciences (8370)	
MIDDLE	8	EN108 English 8 (1120)	MA 320 Algebra 1 (3130)	SC408 Physical Science (4125)	SS 208 Civics & Economics (2357)	Keyboarding/Middle (6150)	Computer Applications (6617/6611)	
Career Assessment: Identify an appropriate career assessment instrument at the middle school level used to help students and their parents plan for high school: VA Wizard ☒ or other assessment (please indicate): ____								Lab Technician Process Technician Data Entry Clerk Quality Assurance Technician Quality Control Technician Biochemist Microbiologist Research Assistant Research Scientist
SECONDARY	9	HT 109 (1130) English 9	MA330 Geometry (3143)	HT 430 Biology (4310)	SS 209 World History 1/ Geography to 1500 A.D. (2215)	Economics and Personal Finance 6120 Health Science Exploration 1, Health & Physical Ed 9 and 10, World Language (3 years), Health Science Elective	Health Science Elective	
SECONDARY	10	HT 110 (1140) English 10	MA 340 Algebra 2 (3135)	HT 440 Chemistry (4410)	SS210 World History 2/1500 to present (2216)		HT 090 Health Exploration I (0128)	
SECONDARY	11	TL 111 English 11 DE (1150)	MA 360 Advanced Math (3160)	SC 450 Physics (4510)	SS 211 US History (2360)		TC401 Dental Occupations 1 (8328)	
SECONDARY	12	TL 112 English 12 DE (1160)	MS 354 Multivariate Calculus (3178)	SC 439 AP Biology (4370) or SC 449 AP Chemistry (4470)	SS 212 US Government (2440)		TC402 Dental Occupations 2 (8329)	
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.cteresource.org/apg (Go to Certification - License Section.)

Workplace Readiness Skills for the Commonwealth (CTECS)

Additional Learning Opportunities:
CTSO Organization(s): ☐ DECA ☐ FBLA ☐ FCCLA ☐ FFA ☐ FEA ☒ HOSA ☐ SkillsUSA ☐ TSA

Work-Based Learning:
☐ Career Research ☐ Cooperative Education ☒ Internship ☐ Mentorship
☐ Job Shadowing ☐ Service Learning Project ☐ Student Apprenticeship

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	Bachelor's Degree	Postgraduate Degree
Diagnostic Services	Associate of Science in General Studies, Science Specialization	See www.jtcc.edu/transfer	

SAMPLE

College: John Tyler Community College **School Division(s):** Chesterfield County – Cosby High School

Postsecondary: Placement Assessments such as VPT, SAT, ACT,PSAT

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 1st Semester	ENG111 College Composition I DE (AP)	MTH173 Calculus with Analytical Geometry I* (AP)	BIO101 General Biology I* (AP)	HIS121 DE/ History Elective* (AP)			Physical Education/Health Elective VC (First Aid/CPR Certification)	SDV100 College Success Skills
Year 1 2nd Semester	ENG112 College Composition II DE (AP)	MTH240 Statistics* (AP)	BIO102 General Biology II* (AP)	HIS122 DE/ History Elective* (AP)	Social/Behavioral Science Elective* (AP US Government)			
Year 2 1st Semester	Literature Elective		CHM111 College Chemistry I (AP)		Social/Behavioral Science Elective* (AP Psychology)	PHY201 (AP) General College Physics I or PHY241(AP C-M)		
Year 2 2nd Semester			CHM112 College Chemistry II (AP)		Humanities Elective* (AP Art Appreciation/History)	PHY202 (AP) General College Physics II or PHY242 (AP – E&M)	General Elective FRE201DE/ German or Spanish AP	

SAMPLE

***See NOTES; College courses offered locally in the high school for college credit should be coded: DE (Dual Enrollment) and/or VC (Validated Credit); A minimum of 16 credits must be completed through JTCC courses; AP Credit for exam scores of '3' or higher may be used to complete certain credits. There is no guarantee of transfer, test or validated credit to other colleges – students must consult with intended colleges/universities. Requirements subject to change; opportunities subject to availability. High school students should consult with their school counselor and JTCC regarding requirements and credit for this program.**

Related Industry Certifications Available:

N/A

Additional Suggested Learning Opportunities:

Work-Based Learning:

☐ Cooperative Education ☐ Internship ☐ Mentorship
☐ Job Shadowing ☐ Service Learning Project ☐ Registered Apprenticeship

UNIVERSITY

University/College: To view Guaranteed Admission and Transfer Agreements, visit: www.jtcc.edu/transfer
Degree or Major:
Number of Articulated CC Credits:

NOTES: This program is specifically designed for transfer into a science major at most four-year colleges. Following the prescribed coursework in this program will result in graduation with the Associate in Science Degree (A.S.) in General Studies with a Specialization in Science. Students should consult with their advisors to ensure that they select courses that best prepare them for the specific requirements of their intended transfer college or university for majors in biology, chemistry or physics.

1. Biology majors need BIO 110 and BIO 120 instead of BIO 101 and BIO 102.
2. The history elective requirements can be satisfied by the following courses: HIS 101, HIS 102, HIS 111, HIS 112, HIS 121, HIS 122 or any other HIS course approved by the student's advisor.
3. Students who are required to take MTH 163 and/or MTH 164 as prerequisites for MTH 173 may use these course as general electives. MTH 173 and MTH 240 are recommended for biology majors. MTH 173 and MTH 174 are recommended for chemistry and physics majors.
4. The social/behavioral sciences elective requirements can be satisfied by courses with the following prefixes: PSY, SOC, ECO, GEO, PLS and HIS.
5. The humanities elective requirement can be satisfied by completing a literature (ENG), foreign language, humanities (HUM), philosophy (PHI), art (ART), music (MUS), speech course addressing performing arts or the history of theatre (CST), or religion course (REL). ENG 112, CST 100, CST 105 and CST 115 may not be used to satisfy humanities electives requirements.
6. The literature requirement can be satisfied by any 200-level English literature course, exclusive of composition and creative writing courses.
7. The laboratory science courses not specified for application to the degree, such as BIO 141, BIO 142, GOL 105, NAS 125, NAS 130, may be taken as preparation for future coursework and will count for college credit.

For additional information on this program, please contact the Division of Mathematics, Natural and Behavioral Sciences: 804-706-5084 (Chester) or 804-594-1500 (Midlothian).

SAMPLE

CareerClusters™
PATHWAYS TO COLLEGE & CAREER READINESS

Health Science

Commonwealth of Virginia Plan of Study

Rev: 6/12

Student Name: DRAFT
School: Monacan
Date: _____

Cluster: Health Science **Pathway:** Therapeutic Services

This Career Pathway Plan of Study 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 http://www.cteresource.org/apg/
		NOTE: Indicate State Course Titles and Codes					
Graduation Requirements: http://www.doe.virginia.gov/instruction/graduation/index.shtml							
MIDDLE	7	EN 107 English 7 (1110)	MA 307 Math 7 (3111)	SC 407 Life Science (4115)	SS 207 U S History (2354)		Exploratory Health and Medical Sciences 8370
MIDDLE	8	EN108 English 8 (1120)	MA 320 Algebra 1 (3130)	SC408 Physical Science (4125)	SS 208 Civics & Economics (2357)	Keyboarding/Middle (6150)	Computer Applications (6617/6611)
Career Assessment: Identify an appropriate career assessment instrument at the middle school level used to help students and their parents plan for high school: VA Wizard ☒ or other assessment (please indicate): ____							
SECONDARY	9	HT 109 (1130) English 9	MA330 Geometry (3143)	HT 430 Biology (4310)	SS 209 World History 1/ Geography to 1500 A.D. (2215)	Economics and Personal Finance **Health Science Exploration 1**, Health & Physical Ed 9 and 10, World Language, Health Science Elective	HT 090 Health Therapy Exploration I (0128)
SECONDARY	10	HT 110 (1140) English 10	MA 340 Algebra 2 (3135)	HT 440 Chemistry (4410)	SS210 World History 2/1500 to present (2216)		Health Therapy Elective (1)
SECONDARY	11	TL 111 English 11 DE (1150)	MA 360 Advanced Math (3160)	SC 450 Physics (4510)	SS 211 US History (2360)		Health Assisting Careers (8331)
SECONDARY	12	TL 112 English 12 DE (1160)	MS 354 Multivariate Calculus (3178)	SC 439 AP Biology (4370) or SC 449 AP Chemistry (4470)	SS 212 US Government (2440)		Physical/Occupational Therapy Technician (8365)

SAMPLE – Occupations Relating to This Pathway:
http://www.doe.virginia.gov/instruction/career_technical/career_clusters/sample_plans_study/index.shtml
http://www.careerclusters.org
http://www.cteresource.org/cpg/

- Anesthesiologist Assistant
- Athletic Trainer
- Audiologist
- Certified Nursing Assistant
- Chiropractor
- Clinical Medical Assistant
- Dental Assistant/Hygienist
- Dental Lab Technician
- Dentist
- Dietician
- EMT/Paramedic
- Exercise Physiologist
- Home Health Aide
- LPN/RN
- Massage Therapist
- Medical Assistant
- Nurse Practitioner
- Occupational Therapist/Assistant
- Optician/Optometrist
- Pharmacist/Pharmacy Technician
- Physical Therapist/Assistant
- Physician (MD/DO)
- Physician's Assistant
- Psychologist
- Radiologic Technician
- Recreation Therapist
- Respiratory Therapist
- Social Worker
- Speech Language Pathologist
- Surgical Technician/Technologist
- Veterinarian/Vet Assistant/Technician

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.cteresource.org/apg (Go to Certification - License Section.)

Workplace Readiness Skills for the Commonwealth (CTECS)

Additional Learning Opportunities:
CTSO Organization(s): ☐ DECA ☐ FBLA ☐ FCCLA ☐ FFA ☐ FEA ☒ HOSA ☐ SkillsUSA ☐ TSA

Work-Based Learning:
☐ Career Research ☐ Cooperative Education ☒ Internship ☐ Mentorship
☐ Job Shadowing ☐ Service Learning Project ☐ Student Apprenticeship

Postsecondary: Placement Assessments such as Virginia Placement Test or COMPASS

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 Science in General Studies, Science Specialization	See www.jtcc.edu/transfer	(Determined locally – optional)

SAMPLE

College: John Tyler Community College

School Division(s): Chesterfield County

Postsecondary: Placement Assessments such as VPT, SAT, ACT,PSAT

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 1st Semester	ENG111 College Composition I (AP)	MTH173 Calculus with Analytical Geometry I* (AP)	BIO101 General Biology I* (AP)	History Elective* (AP)			Physical Education/Health Elective VC (First Aid/CPR Certification)	SDV100 College Success Skills
Year 1 2nd Semester	ENG112 College Composition II (AP)	MTH240 Statistics*	BIO102 General Biology II* (AP)	History Elective* (AP)	Social/Behavioral Science Elective* (AP US Government)			
Year 2 1st Semester	Literature Elective		CHM111 College Chemistry I (AP)		Social/Behavioral Science Elective* (AP Psychology)	PHY201 (AP) General College Physics I or PHY241		
Year 2 2nd Semester			CHM112 College Chemistry II (AP)		Humanities Elective* (AP Art Appreciation/History)	PHY202 (AP) General College Physics II or PHY242	General Elective	

SAMPLE

***See NOTES; College courses offered locally in the high school for college credit should be coded: DE (Dual Enrollment) and/or VC (Validated Credit); A minimum of 16 credits must be completed through JTCC courses; AP Credit for exam scores of '3' or higher may be used to complete certain credits. There is no guarantee of transfer, test or validated credit to other colleges – students must consult with intended colleges/universities. Requirements subject to change; opportunities subject to availability. High school students should consult with their school counselor and JTCC regarding requirements and credit for this program.**

Related Industry Certifications Available:

Additional Suggested Learning Opportunities:

Work-Based Learning:

☐ Cooperative Education ☐ Internship ☐ Mentorship
☐ Job Shadowing ☐ Service Learning Project ☐ Registered Apprenticeship

UNIVERSITY

University/College: To view Guaranteed Admission and Transfer Agreements, visit: www.jtcc.edu/transfer
Degree or Major:
Number of Articulated CC Credits:

NOTES: This program is specifically designed for transfer into a science major at most four-year colleges. Following the prescribed coursework in this program will result in graduation with the Associate in Science Degree (A.S.) in General Studies with a Specialization in Science. Students should consult with their advisors to ensure that they select courses that best prepare them for the specific requirements of their intended transfer college or university for majors in biology, chemistry or physics.

1. Biology majors need BIO 110 and BIO 120 instead of BIO 101 and BIO 102.
2. The history elective requirements can be satisfied by the following courses: HIS 101, HIS 102, HIS 111, HIS 112, HIS 121, HIS 122 or any other HIS course approved by the student's advisor.
3. Students who are required to take MTH 163 and/or MTH 164 as prerequisites for MTH 173 may use these course as general electives. MTH 173 and MTH 240 are recommended for biology majors. MTH 173 and MTH 174 are recommended for chemistry and physics majors.
4. The social/behavioral sciences elective requirements can be satisfied by courses with the following prefixes: PSY, SOC, ECO, GEO, PLS and HIS.
5. The humanities elective requirement can be satisfied by completing a literature (ENG), foreign language, humanities (HUM), philosophy (PHI), art (ART), music (MUS), speech course addressing performing arts or the history of theatre (CST), or religion course (REL). ENG 112, CST 100, CST 105 and CST 115 may not be used to satisfy humanities electives requirements.
6. The literature requirement can be satisfied by any 200-level English literature course, exclusive of composition and creative writing courses.
7. The laboratory science courses not specified for application to the degree, such as BIO 141, BIO 142, GOL 105, NAS 125, NAS 130, may be taken as preparation for future coursework and will count for college credit.

For additional information on this program, please contact the Division of Mathematics, Natural and Behavioral Sciences: 804-706-5084 (Chester) or 804-594-1500 (Midlothian).

SAMPLE

CareerClusters™
PATHWAYS TO COLLEGE & CAREER READINESS
Health Science

Commonwealth of Virginia Sample Plan of Study

Rev: 6/12

Student Name: DRAFT
School: Monacan High School
Date: _____

Cluster: Health Science **Pathway:** Diagnostic Services

This Career Pathway Plan of Study 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	Recommended Electives *Use state course titles*	Recommended Career and Technical Courses Source: Administrative Planning Guide http://www.cteresource.org/apg/	SAMPLE – Occupations Relating to This Pathway: http://www.doe.virginia.gov/instruction/career_technical/career_clusters/sample_plans_study/index.shtml http://www.careerclusters.org http://www.cteresource.org/cpg/
		NOTE: Indicate State Course Titles and Codes						
Graduation Requirements: http://www.doe.virginia.gov/instruction/graduation/index.shtml								
MIDDLE	7	EN 107 English 7 (1110)	MA 307 Math 7 (3111)	SC 407 Life Science (4115)	SS 207 U S History (2354)		Exploratory Health and Medical Sciences (8370)	
MIDDLE	8	EN108 English 8 (1120)	MA 320 Algebra 1 (3130)	SC408 Physical Science (4125)	SS 208 Civics & Economics (2357)	Keyboarding/Middle (6150)	Computer Applications (6617/6611)	
Career Assessment: Identify an appropriate career assessment instrument at the middle school level used to help students and their parents plan for high school: VA Wizard ☒ or other assessment (please indicate): _____								Lab Technician Process Technician Data Entry Clerk Quality Assurance Technician Quality Control Technician Biochemist Microbiologist Research Assistant Research Scientist
SECONDARY	9	HT 109 (1130) English 9	MA330 Geometry (3143)	HT 430 Biology (4310)	SS 209 World History 1/ Geography to 1500 A.D. (2215)	Economics and Personal Finance (6120) Health Science Exploration 1, Health & Physical Ed 9 and 10, World Language (3), Health Science Elective	HT 090 Health Exploration I (0128)	
SECONDARY	10	HT 110 (1140) English 10	MA 340 Algebra 2 (3135)	HT 440 Chemistry (4410)	SS210 World History 2/1500 to present (2216)		(8331) Health Assistant Careers	
SECONDARY	11	TL 111 English 11 DE (1150)	MA 360 Advanced Math (3160)	SC 450 Physics (4510)	SS 211 US History (2360)		TC401 Dental Occupations 1 (8328)	
SECONDARY	12	TL 112 English 12 DE (1160)	MS 354 Multivariate Calculus (3178)	SC 439 AP Biology (4370) or SC 449 AP Chemistry (4470)	SS 212 US Government (2440)		TC402 Dental Occupations 2 (8329)	
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.cteresource.org/apg (Go to Certification - License Section.)

Workplace Readiness Skills for the Commonwealth (CTECS)

Additional Learning Opportunities:
CTSO Organization(s): ☐ DECA ☐ FBLA ☐ FCCLA ☐ FFA ☐ FEA ☒ HOSA ☐ SkillsUSA ☐ TSA

Work-Based Learning:
☐ Career Research ☐ Cooperative Education ☒ Internship ☐ Mentorship
☐ Job Shadowing ☐ Service Learning Project ☐ Student Apprenticeship

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	Bachelor's Degree	Postgraduate Degree
Diagnostic Services	Associate of Science in General Studies, Science Specialization	See www.jtcc.edu/transfer	

SAMPLE

College: John Tyler Community College **School Division(s):** Chesterfield County

Postsecondary: Placement Assessments such as VPT, SAT, ACT,PSAT

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 1st Semester	ENG111 College Composition I (AP)	MTH173 Calculus with Analytical Geometry I* (AP)	BIO101 General Biology I* (AP)	History Elective* (AP)			Physical Education/Health Elective VC (First Aid/CPR Certification)	SDV100 College Success Skills
Year 1 2nd Semester	ENG112 College Composition II (AP)	MTH240 Statistics*	BIO102 General Biology II* (AP)	History Elective* (AP)	Social/Behavioral Science Elective* (AP US Government)			
Year 2 1st Semester	Literature Elective		CHM111 College Chemistry I (AP)		Social/Behavioral Science Elective* (AP Psychology)	PHY201 (AP) General College Physics I or PHY241		
Year 2 2nd Semester			CHM112 College Chemistry II (AP)		Humanities Elective* (AP Art Appreciation/History)	PHY202 (AP) General College Physics II or PHY242	General Elective	

SAMPLE

***See NOTES; College courses offered locally in the high school for college credit should be coded: DE (Dual Enrollment) and/or VC (Validated Credit); A minimum of 16 credits must be completed through JTCC courses; AP Credit for exam scores of '3' or higher may be used to complete certain credits. There is no guarantee of transfer, test or validated credit to other colleges – students must consult with intended colleges/universities. Requirements subject to change; opportunities subject to availability. High school students should consult with their school counselor and JTCC regarding requirements and credit for this program.**

Related Industry Certifications Available:

N/A

Additional Suggested Learning Opportunities:

Work-Based Learning:

☐ Cooperative Education ☐ Internship ☐ Mentorship
☐ Job Shadowing ☐ Service Learning Project ☐ Registered Apprenticeship

UNIVERSITY

University/College: To view Guaranteed Admission and Transfer Agreements, visit: www.jtcc.edu/transfer
Degree or Major:
Number of Articulated CC Credits:

NOTES: This program is specifically designed for transfer into a science major at most four-year colleges. Following the prescribed coursework in this program will result in graduation with the Associate in Science Degree (A.S.) in General Studies with a Specialization in Science. Students should consult with their advisors to ensure that they select courses that best prepare them for the specific requirements of their intended transfer college or university for majors in biology, chemistry or physics.

1. Biology majors need BIO 110 and BIO 120 instead of BIO 101 and BIO 102.
2. The history elective requirements can be satisfied by the following courses: HIS 101, HIS 102, HIS 111, HIS 112, HIS 121, HIS 122 or any other HIS course approved by the student's advisor.
3. Students who are required to take MTH 163 and/or MTH 164 as prerequisites for MTH 173 may use these course as general electives. MTH 173 and MTH 240 are recommended for biology majors. MTH 173 and MTH 174 are recommended for chemistry and physics majors.
4. The social/behavioral sciences elective requirements can be satisfied by courses with the following prefixes: PSY, SOC, ECO, GEO, PLS and HIS.
5. The humanities elective requirement can be satisfied by completing a literature (ENG), foreign language, humanities (HUM), philosophy (PHI), art (ART), music (MUS), speech course addressing performing arts or the history of theatre (CST), or religion course (REL). ENG 112, CST 100, CST 105 and CST 115 may not be used to satisfy humanities electives requirements.
6. The literature requirement can be satisfied by any 200-level English literature course, exclusive of composition and creative writing courses.
7. The laboratory science courses not specified for application to the degree, such as BIO 141, BIO 142, GOL 105, NAS 125, NAS 130, may be taken as preparation for future coursework and will count for college credit.

SAMPLE

For additional information on this program, please contact the Division of Mathematics, Natural and Behavioral Sciences: 804-706-5084 (Chester) or 804-594-1500 (Midlothian).

CareerClusters™
PATHWAYS TO COLLEGE & CAREER READINESS

Health Science

Commonwealth of Virginia Sample Plan of Study

Rev: 6/12

Student Name: DRAFT
School: Monacan HS
Date: _____

Cluster: Health Science **Pathway:** Support Services

This Career Pathway Plan of Study 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	Recommended Electives *Use state course titles*	Recommended Career and Technical Courses Source: Administrative Planning Guide http://www.cteresource.org/apg/	SAMPLE – Occupations Relating to This Pathway: http://www.doe.virginia.gov/instruction/career_technical/career_clusters/sample_plans_study/index.shtml http://www.careerclusters.org http://www.cteresource.org/cpg/
		NOTE: Indicate State Course Titles and Codes						
Graduation Requirements: http://www.doe.virginia.gov/instruction/graduation/index.shtml								
MIDDLE	7	EN 107 English 7 (1110)	MA 307 Math 7 (3111)	SC 407 Life Science (4115)	SS 207 U S History (2354)		Exploratory Health and Medical Sciences (8370)	
MIDDLE	8	EN108 English 8 (1120)	MA 320 Algebra 1 (3130)	SC408 Physical Science (4125)	SS 208 Civics & Economics (2357)	Keyboarding/Middle (6150)	Computer Applications (6617/6611)	
Career Assessment: Identify an appropriate career assessment instrument at the middle school level used to help students and their parents plan for high school: VA Wizard ☒ or other assessment (please indicate): ____								• Biomedical /Clinical Technician • Central Service Manager • Facilities manager • Materials Manager • Ward Secretary • Environmental Services Manager
SECONDARY	9	HT 109 (1130) English 9	MA330 Geometry (3143)	HT 430 Biology (4310)	SS 209 World History 1/ Geography to 1500 A.D. (2215)	Economics and Personal Finance (6120) **Health Science Exploration 1,** Health & Physical Ed 9 and 10, World Language, Health Science Elective	HT 090 Health Therapy Exploration I (0128)	
SECONDARY	10	HT 110 (1140) English 10	MA 340 Algebra 2 (3135)	HT 440 Chemistry (4410)	SS210 World History 2/1500 to present (2216)		Health Assisting Careers (8331)	
SECONDARY	11	TL 111 English 11 DE (1150)	MA 360 Advanced Math (3160)	SC 450 Physics (4510)	SS 211 US History (2360)		TC413 Medical Assistant 1 (8345)	
SECONDARY	12	TL 112 English 12 DE (1160)	MS 354 Multivariate Calculus (3178)	SC 439 AP Biology (4370) or SC 449 AP Chemistry (4470)	SS 212 US Government (2440)		TC413 Medical Assistant 1 (8345)	
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.cteresource.org/apg/
Workplace Readiness Skills for the Commonwealth (CTECS)

Additional Learning Opportunities:
CTSO Organization(s): ☐ DECA ☐ FBLA ☐ FCCLA ☐ FFA ☐ FEA ☒ HOSA ☐ SkillsUSA ☐ TSA

Work-Based Learning:
☐ Career Research ☐ Cooperative Education ☒ Internship ☐ Mentorship
☒ Job Shadowing ☐ Service Learning Project ☐ Student Apprenticeship

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	Bachelor's Degree	Postgraduate Degree
Support Services	Associate of Science in General Studies, Science Specialization	See www.jtcc.edu/transfer	

SAMPLE

College: John Tyler Community College **School Division(s):** Chesterfield County

Postsecondary: Placement Assessments VPT, SAT, ACT, PSAT

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 1st Semester	ENG111 College Composition I (AP)	MTH173 Calculus with Analytical Geometry I* (AP)	BIO101 General Biology I* (AP)	History Elective* (AP)			Physical Education/Health Elective VC (First Aid/CPR Certification)	SDV100 College Success Skills
Year 1 2nd Semester	ENG112 College Composition II (AP)	MTH240 Statistics*	BIO102 General Biology II* (AP)	History Elective* (AP)	Social/Behavioral Science Elective* (AP US Government)			
Year 2 1st Semester	Literature Elective		CHM111 College Chemistry I (AP)		Social/Behavioral Science Elective* (AP Psychology)	PHY201 (AP) General College Physics I or PHY241		
Year 2 2nd Semester			CHM112 College Chemistry II (AP)		Humanities Elective* (AP Art Appreciation/History)	PHY202 (AP) General College Physics II or PHY242	General Elective	

***See NOTES; College courses offered locally in the high school for college credit should be coded: DE (Dual Enrollment) and/or VC (Validated Credit); A minimum of 16 credits must be completed through JTCC courses; AP Credit for exam scores of '3' or higher may be used to complete certain credits. There is no guarantee of transfer, test or validated credit to other colleges – students must consult with intended colleges/universities. Requirements subject to change; opportunities subject to availability. High school students should consult with their school counselor and JTCC regarding requirements and credit for this program.**

Related Industry Certifications Available:

Additional Suggested Learning Opportunities:

Work-Based Learning:
☐ Cooperative Education ☐ Internship ☐ Mentorship
☐ Job Shadowing ☐ Service Learning Project ☐ Registered Apprenticeship

UNIVERSITY

University/College: To view Guaranteed Admission and Transfer Agreements, visit: www.jtcc.edu/transfer

Degree or Major:
Number of Articulated CC Credits:

SAMPLE

NOTES: This program is specifically designed for transfer into a science major at most four-year colleges. Following the prescribed coursework in this program will result in graduation with the Associate in Science Degree (A.S.) in General Studies with a Specialization in Science. Students should consult with their advisors to ensure that they select courses that best prepare them for the specific requirements of their intended transfer college or university for majors in biology, chemistry or physics.

1. Biology majors need BIO 110 and BIO 120 instead of BIO 101 and BIO 102.
2. The history elective requirements can be satisfied by the following courses: HIS 101, HIS 102, HIS 111, HIS 112, HIS 121, HIS 122 or any other HIS course approved by the student's advisor.
3. Students who are required to take MTH 163 and/or MTH 164 as prerequisites for MTH 173 may use these course as general electives. MTH 173 and MTH 240 are recommended for biology majors. MTH 173 and MTH 174 are recommended for chemistry and physics majors.
4. The social/behavioral sciences elective requirements can be satisfied by courses with the following prefixes: PSY, SOC, ECO, GEO, PLS and HIS.
5. The humanities elective requirement can be satisfied by completing a literature (ENG), foreign language, humanities (HUM), philosophy (PHI), art (ART), music (MUS), speech course addressing performing arts or the history of theatre (CST), or religion course (REL). ENG 112, CST 100, CST 105 and CST 115 may not be used to satisfy humanities electives requirements.
6. The literature requirement can be satisfied by any 200-level English literature course, exclusive of composition and creative writing courses.
7. The laboratory science courses not specified for application to the degree, such as BIO 141, BIO 142, GOL 105, NAS 125, NAS 130, may be taken as preparation for future coursework and will count for college credit.

For additional information on this program, please contact the Division of Mathematics, Natural and Behavioral Sciences: 804-706-5084 (Chester) or 804-594-1500 (Midlothian).

SAMPLE

CareerClusters™
PATHWAYS TO COLLEGE & CAREER READINESS
Health Science

Commonwealth of Virginia Sample Plan of Study

Rev: 6/12

Student Name: DRAFT
School: Cosby HS
Date: _____

Cluster: Health Science **Pathway:** Support Services

This Career Pathway Plan of Study 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	Recommended Electives *Use state course titles*	Recommended Career and Technical Courses Source: Administrative Planning Guide http://www.cteresource.org/apg/	SAMPLE – Occupations Relating to This Pathway: http://www.doe.virginia.gov/instruction/career_technical/career_clusters/sample_plans_study/index.shtml http://www.careerclusters.org http://www.cteresource.org/cpg/
		NOTE: Indicate State Course Titles and Codes						
Graduation Requirements: http://www.doe.virginia.gov/instruction/graduation/index.shtml								
MIDDLE	7	EN 107 English 7 (1110)	MA 307 Math 7 (3111)	SC 407 Life Science (4115)	SS 207 U S History (2354)		Exploratory Health and Medical Sciences 8370	
MIDDLE	8	EN108 English 8 (1120)	MA 320 Algebra 1 (3130)	SC408 Physical Science (4125)	SS 208 Civics & Economics (2357)	Keyboarding/Middle (6150)	Computer Applications (6617/6611)	
Career Assessment: Identify an appropriate career assessment instrument at the middle school level used to help students and their parents plan for high school: VA Wizard ☒ or other assessment (please indicate): ____								• Biomedical /Clinical Technician • Central Service Manager • Facilities manager • Materials Manager • Ward Secretary • Environmental Services Manager
SECONDARY	9	HT 109 (1130) English 9	MA330 Geometry (3143)	HT 430 Biology (4310)	SS 209 World History 1/ Geography to 1500 A.D. (2215)	Economics and Personal Finance (6120) Health Science Exploration 1, Health & Physical Ed 9 and 10, World Language (3), Health Science Elective	HT 090 Health Therapy Exploration I (0128)	
SECONDARY	10	HT 110 (1140) English 10	MA 340 Algebra 2 (3135)	HT 440 Chemistry (4410)	SS210 World History 2/1500 to present (2216)		Health Science Elective	
SECONDARY	11	TL 111 English 11 DE (1150)	MA 360 Advanced Math (3160)	SC 450 Physics (4510)	SS 211 US History (2360)		TC413 Medical Assistant 1 (8345)	
SECONDARY	12	TL 112 English 12 DE (1160)	MS 354 Multivariate Calculus (3178)	SC 439 AP Biology (4370) or SC 449 AP Chemistry (4470)	SS 212 US Government (2440)		TC413 Medical Assistant 1 (8345)	
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.cteresource.org/apg/
Workplace Readiness Skills for the Commonwealth (CTECS)

Additional Learning Opportunities:
CTSO Organization(s): ☐ DECA ☐ FBLA ☐ FCCLA ☐ FFA ☐ FEA ☒ HOSA ☐ SkillsUSA ☐ TSA

Work-Based Learning:
☐ Career Research ☐ Cooperative Education ☒ Internship ☐ Mentorship
☒ Job Shadowing ☐ Service Learning Project ☐ Student Apprenticeship

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	Bachelor's Degree	Postgraduate Degree
Support Services	Associate of Science in General Studies, Science Specialization	See www.jtcc.edu/transfer	

SAMPLE

College: John Tyler Community College **School Division(s):** Chesterfield County- Cosby

Postsecondary: Placement Assessments VPT, SAT, ACT, PSAT

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 1st Semester	ENG111 College Composition I DE (AP)	MTH173 Calculus with Analytical Geometry I* (AP)	BIO101 General Biology I* (AP)	HIS121 DE/ History Elective* (AP)			Physical Education/Health Elective VC (First Aid/CPR Certification)	SDV100 College Success Skills
Year 1 2nd Semester	ENG112 College Composition II DE (AP)	MTH240 Statistics* (AP)	BIO102 General Biology II* (AP)	HIS122 DE/ History Elective* (AP)	Social/Behavioral Science Elective* (AP US Government)			
Year 2 1st Semester	Literature Elective		CHM111 College Chemistry I (AP)		Social/Behavioral Science Elective* (AP Psychology)	PHY201 (AP) General College Physics I or PHY241(AP C-M)		
Year 2 2nd Semester			CHM112 College Chemistry II (AP)		Humanities Elective* (AP Art Appreciation/History)	PHY202 (AP) General College Physics II or PHY242 (AP – E&M)	General Elective FRE201DE/ German or Spanish AP	

***See NOTES; College courses offered locally in the high school for college credit should be coded: DE (Dual Enrollment) and/or VC (Validated Credit); A minimum of 16 credits must be completed through JTCC courses; AP Credit for exam scores of '3' or higher may be used to complete certain credits. There is no guarantee of transfer, test or validated credit to other colleges – students must consult with intended colleges/universities. Requirements subject to change; opportunities subject to availability. High school students should consult with their school counselor and JTCC regarding requirements and credit for this program.**

Related Industry Certifications Available:

Additional Suggested Learning Opportunities:

Work-Based Learning:
☐ Cooperative Education ☐ Internship ☐ Mentorship
☐ Job Shadowing ☐ Service Learning Project ☐ Registered Apprenticeship

UNIVERSITY

University/College: To view Guaranteed Admission and Transfer Agreements, visit: www.jtcc.edu/transfer

Degree or Major:
Number of Articulated CC Credits:

SAMPLE

NOTES: This program is specifically designed for transfer into a science major at most four-year colleges. Following the prescribed coursework in this program will result in graduation with the Associate in Science Degree (A.S.) in General Studies with a Specialization in Science. Students should consult with their advisors to ensure that they select courses that best prepare them for the specific requirements of their intended transfer college or university for majors in biology, chemistry or physics.

1. Biology majors need BIO 110 and BIO 120 instead of BIO 101 and BIO 102.
2. The history elective requirements can be satisfied by the following courses: HIS 101, HIS 102, HIS 111, HIS 112, HIS 121, HIS 122 or any other HIS course approved by the student's advisor.
3. Students who are required to take MTH 163 and/or MTH 164 as prerequisites for MTH 173 may use these course as general electives. MTH 173 and MTH 240 are recommended for biology majors. MTH 173 and MTH 174 are recommended for chemistry and physics majors.
4. The social/behavioral sciences elective requirements can be satisfied by courses with the following prefixes: PSY, SOC, ECO, GEO, PLS and HIS.
5. The humanities elective requirement can be satisfied by completing a literature (ENG), foreign language, humanities (HUM), philosophy (PHI), art (ART), music (MUS), speech course addressing performing arts or the history of theatre (CST), or religion course (REL). ENG 112, CST 100, CST 105 and CST 115 may not be used to satisfy humanities electives requirements.
6. The literature requirement can be satisfied by any 200-level English literature course, exclusive of composition and creative writing courses.
7. The laboratory science courses not specified for application to the degree, such as BIO 141, BIO 142, GOL 105, NAS 125, NAS 130, may be taken as preparation for future coursework and will count for college credit.

SAMPLE

For additional information on this program, please contact the Division of Mathematics, Natural and Behavioral Sciences: 804-706-5084 (Chester) or 804-594-1500 (Midlothian).

CareerClusters™
PATHWAYS TO COLLEGE & CAREER READINESS
Health Science

Commonwealth of Virginia Sample Plan of Study

Rev: 6/12

Student Name: DRAFT
School: Cosby/Monacan High School
Date: _____

Cluster: Health Science

Pathway: Biotechnology Research and Development

This Career Pathway Plan of Study 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	Recommended Electives *Use state course titles*	Recommended Career and Technical Courses Source: Administrative Planning Guide http://www.cteresource.org/apg/	SAMPLE – Occupations Relating to This Pathway: http://www.doe.virginia.gov/instruction/career_technical/career_clusters/sample_plans_study/index.shtml http://www.careerclusters.org http://www.cteresource.org/cpg/
		NOTE: Indicate State Course Titles and Codes						
Graduation Requirements: http://www.doe.virginia.gov/instruction/graduation/index.shtml								
MIDDLE	7	English 7 (1110)	Math 7 (3111)	Life Science (4115)	U S History (2354)		Exploratory Health and Medical Sciences (8370)	
MIDDLE	8	English 8 (1120)	Algebra (3130)	Physical Science (4125)	Civics & Economics (2357)		Computer Applications (6617/6611)	
Career Assessment: Identify an appropriate career assessment instrument at the middle school level used to help students and their parents plan for high school: VA Wizard ☒ or other assessment (please indicate): ____								Laboratory Technician Quality Assurance/Control Technician Laboratory Assistant Nuclear Medicine Technologist Cell Biologist Research Assistant Research Scientist Biochemist
SECONDARY	9	HT 109 (1130) Health Therapy English 9	Algebra 2 (3135) or Geometry (3143)	HT 430 (4310) Health Therapy Biology	World History 1/ Geography to 1500 A.D. (2215)	Economics and Personal Finance (6120) Health & PE (2 years) World Language (3 years) Other Electives to Complement Pathway (Core Academic and CTE): AP Biology (4370) AP Computer Science (3185)	Health Science Elective	
SECONDARY	10	HT 110 (1140) Health Therapy English 10	Algebra 2 (3135) or Geometry (3143)	HT 440 (4410) Health Therapy Chemistry	World History 2/1500 to present (2216)		HT 090 (#####) Health Therapy Exploration I	
SECONDARY	11	English 11(1150)	Trig Analysis or Adv. Alg/Trig (3160)	Health Therapy Physics (4510)	US History (2360)		(8331) Health Assistant Careers	
SECONDARY	12	English 12 (1160)	Calculus or College Algebra (3178)	AP Biology (4370) or AP Chemistry (4470)	US Government (2440)		TC 461 (8347) Biotechnologies: Medicine, Forensics and More (Honors)	
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.cteresource.org/apg (Go to Certification - License Section.)

Workplace Readiness Skills for the Commonwealth (CTECS)

Additional Learning Opportunities:
CTSO Organization(s): ☐ DECA ☐ FBLA ☐ FCCLA ☐ FFA ☐ FEA ☒ HOSA ☐ SkillsUSA ☐ TSA

Work-Based Learning:
☐ Career Research ☐ Cooperative Education ☐ Internship ☐ Mentorship
☒ Job Shadowing ☐ Service Learning Project ☐ Student Apprenticeship

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	Bachelor's Degree	Postgraduate Degree
Biotechnology Research and Development	Associate of Science in General Studies, Science Specialization	See www.jtcc.edu/transfer	

SAMPLE

College: John Tyler Community College **School Division(s):** Chesterfield County: Cosby & Monacan High Schools

Postsecondary: Placement Assessments such as VPT, SAT, ACT, PSAT

POSTSECONDARY - COMMUNITY COLLEGE or APPRENTICESHIP - Determined Locally

Semester	English	Mathematics	Science	Social Studies	Required Courses			
POSTSECONDARY PLAN OF STUDIES MUST INCLUDE POSTSECONDARY ACADEMIC, CTE, AND OTHER ELECTIVE COURSES APPROPRIATE FOR AN ASSOCIATE DEGREE.								
Year 1 1st Semester	ENG111 DE College Composition I (AP)	MTH173 Calculus with Analytical Geometry I* (AP AB)	BIO101 General Biology I* (AP)	History Elective* (AP) HIS121 DE US History I			Physical Education/Health Elective VC (First Aid/CPR Certification)	SDV100 College Success Skills
Year 1 2nd Semester	ENG112 DE College Composition II (AP)	MTH240 Statistics* (AP)	BIO102 General Biology II* (AP)	History Elective* (AP) HIS122 DE US History II	Social/Behavioral Science Elective* (AP US Government)			
Year 2 1st Semester	Literature Elective		CHM111 College Chemistry I (AP)		Social/Behavioral Science Elective* (AP Psychology)	PHY201 (AP) General College Physics I or PHY241(AP-C-M)		
Year 2 2nd Semester			CHM112 College Chemistry II (AP)		Humanities Elective* (AP Art Appreciation/History)	PHY202 (AP) General College Physics II or PHY242 (AP-C-E&M)	General Elective FRE201 DE	

***See NOTES; College courses offered locally in the high school for college credit should be coded: COSBY DE (Dual Enrollment) and/or VC (Validated Credit); A minimum of 16 credits must be completed through JTCC courses; AP Credit for exam scores of '3' or higher may be used to complete certain credits. There is no guarantee of transfer, test or validated credit to other colleges – students must consult with intended colleges/universities. Requirements subject to change; opportunities subject to availability. High school students should consult with their school counselor and JTCC regarding requirements and credit for this program.**

Related Industry Certifications Available:

N/A

Additional Suggested Learning Opportunities:

Work-Based Learning:

☐ Cooperative Education ☐ Internship ☐ Mentorship
☐ Job Shadowing ☐ Service Learning Project ☐ Registered Apprenticeship

UNIVERSITY

University/College: To view Guaranteed Admission and Transfer Agreements, visit: www.jtcc.edu/transfer
Degree or Major:
Number of Articulated CC Credits:

SAMPLE

NOTES This program is specifically designed for transfer into a science major at most four-year colleges. Following the prescribed coursework in this program will result in graduation with the Associate in Science Degree (A.S.) in General Studies with a Specialization in Science. Students should consult with their advisors to ensure that they select courses that best prepare them for the specific requirements of their intended transfer college or university for majors in biology, chemistry or physics.

1. Biology majors need BIO 110 and BIO 120 instead of BIO 101 and BIO 102.
2. The history elective requirements can be satisfied by the following courses: HIS 101, HIS 102, HIS 111, HIS 112, HIS 121, HIS 122 or any other HIS course approved by the student's advisor.
3. Students who are required to take MTH 163 and/or MTH 164 as prerequisites for MTH 173 may use these course as general electives. MTH 173 and MTH 240 are recommended for biology majors. MTH 173 and MTH 174 are recommended for chemistry and physics majors.
4. The social/behavioral sciences elective requirements can be satisfied by courses with the following prefixes: PSY, SOC, ECO, GEO, PLS and HIS.
5. The humanities elective requirement can be satisfied by completing a literature (ENG), foreign language, humanities (HUM), philosophy (PHI), art (ART), music (MUS), speech course addressing performing arts or the history of theatre (CST), or religion course (REL). ENG 112, CST 100, CST 105 and CST 115 may not be used to satisfy humanities electives requirements.
6. The literature requirement can be satisfied by any 200-level English literature course, exclusive of composition and creative writing courses.
7. The laboratory science courses not specified for application to the degree, such as BIO 141, BIO 142, GOL 105, NAS 125, NAS 130, may be taken as preparation for future coursework and will count for college credit.

For additional information on this program, please contact the Division of Mathematics, Natural and Behavioral Sciences: 804-706-5084 (Chester) or 804-594-1500 (Midlothian).

SAMPLE

CareerClusters™
PATHWAYS TO COLLEGE & CAREER READINESS

Health Science

Commonwealth of Virginia Sample Plan of Study

Rev: 3/13

Student Name: DRAFT
School: Cosby High School
Date: _____

Cluster: Health Science

Pathway: Biotechnology Research and Development

This Career Pathway Plan of Study 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	Recommended Electives *Use state course titles*	Recommended Career and Technical Courses Source: Administrative Planning Guide http://www.cteresource.org/apg/	SAMPLE – Occupations Relating to This Pathway: http://www.doe.virginia.gov/instruction/career_technical/career_clusters/sample_plans_study/index.shtml http://www.careerclusters.org http://www.cteresource.org/cpg/
		NOTE: Indicate State Course Titles and Codes						
Graduation Requirements: http://www.doe.virginia.gov/instruction/graduation/index.shtml								
MIDDLE	7	EN 107 English 7 (1110)	MA 307 Math 7 (3111)	SC 407 Life Science (4115)	SS 207 U S History (2354)		Exploratory Health and Medical Sciences (8370)	
MIDDLE	8	EN108 English 8 (1120)	MA 320 Algebra 1 (3130)	SC408 Physical Science (4125)	SS 208 Civics & Economics (2357)		Computer Applications (6617/6611)	
Career Assessment: Identify an appropriate career assessment instrument at the middle school level used to help students and their parents plan for high school: VA Wizard ☒ or other assessment (please indicate): ____								Laboratory Technician Quality Assurance/Control Technician Laboratory Assistant Nuclear Medicine Technologist Cell Biologist Research Assistant Research Scientist Biochemist
SECONDARY	9	HT 109 (1130) English 9	MA330 Geometry (3143)	HT 430 Biology (4310)	SS 209 World History 1/ Geography to 1500 A.D. (2215)	Economics and Personal Finance (6120) Health & PE (2 years) Foreign Language (3 years) Other Electives to Complement Pathway (Core Academic and CTE): AP Biology (4370) AP Computer Science (3185)	SC430 Anatomy and Physiology (4701)	
SECONDARY	10	HT 110 (1140) English 10	MA 340 Algebra 2 (3135)	HT 440 Chemistry (4410)	SS210 World History 2/1500 to present (2216)		HS 460 Genetics (4350) or HS 464 Cellular Biology (4610)	
SECONDARY	11	TL 111 English 11 DE (1150)	MA 360 Advanced Math (3160)	SC 450 Physics (4510)	SS 211 US History (2360)		HS 463 Biochemistry (4610)	
SECONDARY	12	TL 112 English 12 DE (1160)	MS 354 Multivariate Calculus (3178)	SC 439 AP Biology (4370) or SC 449 AP Chemistry (4470)	SS 212 US Government (2440)		SC460 Forensic Chemistry (4420)	
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.cteresource.org/apg (Go to Certification - License Section.)

Workplace Readiness Skills for the Commonwealth (CTECS)

Additional Learning Opportunities:
CTSO Organization(s): ☐ DECA ☐ FBLA ☐ FCCLA ☐ FFA ☐ FEA ☒ HOSA ☐ SkillsUSA ☐ TSA

Work-Based Learning:
☐ Career Research ☐ Cooperative Education ☐ Internship ☐ Mentorship
☒ Job Shadowing ☐ Service Learning Project ☐ Student Apprenticeship

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	Bachelor's Degree	Postgraduate Degree
Biotechnology Research and Development	Associate of Science in General Studies, Science Specialization	See www.jtcc.edu/transfer	

SAMPLE

College: John Tyler Community College **School Division(s):** Chesterfield County – Cosby High School

Postsecondary: Placement Assessments such as VPT, SAT, ACT,PSAT

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 1st Semester	ENG111 College Composition I DE (AP)	MTH173 Calculus with Analytical Geometry I* (AP)	BIO101 General Biology I* (AP)	HIS121 DE/ History Elective* (AP)			Physical Education/Health Elective VC (First Aid/CPR Certification)	SDV100 College Success Skills
Year 1 2nd Semester	ENG112 College Composition II DE (AP)	MTH240 Statistics* (AP)	BIO102 General Biology II* (AP)	HIS122 DE/ History Elective* (AP)	Social/Behavioral Science Elective* (AP US Government)			
Year 2 1st Semester	Literature Elective		CHM111 College Chemistry I (AP)		Social/Behavioral Science Elective* (AP Psychology)	PHY201 (AP) General College Physics I or PHY241(AP C-M)		
Year 2 2nd Semester			CHM112 College Chemistry II (AP)		Humanities Elective* (AP Art Appreciation/History)	PHY202 (AP) General College Physics II or PHY242 (AP – E&M)	General Elective FRE201DE/ German or Spanish AP	

*See NOTES; College courses offered locally in the high school for college credit should be coded: DE (Dual Enrollment) and/or VC (Validated Credit); A minimum of 16 credits must be completed through JTCC courses; AP Credit for exam scores of '3' or higher may be used to complete certain credits. There is no guarantee of transfer, test or validated credit to other colleges – students must consult with intended colleges/universities. Requirements subject to change; opportunities subject to availability. High school students should consult with their school counselor and JTCC regarding requirements and credit for this program.

SAMPLE

Related Industry Certifications Available:

N/A

Additional Suggested Learning Opportunities:

Work-Based Learning:

☐ Cooperative Education ☐ Internship ☐ Mentorship
☐ Job Shadowing ☐ Service Learning Project ☐ Registered Apprenticeship

UNIVERSITY

University/College: To view Guaranteed Admission and Transfer Agreements, visit: www.jtcc.edu/transfer
Degree or Major:
Number of Articulated CC Credits:

Notes: This program is specifically designed for transfer into a science major at most four-year colleges. Following the prescribed coursework in this program will result in graduation with the Associate in Science Degree (A.S.) in General Studies with a Specialization in Science. Students should consult with their advisors to ensure that they select courses that best prepare them for the specific requirements of their intended transfer college or university for majors in biology, chemistry or physics.

1. Biology majors need BIO 110 and BIO 120 instead of BIO 101 and BIO 102.
2. The history elective requirements can be satisfied by the following courses: HIS 101, HIS 102, HIS 111, HIS 112, HIS 121, HIS 122 or any other HIS course approved by the student's advisor.
3. Students who are required to take MTH 163 and/or MTH 164 as prerequisites for MTH 173 may use these course as general electives. MTH 173 and MTH 240 are recommended for biology majors. MTH 173 and MTH 174 are recommended for chemistry and physics majors.
4. The social/behavioral sciences elective requirements can be satisfied by courses with the following prefixes: PSY, SOC, ECO, GEO, PLS and HIS.
5. The humanities elective requirement can be satisfied by completing a literature (ENG), foreign language, humanities (HUM), philosophy (PHI), art (ART), music (MUS), speech course addressing performing arts or the history of theatre (CST), or religion course (REL). ENG 112, CST 100, CST 105 and CST 115 may not be used to satisfy humanities electives requirements.
6. The literature requirement can be satisfied by any 200-level English literature course, exclusive of composition and creative writing courses.
7. The laboratory science courses not specified for application to the degree, such as BIO 141, BIO 142, GOL 105, NAS 125, NAS 130, may be taken as preparation for future coursework and will count for college credit.

SAMPLE

For additional information on this program, please contact the Division of Mathematics, Natural and Behavioral Sciences: 804-706-5084 (Chester) or 804-594-1500 (Midlothian).

CareerClusters™
PATHWAYS TO COLLEGE & CAREER READINESS
Health Science

Commonwealth of Virginia Sample Plan of Study

Rev: 3/13

Student Name: DRAFT
School: Cosby High School
Date: _____

Cluster: Health Science **Pathway:** Support Services

This Career Pathway Plan of Study 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	Recommended Electives *Use state course titles*	Recommended Career and Technical Courses Source: Administrative Planning Guide http://www.cteresource.org/apg/	SAMPLE – Occupations Relating to This Pathway: http://www.doe.virginia.gov/instruction/career_technical/career_clusters/sample_plans_study/index.shtml http://www.careerclusters.org http://www.cteresource.org/cpg/
		NOTE: Indicate State Course Titles and Codes						
Graduation Requirements: http://www.doe.virginia.gov/instruction/graduation/index.shtml								
MIDDLE	7	EN 107 English 7 (1110)	MA 307 Math 7 (3111)	SC 407 Life Science (4115)	SS 207 U S History (2354)		Exploratory Health and Medical Sciences (8370)	
MIDDLE	8	EN108 English 8 (1120)	MA 320 Algebra 1 (3130)	SC408 Physical Science (4125)	SS 208 Civics & Economics (2357)	Keyboarding/Middle (6150)	Computer Applications (6617/6611)	
Career Assessment: Identify an appropriate career assessment instrument at the middle school level used to help students and their parents plan for high school: VA Wizard ☒ or other assessment (please indicate): _____								• Biomedical /Clinical Technician • Central Service Manager • Facilities manager • Materials Manager • Ward Secretary • Environmental Services Manager
SECONDARY	9	HT 109 (1130) English 9	MA330 Geometry (3143)	HT 430 Biology (4310)	SS 209 World History 1/ Geography to 1500 A.D. (2215)	Economics and Personal Finance **Health Science Exploration 1,** Health & Physical Ed 9 and 10, World Language, Health Science Elective	HS 020 Introduction to Patient Care (8331)	
SECONDARY	10	HT 110 (1140) English 10	MA 340 Algebra 2 (3135)	HT 440 Chemistry (4410)	SS210 World History 2/1500 to present (2216)		HS 010 Introduction to Health Professions (0128)	
SECONDARY	11	TL 111 English 11 **DE** (1150)	MA 360 Advanced Math (3160)	SC 450 Physics (4510)	SS 211 US History (2360)		SC 460 Forensic Chemistry (0128)	
SECONDARY	12	TL 112 English 12 **DE** (1160)	MS 354 Multivariate Calculus (3178)	SC 439 AP Biology (4370) or SC 449 AP Chemistry (4470)	SS 212 US Government (2440)		HP 722 Sports Medicine /Athletic Training (7660)	

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.cteresource.org/apg/
Workplace Readiness Skills for the Commonwealth (CTECS)

Additional Learning Opportunities:
CTSO Organization(s): ☐ DECA ☐ FBLA ☐ FCCLA ☐ FFA ☐ FEA ☒ HOSA ☐ SkillsUSA ☐ TSA

Work-Based Learning:
☐ Career Research ☐ Cooperative Education ☒ Internship ☐ Mentorship
☒ Job Shadowing ☐ Service Learning Project ☐ Student Apprenticeship

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	Bachelor's Degree	Postgraduate Degree
Support Services	Associate of Science in General Studies, Science Specialization	See www.jtcc.edu/transfer	

SAMPLE

College: John Tyler Community College **School Division(s):** Chesterfield County – Cosby High School

Postsecondary: Placement Assessments such as VPT, SAT, ACT,PSAT

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 1st Semester	ENG111 College Composition I DE (AP)	MTH173 Calculus with Analytical Geometry I* (AP)	BIO101 General Biology I* (AP)	HIS121 DE/ History Elective* (AP)			Physical Education/Health Elective VC (First Aid/CPR Certification)	SDV100 College Success Skills
Year 1 2nd Semester	ENG112 College Composition II DE (AP)	MTH240 Statistics* (AP)	BIO102 General Biology II* (AP)	HIS122 DE/ History Elective* (AP)	Social/Behavioral Science Elective* (AP US Government)			
Year 2 1st Semester	Literature Elective		CHM111 College Chemistry I (AP)		Social/Behavioral Science Elective* (AP Psychology)	PHY201 (AP) General College Physics I or PHY241(AP C-M)		
Year 2 2nd Semester			CHM112 College Chemistry II (AP)		Humanities Elective* (AP Art Appreciation/History)	PHY202 (AP) General College Physics II or PHY242 (AP – E&M)	General Elective FRE201DE/ German or Spanish AP	

***See NOTES; College courses offered locally in the high school for college credit should be coded: DE (Dual Enrollment) and/or VC (Validated Credit); A minimum of 16 credits must be completed through JTCC courses; AP Credit for exam scores of '3' or higher may be used to complete certain credits. There is no guarantee of transfer, test or validated credit to other colleges – students must consult with intended colleges/universities. Requirements subject to change; opportunities subject to availability. High school students should consult with their school counselor and JTCC regarding requirements and credit for this program.**

Related Industry Certifications Available:

N/A

Additional Suggested Learning Opportunities:

Work-Based Learning:

☐ Cooperative Education ☐ Internship ☐ Mentorship
☐ Job Shadowing ☐ Service Learning Project ☐ Registered Apprenticeship

UNIVERSITY

University/College: To view Guaranteed Admission and Transfer Agreements, visit: www.jtcc.edu/transfer
Degree or Major:
Number of Articulated CC Credits:

SAMPLE

Notes: This program is specifically designed for transfer into a science major at most four-year colleges. Following the prescribed coursework in this program will result in graduation with the Associate in Science Degree (A.S.) in General Studies with a Specialization in Science. Students should consult with their advisors to ensure that they select courses that best prepare them for the specific requirements of their intended transfer college or university for majors in biology, chemistry or physics.

1. Biology majors need BIO 110 and BIO 120 instead of BIO 101 and BIO 102.
2. The history elective requirements can be satisfied by the following courses: HIS 101, HIS 102, HIS 111, HIS 112, HIS 121, HIS 122 or any other HIS course approved by the student's advisor.
3. Students who are required to take MTH 163 and/or MTH 164 as prerequisites for MTH 173 may use these course as general electives. MTH 173 and MTH 240 are recommended for biology majors. MTH 173 and MTH 174 are recommended for chemistry and physics majors.
4. The social/behavioral sciences elective requirements can be satisfied by courses with the following prefixes: PSY, SOC, ECO, GEO, PLS and HIS.
5. The humanities elective requirement can be satisfied by completing a literature (ENG), foreign language, humanities (HUM), philosophy (PHI), art (ART), music (MUS), speech course addressing performing arts or the history of theatre (CST), or religion course (REL). ENG 112, CST 100, CST 105 and CST 115 may not be used to satisfy humanities electives requirements.
6. The literature requirement can be satisfied by any 200-level English literature course, exclusive of composition and creative writing courses.
7. The laboratory science courses not specified for application to the degree, such as BIO 141, BIO 142, GOL 105, NAS 125, NAS 130, may be taken as preparation for future coursework and will count for college credit.

For additional information on this program, please contact the Division of Mathematics, Natural and Behavioral Sciences: 804-706-5084 (Chester) or 804-594-1500 (Midlothian).

SAMPLE

CareerClusters™
PATHWAYS TO COLLEGE & CAREER READINESS

Health Science

Commonwealth of Virginia Plan of Study

Rev: 3/13

Student Name: DRAFT
School: Cosby High School
Date: _____

Cluster: Health Science **Pathway:** Therapeutic Services

This Career Pathway Plan of Study 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 http://www.cteresource.org/apg/	SAMPLE – Occupations Relating to This Pathway: http://www.doe.virginia.gov/instruction/career_technical/career_clusters/sample_plans_study/index.shtml http://www.careerclusters.org http://www.cteresource.org/cpg/
		NOTE: Indicate State Course Titles and Codes						
		Graduation Requirements: http://www.doe.virginia.gov/instruction/graduation/index.shtml						- Anesthesiologist Assistant - Athletic Trainer - Audiologist - Certified Nursing Assistant - Chiropractor - Clinical Medical Assistant - Dental Assistant/Hygienist - Dental Lab Technician - Dentist - Dietician - EMT/Paramedic - Exercise Physiologist - Home Health Aide - LPN/RN - Massage Therapist - Medical Assistant - Nurse Practitioner - Occupational Therapist/Assistant - Optician/Optometrist - Pharmacist/Pharmacy Technician - Physical Therapist/Assistant - Physician (MD/DO) - Physician's Assistant - Psychologist - Radiologic Technician - Recreation Therapist - Respiratory Therapist - Social Worker - Speech Language Pathologist - Surgical Technician/Technologist - Veterinarian/Vet Assistant/Technician
MIDDLE	7	EN 107 English 7 (1110)	MA 307 Math 7 (3111)	SC 407 Life Science (4115)	SS 207 U S History (2354)		Exploratory Health and Medical Sciences 8370	
MIDDLE	8	EN108 English 8 (1120)	MA 320 Algebra 1 (3130)	SC408 Physical Science (4125)	SS 208 Civics & Economics (2357)	Keyboarding/Middle (6150)	Computer Applications (6617/6611)	
		Career Assessment: Identify an appropriate career assessment instrument at the middle school level used to help students and their parents plan for high school. VA Wizard ☒ or other assessment (please indicate): ____						
SECONDARY	9	HT 109 (1130) English 9	MA330 Geometry (3143)	HT 430 Biology (4310)	SS 209 World History 1/ Geography to 1500 A.D. (2215)	Economics and Personal Finance **Health Science Exploration 1**, Health & Physical Ed 9 and 10, World Language, Health Science Elective	HS 090 Health Science Exploration I (0128)	
SECONDARY	10	HT 110 (1140) English 10	MA 340 Algebra 2 (3135)	HT 440 Chemistry (4410)	SS210 World History 2/1500 to present (2216)		HS 020 Introduction to Patient Care (8331)	
SECONDARY	11	TL 111 English 11 **DE** (1150)	MA 360 Advanced Math (3160)	SC 450 Physics (4510)	SS 211 US History (2360)		JT 434 Anatomy and Physiology (4701)	
SECONDARY	12	TL 112 English 12 **DE** (1160)	MS 354 Multivariate Calculus (3178)	SC 439 AP Biology (4370) or SC 449 AP Chemistry (4470)	SS 212 US Government (2440)		HP 722 Sports Medicine /Athletic Training (7660)	

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.cteresource.org/apg (Go to Certification - License Section.)

Workplace Readiness Skills for the Commonwealth (CTECS)

Additional Learning Opportunities:
CTSO Organization(s): ☐ DECA ☐ FBLA ☐ FCCLA ☐ FFA ☐ FEA ☒ HOSA ☐ SkillsUSA ☐ TSA

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☐ Career Research ☐ Cooperative Education ☒ Internship ☐ Mentorship
☐ Job Shadowing ☐ Service Learning Project ☐ Student Apprenticeship

Postsecondary: Placement Assessments such as VPT, SAT, ACT,PSAT

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 Science in General Studies, Science Specialization	See www.jtcc.edu/transfer	

SAMPLE

College: John Tyler Community College **School Division(s):** Chesterfield County – Cosby High School

Postsecondary: Placement Assessments such as VPT, SAT, ACT,PSAT

POSTSECONDARY - COMMUNITY COLLEGE or APPRENTICESHIP - Determined Locally

Semester	English	Mathematics	Science	Social Studies	Required Courses or Recommended Electives			
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SAMPLE

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Related Industry Certifications Available:

N/A

Additional Suggested Learning Opportunities:

Work-Based Learning:

☐ Cooperative Education ☐ Internship ☐ Mentorship
☐ Job Shadowing ☐ Service Learning Project ☐ Registered Apprenticeship

UNIVERSITY

University/College: To view Guaranteed Admission and Transfer Agreements, visit: www.jtcc.edu/transfer
Degree or Major:
Number of Articulated CC Credits:

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For additional information on this program, please contact the Division of Mathematics, Natural and Behavioral Sciences: 804-706-5084 (Chester) or 804-594-1500 (Midlothian).

SAMPLE

Monacan Health & Physical Therapy Specialty Center
Monacan Site Requirements for
Governor Academy Health Science Seal on Diploma

Career Pathway **Therapeutic Services**
HT109 (1130) **Health Therapy English 9;** HT110 (1140) **Health Therapy English 10**
Health Therapy HT430 (4310) **Biology;** HT440 (4410) **Chemistry;** HT# (#) **Physics**
HT 090 (####) Health Therapy Exploration I
Must complete AP science course
(8331) Health Assistant Careers
(8365) Physical/Occupational Therapy Technician
Community Service – 15 hr/yr (for 2 yrs) **Mentorship with practitioners – 80 hrs**

CURRENT ADDITIONAL MONACAN HEALTH THERAPY ELECTIVES:

AP Physics
AP Biology
AP Chemistry
AP Psychology
Forensic Chemistry
Anatomy & Physiology

*In addition to listed coursework, all students must complete 9 college hours (3 high school courses) at the Dual Enrollment and/or Advanced Placement level (student selections may be in any CORE academic area), successfully pass the Workplace Readiness Test, and meet all other requirements for a VDOE sanctioned Advanced Studies Diploma to attain the Governors Academy Diploma Seal

Monacan Health & Physical Therapy Specialty Center
Graduation Requirements
for Health Therapy Seal on Diploma in Combination with attending the Chesterfield Technical Center*

Career Pathway **Biotechnology Research and Development**	Career Pathway **Support Services**
HT 109 (1130) Health Therapy English 9	HT 109 (1130) Health Therapy English 9
HT 110 (1140) Health Therapy English 10	HT 110 (1140) Health Therapy English 10
HT 430 (4310) Health Therapy Biology	HT 430 (4310) Health Therapy Biology
HT 440 (4410) Health Therapy Chemistry	HT 440 (4410) Health Therapy Chemistry
HT #TBD (#TBD) Health Therapy Physics	HT #TBD (#TBD) Health Therapy Physics
HT 090 (#TBD) Health Therapy Exploration I	HT 090 (#TBD) Health Therapy Exploration I
(8331) Health Assistant Careers	(8331) Health Assistant Careers
TC 461 (8347) Biotechnologies: Medicine, Forensics and More (Honors)	TC 413 (8345) Medical Assistant 1 and TC 414 (8346) Medical Assistant 2
Community Service – 15 hr/yr (for 2 yrs) Mentorship with practitioners – 80 hrs	Community Service – 15 hr/yr (for 2 yrs) Mentorship with practitioners – 80 hrs

Career Pathway **Health Informatics**	Career Pathway **Diagnostic Services**
HT 109 (1130) Health Therapy English 9	HT 109 (1130) Health Therapy English 9
HT 110 (1140) Health Therapy English 10	HT 110 (1140) Health Therapy English 10
HT 430 (4310) Health Therapy Biology	HT 430 (4310) Health Therapy Biology
HT 440 (4410) Health Therapy Chemistry	HT 440 (4410) Health Therapy Chemistry
HT #TBD (#TBD) Health Therapy Physics	HT #TBD (#TBD) Health Therapy Physics
HT 090 (#TBD) Health Therapy Exploration I	HT 090 (#TBD) Health Therapy Exploration I
Health Therapy Elective (1)	Health Therapy Elective (1)
TC 413 (8345) Medical Assistant 1 and TC 414 (8346) Medical Assistant 2	TC401 (8328) Dental Occupations 1 and TC 402 (8329) Dental Occupations 2
Community Service – 15 hr/yr (for 2 yrs) Mentorship with practitioners – 80 hrs	Community Service – 15 hr/yr (for 2 yrs) Mentorship with practitioners – 80 hrs

CURRENT HEALTH THERAPY ELECTIVES:

AP Physics
AP Biology
AP Chemistry
AP Psychology
Forensic Chemistry
Anatomy & Physiology
Relevant CTC courses

*In addition to listed coursework, all students must complete 9 college hours (3 high school courses) at the Dual Enrollment and/or Advanced Placement level (student selections may be in any CORE academic area), successfully pass the Workplace Readiness Test, and meet all other requirements for a VDOE sanctioned Advanced Studies Diploma to attain the Governors Academy Diploma Seal

Health Science Specialty Center Graduation Requirements for Health Science School Governor Academy Diploma Seals

Option I (with coursework at CTC)	Option II
HS 109 (01101) Health Science English 9	HS 109 (01101) Health Science English 9
HS 110 (01002) Health Science English 10	HS 110 (01002) Health Science English 10
HS 430 (03051) Health Science Biology	HS 430 (03051) Health Science Biology
HS 440 (03101) Health Science Chemistry	HS 440 (03101) Health Science Chemistry
Physics or Science Elective	CS 450 (03151) Physics
HS 090 (03999) Health Science Exploration I	AP Biology or AP Chemistry
Health Science Electives (2 choices)	HS 090 (03999) Health Science Exploration I
Attend CTC for specific Health Science Pathway courses (options listed below) for Governor Academy Seal	Health Science Exploration II (taught through VCU) 2 additional Health Science Electives (must be in a sequence within courses listed below for each Pathway)
Community Service – 20 hours/year	Community Service – 20 hours/year

*In addition to listed coursework, all students must complete 9 college hours (3 high school courses) at the Dual Enrollment and/or Advanced Placement level (student selections may be in any CORE academic area), successfully pass the Workplace Readiness Test, and meet all other requirements for a VDOE sanctioned Advanced Studies Diploma to attain the Governors Academy Diploma Seal

COURSES TYPICALLY OFFERED AT COSBY WHICH CURRENTLY COUNT AS HEALTH SCIENCE ELECTIVES

AP Sciences
Forensic Chemistry
Medical Law & Ethics / Medical Spanish
JTCC Human Anatomy & Physiology
Genetics / Cell Biology
Anatomy & Drawing
Biochemistry of Foods / Parasitology
Research
Sports Medicine / Athletic Training
Introduction to Patient Care

Option 1 Students who attend Cosby and the Chesterfield Technical Center Junior and/or Senior Year

Biotechnology Research and Development Pathway

Coursework: Biotechnologies: Medicine, Forensics and More

Diagnostic Services Pathway

Coursework: Dental Occupations 1 and 2

Health Infomatics Pathway

Coursework: Systems Administration 1 and 2

Support Services Pathway

Coursework: Medical Assistant 1 and 2

Therapeutic Pathway

Coursework: Practical Nursing 1 and 2

Pathway and Course Choices for Option 2 at Cosby HS

>Biotechnology Research & Development Pathway for Option 2

Forensics Chemistry (required) and either:
Advanced Placement Science (2nd AP Science Course must be either Biology or Chemistry)
JTCC Human Anatomy & Physiology
Genetics/Cellular Biology
Biochemistry of Foods/Parasitology

>Support Services Pathway for Option 2

Introduction to Patient Care (required) and either:
Medical Law & Ethics
Medical Spanish
Forensics Chemistry

>Therapeutic Services Pathway for Option 2

Sports Medicine/Athletic Training (required) and either:
JTCC Human Anatomy and Physiology
Introduction to Patient Care
Advanced Placement Science (2nd AP Science Course must be either Biology or Chemistry)

>Health Infomatics and Diagnostic Services Pathways for Option 2

Additional coursework must be taken at the Chesterfield Technical Center for completion

Health Science Course Offerings
Chesterfield Technical Center
2012-13

TC401 **DENTAL OCCUPATIONS 1** Three Credits
This course is designed to prepare students for entry level positions in the dental field. Students will learn basic dental anatomy, charting, instrumentation, radiographic techniques, use of dental equipment, and other dental skills.

TC402 **DENTAL OCCUPATIONS 2** Three Credits
This course involves clinical rotations at selected dental care facilities. Students are required to participate in the Workplace Transition Program at approved local dentist offices or dental labs. Transportation is required. Pre-requisites: Minimum of Grade C in TC401 Dental Occupations 1and be X-ray certified

TC413 **MEDICAL ASSISTANT 1** Three Credits
This course is designed to prepare students to take the Medical Assistant Certification (CMA) Examination through the National Association of Health Professionals. Students develop basic skills and techniques to assist a physician with patient examinations, minor surgery, and collecting and analyzing specimens. Additionally, students learn to perform basic diagnostic tests such as electrocardiograms, apply principles of medical asepsis, check vital signs and record findings, change dressings and bandages, and administer prescribed medications via specified routes such as injections. Training also includes principles of basic anatomy, medical math, and drug dosage/calculations.

TC414 **MEDICAL ASSISTANT 2** Three Credits
A continuation of Medical Assistant 1. Student further develop medical -assisting skills and techniques through advanced on-the-job clinical experience in physicians' offices or clinics. Transportation to clinical sites is the responsibility of the student. Pre-requisites: Minimum of Grade C in TC413, Medical Assistant 1

TC432 **PRACTICAL NURSING 1** (HONORS) 1.5 Credits
The first component of the program is devoted primarily to classroom and nursing laboratory activities. Students learn nursing theory in anatomy and physiology and issues relating to health care systems, legal and ethical implications of practice, and professionalism in nursing. A minimum grade of 81% is required in each of these study areas. Theory and lab practice in basic nursing skills are also taught. NOTE: This 18-month program is regulated by the Virginia Board of Nursing and is designed to prepare students to practice nursing under the guidance of registered nurses or physicians. Applicants must demonstrate essential functional abilities consistent with the standards of nursing as defined by the National Council of State Board of Nursing. The program is divided into three components and consists of a combination of classroom training and clinical experiences. Students taking the third component (Practical Nursing 3) of the program must do so following high school graduation. Practical Nursing 3 includes nine months of classroom, lab and clinical study in advanced medical surgical nursing, obstetrics, pediatrics, psychiatric nursing, and pharmacology. Student participate in clinical

learning experiences in five area hospitals and in various community health care settings. Students successfully completing the entire program (TC432, TC433 and the post-graduate Practical Nursing 3 component) are eligible to take the National Council Licensure Examination for Practical Nurses (NCLEX-PN). Pre-requisites: Cumulative GPA of 2.5 or higher, MA320 Algebra 1 or equivalent and SC430 Biology 1.

TC433 **PRACTICAL NURSING 2** (HONORS) 1.5 Credits
During the second component of the program, students participate in learning activities in the classroom, the nursing laboratory, and at a nearby clinical facility. Students study nutrition, geriatrics, medical surgical nursing, and dosage calculations. A minimum grade of 81% is required in each of these study areas. Additionally, students participate in a brief clinical experience in geriatrics, which (if completed successfully) will qualify them to take the state nurse aide certification examination. NOTE: This 18-month program is regulated by the Virginia Board of Nursing and is designed to prepare students to practice nursing under the guidance of registered nurses or physicians. Applicants must demonstrate essential functional abilities consistent with the standards of nursing as defined by the National Council of State Board of Nursing. The program is divided into three components and consists of a combination of classroom training and clinical experiences. Students taking the third component (Practical Nursing 3) of the program must do so following high school graduation. Practical Nursing 3 includes nine months of classroom, lab and clinical study in advanced medical surgical nursing, obstetrics, pediatrics, psychiatric nursing, and pharmacology. Students participate in clinical learning experiences in five area hospitals and in various community health care settings. Students successfully completing the entire program (TC432, TC433 and the post-graduate Practical Nursing 3 component) are eligible to take the National Council Licensure Examination for Practical Nurses (NCLEX-PN).
Pre-requisites: TC432 Practical Nursing 1

TC451 **VETERINARY SCIENCE** Three Credits
This course combines classroom discussion and hands-on training with companion animals. The course is designed for students considering careers in animal science, veterinary medicine, pet industries, governmental regulatory agencies, pharmaceutical sales, agricultural production, and laboratory research. Course content includes an introduction to companion and production animals, understanding the concepts of genetics, species and breeding, identifying body systems and their treatment, disease and its prevention, animal nutrition, animal behavior and training, ethical/legal animal welfare issues, ownership responsibilities, and bio-security issues. Students learn various technical skills, such as safe animal restraint, administering medication, applying septic techniques, recognizing abnormal behavior, maintaining appropriate housing, grooming, and performing administrative duties in a simulated veterinary hospital environment.
73
Emphasis is placed on continuing education as well as entry-level career opportunities. This course is displayed on a student's schedule as three 1.0 credit courses: TC452O/Small Animal Care (elective credit), TC453O/Anatomy & Physiology science credit and TC454O/Veterinary Science (elective credit). A lab fee, private health insurance, and uniforms are required. Pre-requisites: MA320
Algebra 1 or equivalent and SC430 Biology 1

TC455 **INTRODUCTION TO SMALL ANIMAL CARE** One Credit
This course focuses on topics related to small-animal industries and includes a study of the classification or organisms, the history and domestication of animals, safety concerns and zoonotic disease, responsibilities of pet owners, animal rights versus animal welfare, nutrition in conjunction with digestive systems, and careers in small animal care. Topics intensively discussed in the course are: classification, history, breeds, grooming, feeding, and diseases of dogs, cats, ferrets, rabbits, guinea pigs, mice, reptiles, and birds. This course is designed as a preparatory course for the Veterinary Science Course at CTS or as an introduction to responsible small animal ownership. A lab fee ($25), private health insurance and uniforms are required. Pre-requisites: Algebra 1 and Biology 1

TC461 **BIOTECHNOLOGIES: MEDICINE, FORENSICS AND MORE** (HONORS) Three Credits
A cutting-edge opportunity for students preparing for careers in medicine or research, as well as for those fascinated by forensics and the rapid growth of the international biotechnology industry. One of only a handful of such courses offered nationwide, this course explores the complexities of scientific research in a new, state-of-the-art laboratory and classroom facility. Students combine advanced in-depth study of biotechnologies used in forensics, medicine, environmental science and genetics, with discussion relating to bioethics and bioinformatics. Students acquire hands-on laboratory skills such as micro-pipetting, DNA extraction, PCR (Polymerase Chain Reaction), electrophoresis, culturing of bacteria, and more. Emphasis is placed on continuing education requirements pertaining to professional career paths in biotechnology. This course will be displayed on a student's schedule as three 1.0 credit honors science courses: TC462H/Genetics, TC463H/Microbiology and TC464H/Cell Biology. Pre-requisites: MA320 Algebra 1 or equivalent, SC430 Biology 1 and SC440 Chemistry (Chemistry may be taken concurrently)

JT240 **MEDICAL SYSTEMS ADMINISTRATION**
TC241 **MEDICAL SYSTEMS ADMINISTRATION**
Three Credits
This course is designed to assist students in developing the skills needed for the medical office. Instruction includes general office tasks such as word processing, spreadsheet applications, filing, scheduling appointments, and receptionist duties, as well as specialized training in medical terminology, medical record keeping, insurance forms and reporting, billing, medical correspondence and medical office ethics. Customer service skills related to the responsibilities of working in a medical office are also taught. During the second semester, advanced students with their own transportation may be able to participate in work experience at approved medical sites. Successful completion of this course and passing the IC3 Certification or MOS exams (two exams/core level) allows students to earn two verified credits.
Pre-requisites: Keyboard Proficiency

Appendix B: Planning Committee Members

and

Advisory Board Members Lists

Planning Committee
Chesterfield Governors Academy
for
Health Sciences
at
Cosby & Monacan High Schools

Barbara Hancock-Henley, Chairperson	CTE Instructional Specialist, CCPS
William Broyles	Principal, Monacan High School
Donna Dalton	Chief Academic Officer, CCPS
Susan Dandridge	Grants Coordinator for Instruction, CCPS
Steve Dimmett	Acting Principal, Chesterfield Technical Center
Hunter Durvin	Manager of Sports Medicine, CJW Medical Center
Michael Gill	Executive Principal for CTE and Director of Middle School Education, CCPS
Nancy Hoover	Director for Research & Evaluation, CCPS
Seth Leibowtiz	Assistant Vice Provost, Director of Community Engagement, Virginia Commonwealth University
Jeremy Lloyd	Director for Curriculum and Instruction, CCPS
Suzan A. Marshall	PEER Consortium Coordinator, John Tyler Community College
Brenda Mayo	Principal, Cosby High School
Belinda Merriman	Assistant Principal, Monacan High School
Paul Nussbaum	Director of Academic Affairs, ECPI
Michael Ormsmith	Acting Coordinator Health Science, Monacan
Cassandra Rogers	Coordinator Health Science, Cosby
Ivan Schwartz	Administrator, Bon Secours Sports Medicine
Beth Teigen	Executive Director for School Administration, CCPS
Joseph Tylus	Director of High School Education, CCPS
Ellen Vance	Chief Human Resource Officer, Sheltering Arms Hospital

Initial Planning Committee
Cosby High School
Health Sciences

Ken Butta	Instructional Specialist Science, CCPS
Karen Cameron	Central Virginia Health Planning Agency
Donna Dalton	Curriculum & Instruction
Tracy Daniels	Brandermill Woods Retirement Facility
Ceal Donahue	Program Manager CTE, CCPS
Teresa Edwards	Executive VP, Bon Secours, St. Francis Medical Center
Pam Lumsden	Administrator, Thomas Dale HS
Melody Moore, Ph.D.	Dean, John Tyler Community College
Joe Oley	Construction, CCPS
Toni Rice	CJW Medical Center
Alice Rose, Ph.D.	Staff, Chesterfield Technical Center
Hugo Seibel, Ph.D.	Associate Dean of Medicine for Student Affairs, Medical College of Virginia
Lisa Sharpe	Director of Development & Programs, John Randolph Foundation
Ed Witthoefft	Director, CCPS

Current School Site Advisory
Cosby High School
Health Sciences

Cassandra Rogers	Coordinator Health Science Center, CCPS
Brenda Mayo, Ed.D.	Principal, Cosby High School
Hunter Durvin, ATC	Manager of Sports Medicine, CJW Medical Center
Seth Leibowitz	Assistant Vice Provost, Director of Community Engagement, Virginia Commonwealth University
Dani Fink	Current President Booster Shots
Shelly Schuetz	Prior President Booster Shots
Maria Moses	Brandermill Woods
Katherine Dec, M.D.	Chippenham-Johnston Willis Hospital
Amy Allen	Math Teacher, CCPS
Wendy Fry	Science Department Chairperson, CCPS
Brenda Miller	Office Assistant

Initial Planning Committee
&
Current School Site Advisory
Monacan High School
Health Sciences

William Broyles	Principal, Monacan High School
Belinda Merriman	Assistant Principal, Monacan High School
Kim Raimist	Science Staff, Lloyd C. Bird HS
Ivan Schwartz	Administrator, Bon Secours Sports Medicine
Teresa Crist	Director of Radiation Oncology, Bon Secours
Mary Burlegh	Director of Diagnostic Services, St. Francis
Allen Bailey	Administrative Director, St. Mary's
Valarie Szalay	Administrative Director, Memorial Regional and Richmond Community Hospital
Lisa Tuzzo	Department Manager, Radiation Oncology
Lauren Baker	Current Student (Monacan Graduate) in HNFE at Virginia Tech University
Kristen Snyder	School Counseling Coordinator, CCPS
Ron Tuzzo	Science Teacher, Monacan High School
Michael Ormsmith	Teacher, Monacan High School
Kristen Beck	Athletic Trainer, CJW
Bill Bridgforth	Construction, CCPS
Pete Minton	Construction, CCPS
Denise Langford	PTSA President, Monacan High School
Barbara Hancock-Henley	Instructional Specialist CTE, CCPS
Ceal Donahue	Program Manager CTE, CCPS
Paul Kiritsis, M.D.	West End Orthopedic

Chesterfield County Public Schools Advisory
CTE Committee
&
Governors Academy for Health Science

LAST	*FIRST*	*TITLE*	*ADDRESS*
ANDERSON	DAVE		PLACEMAKING PLLC
BYRD	ROBIN	SCHOOL BUSINESS PARTNERSHIP SPECIALIST	CHESTERFIELD COUNTY PUBLIC SCHOOLS BUSINESS & GOVERNMENT RELATIONS
CARR	BRYAN	INSTRUCTIONAL SPECIALIST SCHOOL COUNSELING SERVICES INSTRUCTIONAL SUPPORT	CHESTERFIELD COUNTY PUBLIC SCHOOLS
COFFEY	CRAIG	SENIOR MGR NORTH AND LATIN AMERICAN LOGISTICS	AFTON CHEMICAL CORPORATION
DALTON	DONNA	CHIEF ACADEMIC OFFICER	CHESTERFIELD COUNTY PUBLIC SCHOOLS
DONOHUE	CEAL	CTE PROGRAM MANAGER	CHESTERFIELD COUNTY PUBLIC SCHOOLS
GILL	DR. MICHAEL	EXECUTIVE PRINCIPAL	CHESTERFIELD COUNTY PUBLIC SCHOOLS
GRINNAGE	KYLE	INDEPENDENT CONSULTANT	BEAUTICONTROL
HANCOCK-HENLEY	BARBARA	CTE PROGRAM MANAGER	CHESTERFIELD COUNTY PUBLIC SCHOOLS
KIRKPATRICK	GEORGIA	WORKFORCE TRANSITION AND TESTING COORDINATOR FOR CTE	CHESTERFIELD COUNTY PUBLIC SCHOOLS

KING	DONNA	ADMINISTRATIVE ASST	CHESTERFIELD COUNTY PUBLIC SCHOOLS
MARSHALL	SUSAN	PEER COORDINATOR	JOHN TYLER COMMUNITY COLLEGE
PERKINS	SHARON	PRESIDENT	APPOMATTOX TITLE CO., INC.
POLLOCK	LAURA	MORTGAGE LOAN OFFICER	MONARCH MORTGAGE
TEIGEN	DR. BETH	EXECUTIVE DIRECTOR SCHOOL ADMINISTRATION	CHESTERFIELD COUNTY PUBLIC SCHOOLS
VAVRA	TOM		RIVERS EDGE DEVELOPMENT CORPORATION
FRENCH	JOHN	DIRECTOR, PROJECTS AND APPLICATIONS	BLUEPRINT AUTOMATION
OXFORD	DEMUS	SENIOR IT MANAGER	ALTRIA
SIFFERT	JEFF	BUSINESS DEVELOPMENT/PROGRAM MANAGER	WAUFORD GROUP
*ROGERS	CASSANDRA	COORDINATOR	COSBY HEALTH SCIENCES
*ORMSMITH	MICHAEL	COORDINATOR	MONACAN HEALTH SCIENCES

*Pending approval from the School Board (added for direct representation from the two Governors Academy Health Science sites)

Current Advisory
Chesterfield Technical Center
Health Sciences Fields

Dr. Greg	Buck	Bio Tech
Bernie	Fisher	Bio Tech
Ms. Miche'al	Fuzy	Bio Tech
Melanie	Haines-Bartolf	Bio Tech
Dr. Joyce	Lloyd	Bio Tech
Dr. Jeremy	Lloyd	Bio Tech
William	Miller	Bio Tech
Melinda	Miller	Bio Tech
Dr. Melody	Moore	Bio Tech
Mr. Adam	Potts	Bio Tech
Brian	Sayre	Bio Tech
Dave	Anderson	CTE
Judy	Averill	CTE
Robin	Byrd	CTE
Bryan	Carr	CTE
Kathryn	Catina	CTE
Craig	Coffey	CTE
Donna	Dalton	CTE
Cecilia	Donohue	CTE
Mike	Gill	CTE
Kyle	Grinnage	CTE
Barb	Hancock-Henley	CTE
Barbara	Jones	CTE
Donna	King	CTE
Henry	Mack	CTE
Suzan	Marshall	CTE
Chris	Molenkamp	CTE
Sharon	Perkins	CTE
Laura	Pollock	CTE
Dr. Alice	Rose	CTE
Beth	Teigen	CTE
Tom	Vavra	CTE
Dawn	Wells	CTE
Dr.	Bach	Dental
Dr.	Bates	Dental
Dr. Scott	Bittler	Dental
Dr. Jeff	Blackburn	Dental
Dr. William	Callery	Dental

Dr. Harold	Cruse	Dental
Dr.	Dabney	Dental
Dr. David	Ellis	Dental
Dr. Jonathan	Ellis	Dental
Dr.	Ferry	Dental
Dr.	Friend	Dental
Dr. Jose	Gallegos	Dental
Dr.	Galston	Dental
Dr. James	Glaser	Dental
Dr.	Gore	Dental
Dr.	Hanley	Dental
Dr. Kurt	Haselman	Dental
Dr. Alex	Hawkins	Dental
Dr.	Hunt	Dental
Dr. John	King	Dental
Dr. Randal	King	Dental
Dr.	Krone	Dental
Dr. Barry	Kurzer	Dental
Sonja	Lauren	Dental
Dr. Hazel	Luton, CDA	Dental
Dr. James	Luton, DDS	Dental
Dr.	Malone	Dental
Dr. Richard	Marcus, D.D.S.	Dental
Dr. Michael	McMunn	Dental
Dr.	Moore	Dental
Dr.	Neighbors	Dental
Dr.	Niamtu	Dental
Dr.	Olivero	Dental
Dr.	Overton	Dental
Dr.	Penterson	Dental
Dr. James	Schroeder	Dental
Dr. Sandra	Smith	Dental
Dr.	Sorenson	Dental
Dr.	Vacca	Dental
Dr. Terry	Webber	Dental
Dr.	White	Dental
Dr.	Williams	Dental
Dr.	Wilson	Dental
Dr.	Zentgraf	Dental
Carol	Beville	Med Asst
Simone	Butler	Med Asst

Chris	Clark	Med Asst
Lynette	Dickerson	Med Asst
Louisa	Johnson	Med Asst
Kathy	Kaiser, MSHA	Med Asst
Laurie	Kent	Med Asst
Dawn	Quada	Med Asst
Michelle	Rhodes, RN	Med Asst
Shirley	Robbins, RN	Med Asst
Jean	Russell	Med Asst
Eddie	Sowers	Med Asst
Wanda	Stephenson	Med Asst
Diane	Van De Vander	Med Asst
Beverly	Zevarkis	Med Asst
Brigette	Booth Terrell	Medical Systems
Deidre	Foerster	Medical Systems Director of Volunteer Services
Marie	Gilmore	Medical Systems Director of Volunteer Services
Wanda	Stephenson	Medical Systems
Rebecca	Taylor	Medical Systems
Allen	NURSING	Chippenham Medical Center
Foote, RN, MS	NURSING	
Lee, MS, RN	NURSING	Chippenham Medical Center
Ley, RN	NURSING	Lucy Corr Village
Miller, RN	NURSING	
Parsons, RN, MSN	NURSING	Vice President SRMC Professional Schools
Pratt, RN, MS	NURSING	McGuire VA Center
Robinson, BSN, RN	NURSING	Chippenham/Johnston Willis Medical Centers
Simmons, RN	NURSING	McGuire VA Center, Nursing Ed Dept.
Stephenson	NURSING	McGuire VA Center Nursing Education Dpt
Ulmer, RN, PhD	NURSING	John Tyler Community College
Windom, MSN, RN	NURSING	McGuire VA Center

Appendix C: Planning Committee Members

and

Advisory Board Members Agreements

Planning Committee Agreement
Governor's Health Science Academy

An essential component of the establishment of the Governor's Health Science Academy is the establishment of the planning committee. As a member of this committee, I will:

1. Assist in the development of academy goals and objectives
2. Identify the needs of the community and workforce
3. Assist in the design of the facilities
4. Assist the curriculum coordinator in the alignment of course objectives
5. Assist in the evaluation of the programs, courses, and overall operation of the academy
6. Assist in the dual enrollment process to establish each course at the high school level as a dual enrollment course*

By signing this agreement, I certify that I am a willing participant and supporter in the establishment of the Governor's Health Science Academy.

Name
Title
Chesterfield County Public Schools

Date: 01/9/013

Joe Tylus
Director of High Schools
Chesterfield County Public Schools

Date: 01/9/13

*This will be articulated between the community colleges and the high school dual enrollment coordinator.

Planning Committee Agreement
Governor's Health Science Academy

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By signing this agreement, I certify that I am a willing participant and supporter in the establishment of the Governor's Health Science Academy.

Date: 01/9/013

William A. Broyles
Principal
Chesterfield County Public Schools

Date: 01/9/13

Joe Tylus
Director of High Schools
Chesterfield County Public Schools

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By signing this agreement, I certify that I am a willing participant and supporter in the establishment of the Governor's Health Science Academy.

Donna Dalton

Date: 01/9/13

Donna Dalton
Chief Academic Officer
Chesterfield County Public Schools

Date: 01/9/13

Joe Tylus
Director of High Schools
Chesterfield County Public Schools

*This will be articulated between the community colleges and the high school dual enrollment coordinator.

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Governor's Health Science Academy

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By signing this agreement, I certify that I am a willing participant and supporter in the establishment of the Governor's Health Science Academy.

Date: 01/9/013

Name: Susan Dandridge
Title: Grants Coordinator
Chesterfield County Public Schools

Date: 01/9/13

Joe Tylus
Director of High Schools
Chesterfield County Public Schools

*This will be articulated between the community colleges and the high school dual enrollment coordinator.

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Governor's Health Science Academy

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By signing this agreement, I certify that I am a willing participant and supporter in the establishment of the Governor's Health Science Academy.

Date: 01/9/013

Name: Steven D. Dimmett
Title: Acting Principal, Chesterfield Technical Center
Chesterfield County Public Schools

Date: 01/9/13

Joe Tylus
Director of High Schools
Chesterfield County Public Schools

*This will be articulated between the community colleges and the high school dual enrollment coordinator.

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Governor's Health Science Academy

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5. Assist in the evaluation of the programs, courses, and overall operation of the academy
6. Assist in the dual enrollment process to establish each course at the high school level as a dual enrollment course (if applicable)

By signing this agreement, I certify that I am a willing participant and supporter in the establishment of the Governor's Health Science Academy.

Hunter Durvin, ATC

Date: 01/23/013

Hunter Durvin
Manager of Sports Medicine
CJW Medical Center

Date: 01/23/13

Joe Tylus
Director of High Schools
Chesterfield County Public Schools

Planning Committee Agreement
Governor's Health Science Academy

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6. Assist in the dual enrollment process to establish each course at the high school level as a dual enrollment course*

By signing this agreement, I certify that I am a willing participant and supporter in the establishment of the Governor's Health Science Academy.

Date: 01/9/13

Michael B. Gill, Ed.D.
Executive Principal of Career and Technical Education
Chesterfield County Public Schools

Date: 01/9/13

Joe Tylus
Director of High Schools
Chesterfield County Public Schools

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Planning Committee Agreement
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By signing this agreement, I certify that I am a willing participant and supporter in the establishment of the Governor's Health Science Academy.

Nancy R. Hoover
Director, Research and Evaluation
Chesterfield County Public Schools

Date: 01/9/013

Joe Tylus
Director of High Schools
Chesterfield County Public Schools

Date: 01/9/13

*This will be articulated between the community colleges and the high school dual enrollment coordinator.

Planning Committee Agreement
Governor's Health Science Academy

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By signing this agreement, I certify that I am a willing participant and supporter in the establishment of the Governor's Health Science Academy.

Seth Leibowitz
Assistant Vice Provost, Division of Community Engagement
Virginia Commonwealth University

Date: 01/24/013

Joe Tylus
Director of High Schools
Chesterfield County Public Schools

Date: 01/24/13

*This will be articulated between the community colleges and the high school dual enrollment coordinator.

Planning Committee Agreement
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By signing this agreement, I certify that I am a willing participant and supporter in the establishment of the Governor's Health Science Academy.

Jeremy Lloyd

Date: 01/9/013

Dr. Jeremy Lloyd
Director of Curriculum & Instruction
Chesterfield County Public Schools

Date: 01/9/13

Joe Tylus
Director of High Schools
Chesterfield County Public Schools

*This will be articulated between the community colleges and the high school dual enrollment coordinator.

Planning Committee Agreement
Governor's Health Science Academy

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By signing this agreement, I certify that I am a willing participant and supporter in the establishment of the Governor's Health Science Academy.

Suzan A. Marshall
PEER Consortium Coordinator
John Tyler Community College

Date: 01/23/13

Joe Tylus
Director of High Schools
Chesterfield County Public Schools

Date: 01/23/13

*This will be articulated between the community colleges and the high school dual enrollment coordinator.

Planning Committee Agreement
Governor's Health Science Academy

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6. Assist in the dual enrollment process to establish each course at the high school level as a dual enrollment course*

By signing this agreement, I certify that I am a willing participant and supporter in the establishment of the Governor's Health Science Academy.

Dr. Brenda R. Mayo
Principal – Cosby High School
Chesterfield County Public Schools

Date: 01/9/013

Joe Tylus
Director of High Schools
Chesterfield County Public Schools

Date: 01/9/13

*This will be articulated between the community colleges and the high school dual enrollment coordinator.

Planning Committee Agreement
Governor's Health Science Academy

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6. Assist in the dual enrollment process to establish each course at the high school level as a dual enrollment course*

By signing this agreement, I certify that I am a willing participant and supporter in the establishment of the Governor's Health Science Academy.

Belinda Merriman

Date: 01/9/013

Belinda Merriman
Assistant Principal
Monacan High School
Chesterfield County Public Schools

Date: 01/9/13

Joe Tylus
Director of High Schools
Chesterfield County Public Schools

*This will be articulated between the community colleges and the high school dual enrollment coordinator.

Planning Committee Agreement
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By signing this agreement, I certify that I am a willing participant and supporter in the establishment of the Governor's Health Science Academy.

Date: 01/23/13

Paul Nussbaum
Director of Academic Affairs
ECPI University, Richmond, VA Campus

Date: 01/23/13

Joe Tylus
Director of High Schools
Chesterfield County Public Schools

*This will be articulated between the community colleges and the high school dual enrollment coordinator.

Planning Committee Agreement
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6. Assist in the dual enrollment process to establish each course at the high school level as a dual enrollment course*

By signing this agreement, I certify that I am a willing participant and supporter in the establishment of the Governor's Health Science Academy.

Date: 01/9/013

Michael Ormsmith
Coordinator Health Science, Monacan
Chesterfield County Public Schools

Date: 01/9/13

Joe Tylus
Director of High Schools
Chesterfield County Public Schools

*This will be articulated between the community colleges and the high school dual enrollment coordinator.

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By signing this agreement, I certify that I am a willing participant and supporter in the establishment of the Governor's Health Science Academy.

Cassandra Rogers

Date: 01/9/013

Cassandra Rogers
Coordinator Health Science, Cosby
Chesterfield County Public Schools

Date: 01/9/13

Joe Tylus
Director of High Schools
Chesterfield County Public Schools

*This will be articulated between the community colleges and the high school dual enrollment coordinator.

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4. Assist the curriculum coordinator in the alignment of course objectives
5. Assist in the evaluation of the programs, courses, and overall operation of the academy
6. Assist in the dual enrollment process to establish each course at the high school level as a dual enrollment course*

By signing this agreement, I certify that I am a willing participant and supporter in the establishment of the Governor's Health Science Academy.

Ivan Schwartz
Administrative Director of Sports Medicine
Bon Secours Virginia Health System

Date: 01/9/013

Joe Tylus
Director of High Schools
Chesterfield County Public Schools

Date: 01/9/13

*This will be articulated between the community colleges and the high school dual enrollment coordinator.

Planning Committee Agreement
Governor's Health Science Academy

An essential component of the establishment of the Governor's Health Science Academy is the establishment of the planning committee. As a member of this committee, I will:

1. Assist in the development of academy goals and objectives
2. Identify the needs of the community and workforce
3. Assist in the design of the facilities
4. Assist the curriculum coordinator in the alignment of course objectives
5. Assist in the evaluation of the programs, courses, and overall operation of the academy
6. Assist in the dual enrollment process to establish each course at the high school level as a dual enrollment course*

By signing this agreement, I certify that I am a willing participant and supporter in the establishment of the Governor's Health Science Academy.

Beth N. Teigen

Date: 01/9/13

Beth N. Teigen, Ph. D
Executive Director of School Administration
Chesterfield County Public Schools

Date: 01/9/13

Joe Tylus
Director of High Schools
Chesterfield County Public Schools

*This will be articulated between the community colleges and the high school dual enrollment coordinator.

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Governor's Health Science Academy

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6. Assist in the dual enrollment process to establish each course at the high school level as a dual enrollment course*

By signing this agreement, I certify that I am a willing participant and supporter in the establishment of the Governor's Health Science Academy.

Joseph Tylus, Ph.D.
Director of High Schools
Chesterfield County Public Schools

Date: 01/9/013

Joe Tylus
Director of High Schools
Chesterfield County Public Schools

Date: 01/9/13

*This will be articulated between the community colleges and the high school dual enrollment coordinator.

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5. Assist in the evaluation of the programs, courses, and overall operation of the academy
6. Assist in the dual enrollment process to establish each course at the high school level as a dual enrollment course*

By signing this agreement, I certify that I am a willing participant and supporter in the establishment of the Governor's Health Science Academy.

Name Ellen Vance
Title Chief Human Resources Officer
Establishment Sheltering Arms Hospital

Date: 01/9/013

Joe Tylus
Director of High Schools
Chesterfield County Public Schools

Date: 01/9/13

*This will be articulated between the community colleges and the high school dual enrollment coordinator.

Appendix C

Dual Enrollment Contract

Between
John Tyler Community College
and
Chesterfield County Public Schools

The purpose of this agreement is to set out the terms and conditions upon which courses will be offered under the "Virginia Plan for Dual Enrollment Between Virginia Public Schools and Community Colleges" established by the Secretary of Education, the VCCS Chancellor, and the Superintendent of Public Instruction in January 2005. 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 towards graduation.

Each party does hereby agree to the following:

1. Under this agreement, John Tyler Community College, (herein after "the College"), will make available college-level courses to students of Chesterfield County Public Schools for the 2011-2012 academic year. This agreement will continue until written notice of termination (section 15) is submitted by either party.

   The courses to be offered will be established by mutual agreement of both parties for the fall and spring semesters.

   The responsibilities of the parties pursuant to this agreement are conditional upon student registration for the course(s) being completed and subject to adequate student enrollment as determined by the college. The College and Chesterfield County Public Schools reserve the right to cancel any class sections or add sections, no later than the census date for the class as determined by the college.

2. Tuition & Fees

   Pursuant to the Virginia Plan for Dual Enrollment, schools and colleges are encouraged to provide high school students the opportunity for dual enrollment at no cost to them or their families. If tuition will be charged, then the School will pay on behalf of the student or students, or the student will pay the College, the mandatory tuition and any fees established by the State Board for Community Colleges at the rate then in effect at the time the classes begin. Where the School agrees to pay the tuition and fees, the College will bill the School on a semester basis. When all dual enrollment instructors are employees of the School Division an equivalent reimbursement for instruction will be applied to the School Division's invoice. If the College provides a full- or part-time instructor, the School Division will be billed for that faculty member's services.

3. Textbooks

   The College reserves the right to determine the textbooks used in dual enrollment courses. The provision of all dual enrollment course textbooks is the responsibility of Chesterfield County Public Schools. Required textbooks should be purchased by the School Division when a new course is established or during the next purchasing cycle for established courses.

4. Payment for Other Services

Fees and reimbursement for other costs and services will be determined by mutual consent of Chesterfield County Public Schools and the College per Attachment 1, which is hereby incorporated herein and made a part of this Agreement.

5. Faculty

a. Selection

(1) Authority to Select/Hire

The selection and supervision of instructional faculty for all community college courses covered by this agreement will be the responsibility of the College. Chesterfield County Public Schools may recommend qualified teachers who are interested in teaching in the dual enrollment program to the College for consideration. Each faculty member teaching in the dual enrollment program shall be a member of the college's full-time or part-time faculty or an employee of Chesterfield County Public Schools.

(2) Dual enrollment course faculty must meet the minimum credential requirements set forth by Form VCCS-29 (Attachment 2) and the Southern Association of Colleges and Schools.

b. Payment

If the instructor for dual enrollment course(s) is employed full time by Chesterfield County Public Schools and the course(s) are part of the assigned teaching workload, the College may reimburse Chesterfield County Public Schools for the services of its employee in lieu of direct compensation to the faculty member. If, however, the College employs an instructor that is not affiliated with Chesterfield County Public Schools, the College will compensate the faculty member directly. Reimbursement and/or payment of faculty salaries directly will be in accordance with the Virginia Community College System approved lecturer rates depending on qualifications of the instructor and will occur no later than the end of the semester of the course. Other reimbursement procedures, mutually agreeable to both the college and the school division, can also be implemented as an alternative if evidenced in writing.

c. Faculty Responsibilities

a. Instructors will be expected to conform to college policies for the dual enrollment courses they teach, such as preparing course syllabi, verifying class rosters, reporting student progress to the college at mid-semester, taking attendance, and providing final grades at the end of the semester.

b. Evaluation

a. Instructor Evaluation-- The community college will conduct faculty evaluations for dual enrollment instructors using the college guidelines adopted for all adjunct faculty.

b. Student Evaluation – End of course student evaluations will be conducted each year for each course offered through the dual enrollment program. Results of the student evaluations will be compiled and shared with the Director and Coordinator of Career Pathways, faculty, and designated school division representative upon your request.

6. Students

a. Selection and Eligibility to Participate in Dual Enrollment Program

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

(2) Students must meet admission and course placement requirements of the college. Requirements for admission include the completion of an application for admission to the college, P2 forms, and the completion and receipt of satisfactory scores on the college's placement tests when required.

(3) Exceptions to the policies established in 6.a.(1) and 6.a.(2) regarding student eligibility may be made on a case-by-case basis with the approval of the public school superintendent and appropriate community college officials, so long as such exceptions are in accordance with the VCCS Policy Manual.

7. College Administrative Responsibilities

a. The College, through its instructor(s), will provide the appropriate Chesterfield County Public Schools officials with progress reports on each student from time to time as shall be agreed by the contracting School System and College. At the conclusion of each college academic term, the student will receive a college grade for each course in which he/she was registered and such grades will become part of the student's permanent college record.

b. A record will be maintained by the College for each student in the Dual Enrollment Program as a part of the permanent college record maintained by the College's Admissions and Records office. The College will send transcripts to colleges/universities upon a student's request.

c. The College will provide a minimum of 750 minutes of instruction (to include testing and evaluation) for each lecture credit or lab contact hour per semester to Chesterfield County Public Schools students enrolled in college courses under this agreement.

8. High School Administrative Responsibilities

Chesterfield County Public Schools will verify enrollments in each class section, and instructors will report grades to the College within a prescribed period of time, according to established college procedures.

9. Award of Credit

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

10. Course Standards

a. Course Equivalency, Evaluation, and Assessment

Assessment has long been recognized in Virginia as an important aspect of an effective instructional program. In this spirit, all dual enrollment courses developed and implemented under the auspices of the Virginia Plan for Dual Enrollment and this contract shall include a formal mechanism for evaluation. The College has the responsibility to ensure that all dual enrollment courses taught are equivalent to other instruction offered by the College, specifically in terms of course objectives, components of the syllabi, level and rigor of content, evaluation of students, textbooks, student outcomes and assessment and faculty evaluation.

b. Modifications of Policies

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. Dual enrollment courses will conform to the high school calendar.

c. Student Performance

The College reserves the right to advise the student, parents, and School System that the student does not have sufficient skills or abilities to continue in the courses selected after the first semester.

11. Agreement Contacts

Contact persons for this agreement are:

- School Division: Ed Witthoeft / Neal Dinkins

- High School: Dr. Joe Tyler
- College, Academic Matters: Dr. Peggy Westcott, Director of Career Pathways
- College, Financial Matters: Mr. Leon Brown, Business Manager

12. Transferability

Normally, academic courses intended for transfer with a grade of "C" or above will transfer to institutions of higher education. However, no guarantee can be made to students regarding transferability to all colleges and universities. Community college occupational/technical course credits earned 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 VCCS courses exists. The School should advise students to consult with transfer institutions in order to determine if their courses will be accepted for transfer.

13. The College reserves the right to enroll other students in the courses subject to this contract when those courses are offered on the College's campus or sites not at the high school.

14. 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.

15. If either party wishes to terminate this agreement, a written notice must be provided to the other party within 30 days of the requested termination date. Termination will not take place until dual enrollment courses in progress are completed.

16. The College or Chesterfield County Public Schools shall not unlawfully discriminate on the basis of race, nationality, ethnicity, religion, gender, age, or disability in any undertaking pursuant to this contract. Disabled students will continue to receive accommodations through the School pursuant to the Individuals with Disabilities Education Improvement Act of 2004, 20 U.S.C § 1400.

17. 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 Virginia law.

Signatures:

By: William F. Taylor — 12/26/11
William F. Taylor, Vice President of Finance and Administration — Date
John Tyler Community College

By: Marcus J. Newsome — 11-21-11
Dr. Marcus Newsome, Superintendent — Date
Chesterfield County Public Schools

VIRGINIA STATE UNIVERSITY-SCHOOL DISTRICT/HIGH SCHOOL DUAL ENROLLMENT AGREEMENT

Virginia State's Academic Partnership Program, (VSAPP)

__X__ School District **_____ High School:**

Term of Agreement: Academic Year 2012 - 2013

Virginia State University, hereafter referred to as VSU, in partnership with various school districts and high schools, offers the *Virginia State's Academic Partnership Program (VSAPP)*, a pathway to a college education for high school students, who wish to earn college credits, while concurrently satisfying the required high school units for graduation from high school.

Through VSAPP, qualified high school students, with the consent of their parent(s)/guardian(s), and the recommendation of their school principal(s)/designee(s), may enroll in University courses through VSU. Courses will be taught at the high school sites, in the familiar and supporting settings, with no disruption to the students' daily schedules.

Although courses will be taught at the high schools, the use of VSU's facilities is encouraged, where teaching and learning materials may be available, particularly for teachers. Students will be issued identification/library cards, and both students, if escorted, and their teachers are encouraged to visit VSU's campus to utilize the library and laboratories. Classes, problem sessions and tutorial meetings may also be arranged at the University. The VSAPP faculty liaison will travel to the high school settings to meet with adjunct instructors (teachers), and often become involved in classroom interactions.

The course curricula are identical to those used on VSU's campus; the course syllabi and tests are also the same as those used at the University. The grades earned are considered dual credit for high school and the University. VSU transcripts will reflect college course credit, the same as that of the University students.

The names and credentials of prospective VSAPP teachers are forwarded by the high school administration to the VSAPP Office for review, which will be conducted by the corresponding University department, with approval from the Associate Provost. Once approved, those teachers accepted, hereafter referred to as adjunct instructors, will work in a "team arrangement" with a designated, University department liaison.

An orientation for adjunct instructors with the designated University faculty liaison must precede the offering of VSU courses, and will include the examination of the course design, teaching materials, methodology and other dimensions for facilitating the adaptation of campus-designed courses to the high school setting.

At the end of each semester, several program evaluations must be conducted, including questionnaires for students, parents and adjunct instructors. Course assessments will also be provided by the University faculty in the disciplines in which dual enrollment courses are taught.

Registration and other facilitation matters will be conducted by the VSAPP liaison. Coordinator and execution of the partnership will be based on the following conditions:

I. **The University Agrees To:**

A. Enroll in its courses, according to its standards and requirements, qualified high school students for instruction in courses designated as dual credit.

B. Provide descriptive information for each course included in the dual credit program, to include a syllabus, text materials and evaluation procedures.

C. By mutual agreement only, make changes in adjunct instructors, course materials, or make other adjustments for dual credit courses.

D. Conduct an extensive program evaluation, including evaluations by the faculty liaisons and adjunct instructors, along with student and parent evaluations of the courses.

E. Grant dual enrollment students the same academic privileges and rights accorded to other University students.

F. Establish annual tuition costs for participating students.

II. **The School District Agrees To:**

A. Inform high school students about the dual enrollment program, and receive registration applications from students seeking entry into courses for dual credit.

B. Maintain procedures for screening and approving applications for entry into dual credit courses.

C. Provide academic counseling services for students enrolled in, or seeking enrollment in dual credit courses.

D. Extend all privileges normally conferred upon students in high school to students in courses for dual credit.

E. Have textbooks and course materials paid for by the student, unless provided by the school district.

F. Provide the opportunity for students to visit the University at least once during the course to observe other University classes, and take part in other University-related matters, jointly agreed upon by the adjunct instructors and faculty liaisons.

G. Permit all adjunct instructors to attend and participate in scheduled faculty development workshop at Virginia State University.

H. Distribute and collect student and parent evaluations.

I. Enforce the policy that VSU course drops are limited to the first five days of the session.

III. <u>It Is Mutually Agreed That:</u>

A. Representatives of both parties will meet as necessary for the purpose of planning and evaluating academic and administrative aspects of the collaborative program, as well as discuss any problems and matters relative to the relationship of the parties in this agreement.

B. Dual credit course offerings will be approved by both parties.

C. Students will register for courses at times convenient for both parties.

D. During the time that high school students are on the campus of the University, they will be subject to the rules and regulations of the University, as well as those set forth by the respective school district or high school.

E. This agreement shall become effective September 1, 2011, and shall continue for a period of one year. The agreement may be terminated at any time by mutual consent of both parties. Either party may terminate the agreement by giving a six-month written notice.

Courses being offered by the High School for **2012-2012** are on the following attached addendum to this agreement.

FOR VIRGINIA STATE UNIVERSITY:

Keith J. Miller — May 4, 2012

President or Designee — Date

CHESTFIELD COUNTY PUBLIC SCHOOLS:

Marcus J. Newsome — May 4, 2012

Superintendent or Designee — Date

FORMAL AGREEMENT

Virginia Commonwealth University
Office of the Vice President for Health Sciences
Division for Health Sciences Diversity

This agreement is between the following four institutions:

- Virginia Commonwealth University School of Medicine
- Division of Community Engagement
- Cosby High School Health Sciences Specialty Center

The purpose of this agreement is to establish a linkage between the Virginia Commonwealth University School of Medicine (VCU), Cosby Health Sciences Specialty Center, and the Division of Community Engagement at Virginia Commonwealth University. The purpose of the linkage is to implement a partnership that will ensure sustainability of on going health career pipeline efforts. This pipeline effort of teaching a health careers exploration course will involve exposing students to a variety of health careers so specialty center participants make informed and realistic decisions about the health careers to pursue in college. All partners will develop specific objectives, academic enrichment and motivational activities and intermediate milestones to determine goal achievement.

The above named parties agree that:

- Cosby High School Agrees to

  - Continue working with representatives from VCU to include in its curriculum a Health Careers Exploration Course. The course has been offered in spring 2008, spring 2009, spring 2010, spring 2011, and the spring 2012 academic semesters. The course will continue to be provided in the spring 2013, spring 2014, and spring 2015 academic semesters.
  - Obtain completed registration, consent, and media release forms from students and parents during the semesters in which the course is offered.
  - Provide space and equipment required to support the didactic components of the Introduction to Health Careers course that are taught at Cosby High School.
  - Provide instructors to partner with VCU faculty to teach agreed upon components of the Introduction to Health Careers class.
  - Chesterfield County Schools or Cosby High School will reimburse Virginia Commonwealth University for each student enrolled in the course at a rate of $100/credit ($300 per student)
  - Provide transportation for students to attend scheduled practicum sessions on the VCU campus or other sites identified as a part of the program.

- The Division of Community Engagement agrees to:

- In partnership with the College of Humanities and Sciences & Schools of Education, Engineering, Medicine, Allied Health, Dentistry, and Nursing provide staffing to coordinate the field trips and didactic portions of the health sciences exploration class taught at Cosby High School.
- Coordinate the enrollment, registration, and grading of high school students enrolled in the health sciences exploration classes

- The School of Medicine agrees to
  - In partnership with the Schools of Medicine, Allied Health, Dentistry, and Nursing provide staffing to coordinate the field trips and didactic portions of the health sciences exploration class taught at Cosby High School.
  - Provide instruction and lab activities to help specialty center participants explore health sciences careers.

The Agreement will be reviewed annually by all parties. Changes shall be made in writing and a new agreement shall be signed by all parties.

Signed on .

Dr. Brenda R Mayo 7/23/12

Signature of Official **Date**

Dr. Brenda Mayo, Principal Cosby High School

Cosby High School, Chesterfield County School System.

Seth Leibowitz 8/8/2012

Signature of Official **Date**

Dr. Seth Leibowitz, Assistant Vice Provost

Division of Health Sciences Diversity, Virginia Commonwealth University

M Whitehurst-Cook 8/27/2012

Signature of Official **Date**

Dr. Michelle Whitehurst-Cook

School of Medicine, Virginia Commonwealth University

M. A. Nam 8/24/12

Signature of Official **Date**

Kevin A. Harris, MSA, Assistant Vice President

Virginia Commonwealth University, Academic and Diversity Affairs

SCHOOL AFFILIATION AGREEMENT

THIS AFFILIATION AGREEMENT (the "Agreement") is made as of this 3rd day of January, 2013 by and between Chesterfield County School Board on behalf of Chesterfield Technical Center, hereinafter referred to as "School" and Chippenham & Johnston-Willis Hospitals, Inc., d/b/a CJW Medical Center, hereinafter referred to as "Hospital".

WITNESSETH:

WHEREAS, School offers to enrolled students a degree program in the field of All Healthcare Programs, (Nursing/Respiratory Therapy/Emergency Medical Services/Medical Laboratory/Other Clinical Programs); and

WHEREAS, Hospital operates a comprehensive acute-care medical-surgical facility; and

WHEREAS, School desires to provide to its students a clinical learning experience through the application of knowledge and skills in actual patient-centered situations in a health care facility; and

WHEREAS, Hospital has agreed to make its facility available to School for such purposes.

NOW, THEREFORE, in consideration of the mutual promises contained herein, the parties hereby agree as follows:

1. **RESPONSIBILITIES OF SCHOOL.**

(a) **Clinical Program.** School shall be responsible for the implementation and operation of the clinical component of its program at Hospital ("Program"), which Program shall be approved in advance by Hospital. Such responsibilities shall include, but not be limited to, the following:

(i) Orientation of students to the clinical experience at Hospital;

(ii) Provision of classroom theory and practical instruction to students prior to their clinical assignments at Hospital;

(iii) Preparation of student/patient assignments and rotation plans for each student and coordination of same with Hospital;

(iv) Continuing oral and written communication with Hospital regarding student performance and evaluation, absences and assignments of students, and other pertinent information;

(v) Supervision of students and their performance at Hospital;

(vi) Participation, with the students, in Hospital's Quality Assurance and related programs;

(vii) Performance of such other duties as may from time to time be agreed to between School and Hospital;

(viii) Provide adequate documentation attesting to competency of each instructor.

All students, faculty, employees, agents and representatives of School participating in the Program at Hospital (the "Program Participants") shall be accountable to the Hospital's Administrator.

(b) **Student Statements.** School shall require each Program Participant to sign a Statement of Responsibility, in the form attached hereto as Exhibit A, and a Statement of Confidentiality and Security, in the form attached hereto as Exhibit B.

(c) **Insurance.** School shall obtain and maintain self-insured coverage consisting of $2,000,000 combined single limit General Liability, Automobile Liability, Excess Liability and applicable State Workers' Compensation coverage. A certificate of this coverage is attached as Exhibit C. School and Hospital shall be given a minimum of (15) day's written notice by Chesterfield County prior to cancellation, termination or material change in such coverage.

(d) **Health of Program Participants.** All Program Participants shall pass a medical examination acceptable to Hospital prior to their participation in the Program at Hospital as required by Virginia law. School and/or the Program Participant shall be responsible for arranging for the Program Participant's medical care and/or treatment, if necessary, including transportation in case of illness or injury while participating in the Program at Hospital. In no event shall Hospital be financially or otherwise responsible for said medical care and treatment. Program Participants' medical examination records will be maintained by the School. The School shall attest that all Program Participants in the Program at the Hospital have a medical examination record, which includes the following on file:

(i) Tuberculin skin test within the past 12 months or documentation as a previous positive reactor; and

(ii) Proof of Rubella and Rubeola immunity by positive antibody titers or 2 doses of MMR; and

(iii) Varicella immunity, by positive history of chickenpox or proof of Varicella immunization; and

(iv) Proof of Hepatitis B immunization or declination of vaccine, if patient contact is anticipated.

(e) **Dress Code; Breaks.** School shall require the students to dress in accordance with dress and personal appearance standards approved by School. Such standards shall be in accordance with Hospital's standards regarding same. All Program Participants shall remain on the Hospital premises for breaks, including meals. Program Participants shall pay for their own meals at Hospital.

(f) **Performance.** All faculty provided by School shall be duly licensed, certified or otherwise qualified to participate in the Program at Hospital. School shall have a specially designated staff for the performance of the services specified herein. School and all Program Participants shall perform its and their duties and services hereunder in accordance with all relevant local, state, and federal laws and shall comply with the standards and guidelines of all applicable accrediting bodies and the bylaws, rules and regulations of Hospital and any rules and regulations of School as may be in effect from time to time. Neither School nor any Program Participant shall interfere with or adversely affect the operation of Hospital or the performance of services therein.

(g) **Background Checks.** School shall, in a timely manner at either School's expense or the Program Participant's expense, require each and every student assigned to the Program and every member of the staff/faculty responsible for supervision and/or instruction to consent in writing, under oath, to a criminal background check. The School shall advise those completing the consent forms that the hospital shall receive the results of such criminal background checks. In accordance with the Hospital's request, the School shall, upon request, send the consent forms along with payment for processing either to the Virginia Central Criminal Records Exchange, a criminal justice agency, or directly to the Hospital. If School has students or staff/faculty on-site at Hospital prior to the execution of this Agreement, then School shall immediately conduct a retrospective background check on such persons. The background check shall include, at a minimum, the following:

(i) Social Security Number Verification;

(ii) Criminal Search (7 years or up to 5 criminal searches);

(iii) Employment Verification to include reason for separation and eligibility for re-employment for each employer (if applicable);

(iv) Violent Sexual Offender and Predator Registry Search;

(v) HHS/OIG List of Excluded Individuals/Entities

(vi) GSA List of Parties Excluded from Federal Programs;

(vii) U.S. Treasury, Office of Foreign Assets Control (OFAC), list of Specially Designated Nationals (SDN);

(viii) Applicable State Exclusion List, if one.

The background check for staff/faculty, if licensed or certified caregivers, shall include all of the above and, in addition, shall include the following:

(i) Education verification (highest level);

(ii) Professional License Verification;

(iii) Certification & Designations Check;

(iv) Professional Disciplinary Action Search;

(v) Department of Motor Vehicle Driving History, based on responsibilities;

(vi) Consumer Credit Report, based on responsibilities.

Should the background check disclose (1) conviction of a felony offense, (2) a misdemeanor offense, if job related, (3) termination from a previous job related to criminal conduct or sexually predatory behavior, (4) providing a false statement on the application or resume, (5) inclusion on the list of Ineligible Persons by or of any student and/or member of the staff/faculty, or (6) other adverse information that would affect the student's and/or member of the staff/faculty's participation, School shall immediately remove said student and/or member of the staff/faculty from participation in the Program at Hospital.

(h) School Status. School represents and warrants to Hospital that the School and its Program Participants participating hereunder: (i) are not currently excluded, debarred, or otherwise ineligible to participate in the Federal health care programs as defined in 42 U.S.C. Section 1320a-7b(f) (the "Federal Health Care Programs"); (ii) are not convicted of a criminal offense related to the provision of health care items or services but has not yet been excluded, debarred or otherwise declared ineligible to participate in the Federal health care programs, and (iii) are not under investigation or otherwise aware of any circumstances which may result in the School or a Program Participant being excluded from participation in the Federal health care programs. This shall be an ongoing representation and warranty during the term of this Agreement and the School shall immediately notify Hospital of any change in status of the representation and warranty set forth in this section. Any breach of this Paragraph 1(h) shall give Hospital the right to immediately terminate this Agreement for cause.

2. RESPONSIBILITIES OF HOSPITAL.

(a) Hospital shall accept the Program Participants assigned to the Program by School and reasonably cooperate in the orientation of all Program Participants to Hospital. Hospital shall provide reasonable opportunities for such Program Participants, who shall be supervised by School and Hospital, to observe and assist in various aspects of patient care to the extent permitted by applicable law and without disruption of patient care or Hospital operations. Hospital shall coordinate School's rotation and assignment schedule with its own schedule and those of other educational institutions. Hospital shall at all times retain ultimate control of the Hospital and responsibility for patient care.

(b) Upon the request of School, Hospital shall assist School in the evaluation of each Program Participant's performance in the Program. However, School shall at all times remain solely responsible for the evaluation and grading of Program Participants.

3. MUTUAL RESPONSIBILITIES. The parties shall cooperate to fulfill the following mutual responsibilities:

(a) Students shall be treated as trainees who have no expectation of receiving compensation or future employment from the Hospital or the School.

(b) Any courtesy appointments to faculty or staff by either the School or Hospital shall be without entitlement of the individual to compensation or benefits for the appointed party.

4. WITHDRAWAL OF PROGRAM PARTICIPANTS.

Hospital may request in writing that School withdraw or dismiss a student or other Program Participant from the Program at Hospital when his or her clinical performance is unsatisfactory to Hospital or his or her behavior, in Hospital's discretion, is disruptive or detrimental to Hospital and/or its patients. In such event, said Program Participant's participation in the Program at Hospital shall immediately cease. It is understood that only School can dismiss the Program Participant from the Program.

5. INDEPENDENT CONTRACTOR; NO OTHER BENEFICIARIES.

The parties hereby acknowledge that they are independent contractors, and neither the School nor any of its agents, representatives, Program Participants, or employees shall be considered agents, representatives, or employees of Hospital. In no event shall this Agreement be construed as establishing a partnership or joint venture or similar relationship between the parties hereto. School shall be liable for its own debts, obligations, acts and omissions, including the payment of all required withholding, social security and other taxes or benefits. No Program Participant shall look to Hospital for any salaries, insurance or other benefits. No Program Participant or other third person is entitle to, and shall not, receive any rights under this Agreement.

6. NON-DISCRIMINATION.

There shall be no unlawful discrimination on the basis of race, national origin, religion, creed, sex, age, veteran status, or handicap in either the selection of students for participation in the Program, or as to any aspect of the clinical training; provided, however, that with respect to handicap, the handicap must not be such as would, even with reasonable accommodation, in and of itself preclude the Program Participant's effective participation in the Program.

7. CONFIDENTIALITY.

School and its agents, Program Participants, faculty, representatives and employees agree to keep strictly confidential and hold in trust all confidential information of Hospital and/or its patients and not disclose or reveal any confidential information to any third party without the express prior written consent of Hospital. School shall not disclose the terms of this Agreement to any person who is not a party to this Agreement, except as required by law or as authorized by Hospital. Unauthorized disclosure of confidential information or of the terms of this Agreement shall be a material breach of this Agreement and shall provide Hospital with the option of pursuing remedies for breach, or, notwithstanding any other provision of this Agreement, immediately terminating this Agreement upon written notice to School.

8. TERM; TERMINATION.

(a) The initial term of this Agreement shall be (1) year(s), commencing on February 3, 2013 and ending on February 2, 2014.

(b) Except as otherwise provided herein, either party may terminate this Agreement at any time without cause upon at least thirty (30) days prior written notice, provided that all students currently enrolled in the Program at Hospital at the time of notice of termination shall be given the opportunity to complete their clinical Program at Hospital, such completion not to exceed six (6) months.

9. ENTIRE AGREEMENT.

This Agreement and its accompanying Exhibits set forth the entire Agreement with respect to the subject matter hereof and supersedes all prior agreements, oral or written, and all other communications between the parties relating to such subject matter. This Agreement may not be amended or modified except by mutual written agreement. All continuing covenants, duties and obligations herein shall survive the expiration or earlier termination of this Agreement.

10. SEVERABILITY.

If any provision of this Agreement is held to be invalid or unenforceable for any reason, this Agreement shall remain in full force and effect in accordance with its terms disregarding such unenforceable or invalid provision.

11. CAPTIONS.

The captions contained herein are used solely for convenience and shall not be deemed to define or limit the provisions of this Agreement.

12. **No Waiver.**

Any failure of a party to enforce that party's right under any provision of this Agreement shall not be construed or act as a waiver of said party's subsequent right to enforce any of the provisions contained herein.

13. **Governing Law.**

This Agreement shall be governed and construed in accordance with the laws of the Commonwealth of Virginia.

14. **Assignment; Binding Effect.**

School may not assign or transfer any of its rights, duties or obligations under this Agreement, in whole or in part, without the prior written consent of Hospital. This Agreement shall inure to the benefit of, and be binding upon, the parties hereto and their respective successors and permitted assigns.

15. **Notices.**

All notices hereunder by either party to the other shall be in writing, delivered personally, by certified or registered mail, return receipt requested, or by overnight courier, and shall be deemed to have been duly given when delivered personally or when deposited in the United States mail, postage prepaid, addressed as follows:

If to Hospital: CJW Medical Center
7101 Jahnke Road
Richmond, VA 23225
Attention: Sandy Aderholt, Associate Chief Nursing Officer

Copy to: HCA
One Park Place
Nashville, Tennessee 37203
Attention: Operations Counsel

If to School: Chesterfield Technical Center
10101 Courthouse Road
Chesterfield, VA 23832
Attention: Carole Cheeley, Nursing Coordinator

or to such other persons or places as either party may from time to time designate by written notice to the other.

16. **Execution of Agreement.**

This Agreement shall not become effective or in force until all of the below named parties have fully executed this Agreement.

17. **HIPAA Requirements.**

To the extent that it is applicable, the parties agree to comply with the Health Insurance Portability and Accountability Act of 1996, as codified at 42 U.S.C. Section 1320d ("HIPAA") and any current and future regulations promulgated there under, including, without limitation, the federal privacy regulations contained in 45 C.F.R. Parts 160 and 164 ("Federal Privacy Regulations"), the federal security standards contained in 45 C.F.R. Part 142 ("Federal Security Regulations"), and the federal standards for electronic transactions contained in 45 C.F.R. Parts 160 and 162, all collectively referred to herein as "HIPAA Requirements". The parties agree not to use or further disclose any Protected Health Information (as defined in 45 C.F.R. Section 164.501) or Individually Identifiable Health Information (as defined in 42 U.S.C. Section 1320d), other than as permitted by the HIPAA Requirements and the terms of this Agreement. The parties agree to make their internal practices, books and records relating to the use and disclosure of Protected Health Information available to the Secretary of Health and Human Services to the extent required for determining compliance with the Federal Privacy Regulations. In addition, the parties agree to comply with any state laws and regulations that govern or pertain to the confidentiality, privacy, security of, and electronic and transaction code sets pertaining to, information related to patients.

The School shall direct its Program Participants to comply with the policies and procedures of Hospital, including those governing the use and disclosure of individually identifiable health information under federal law, specifically 45 CFR parts 160 and 164. Solely for the purpose of defining the Program Participants' role in relation to the use and disclosure of Hospital's protected health information, the Program Participants are defined as members of the Hospital's workforce, as that term is defined by 45 CFR 160.103, when engaged in activities pursuant to this Agreement. However, the Program Participants are not and shall not be considered to be employees of Hospital.

18. **No Requirement to Refer.**

Nothing in this Agreement requires or obligates School to admit or cause the admittance of a patient to Hospital or to use Hospital's services. None of the benefits granted pursuant to this Agreement is conditioned on any requirement or expectation that the parties make referrals to, be in a position to make or influence referrals to, or otherwise generate business for the other party. Neither party is restricted from referring any services to, or otherwise generating any business for, any other entity of their choosing.

THE PARTIES HERETO have executed this Agreement as of the day and year first above written.

Chesterfield Technical Center

By: Marcus J. Newsome

Title: Marcus J. Newsome, Ed.D., Superintendent KFS

Date: 2/1/2013

By: Steve D. Dimmett

Title: Steve Dimmett, Acting Principal

Date: 1/22/13

By: C. Cheeley MSEd RN

Title: Carole Cheeley, Nursing Coordinator

Date: 1/22/2013

CJW Medical Center

By: Trula L. Minton

Title: Trula Minton, Chief Nursing Officer

Date: 12/5/12

THE HEALTH CARE CENTER
AT

Lucy Corr Village
6800 Lucy Corr Blvd.
P.O. Drawer 170
Chesterfield, VA 23832
(804) 748-1511

A G R E E M E N T

EDUCATION OF STUDENTS ENROLLED INTHE CERTIFIED NURSES' ASSISTANT AND LICENSED PRACTICAL NURSING COURSES

I. INTRODUCTION

This document is a mutual agreement between the administration of the affiliating agency, The Health Care Center At Lucy Corr Village ("Health Center") and the School Board of Chesterfield County ("School Board") for students enrolled in the Chesterfield County Vocational Centers Certified Nurses' Assistant and Licensed Practical Nursing Courses.

It is understood that the primary purpose of this program is the education of the students for service in the chosen vocation of Certified Nursing Assistant and Licensed Practical Nursing. It is further understood that the affiliating agency shares with the school in the responsibility for the education of the student through the cooperation given the school faculty in the teaching and supervision of the students.

II. THE SCHOOL BOARD OF CHESTERFIELD COUNTY AGREES TO:

A. Maintain approved school for Certified Nursing Assistants and Licensed Practical Nurses.
B. Provide classroom instruction in the care of patients.
C. Supply a qualified instructor to supervise clinical experiences.
D. Provide for equipment and/or medical supplies that are required in addition to those used in the Health Center routine operation.

The responsibilities and obligations of the program instruction are:

1. To assist in developing the total Health Assistant Program.

2. To give close supervision, guidance, and counseling to Certified Nursing Assistant and Licensed Practical Nursing students.

3. To make patient care assignments with the cooperation of the head nurse and the director of nursing.

4. To plan and give related instruction to students during their clinical experience.

5. To evaluate student's performance and confer with the student about such performance.

6. To notify the Health Center regarding the number of students who will report for duty and the date of their arrival while also mutually agreeing upon the station to be worked.

7. To provide transportation for the students.

8. To assure that students know and are subject to the rules and regulations of the Health Center while they are in the clinical area.

9. To have the students comply with the uniform standards that are consistent with the Chesterfield Vocational Center's policies.

10. To establish and comply with a mutually agreed upon work schedule for the students. If it is necessary for the instructor to miss any days during the students;' practical experience, the trainees will not report for duty; and the Health Center will be informed as soon as possible.

11. To provide certain supplies as agreed upon by both parties.

12. To develop policies providing for the safety, welfare, and guidance of students along wit procedures for protecting the Health Center's responsibilities for them.

III. THE HEALTH CENTER AGREES TO:

A. Provide a nursing climate conducive to learning.

B. Allow students to gain clinical experience to fulfill the requirements of the course.

C. Permit the instructor free access to the Nursing and Therapy Units for the purpose of supervising students.

D. Permit students to have supervised experience in nursing techniques taught in the course.

E. Cooperate in coordinating nursing service, Certified Nurses' Assistant, and Licensed Practical Nursing education.

F. Arrange for students to receive sufficient understanding of the patient's condition at the beginning of each day's assignment for the head nurse, or her delegate, in order to safeguard patient care and to create confidence within the students.

G. Provide medical equipment and/or supplies that are used in the regular delivery of routine nursing care. To allow the Training program to use related training materials available in the Health Center library. To make available, as appropriate, resource and in-service persons to supplement the Certified Nursing Assistant and Licensed Practical Nursing Training Program.

IV. DURATION AND REVISION OF AGREEMENT

A. This contract shall be reviewed annually by both parties.

B. A written notice shall be rendered to the affiliating agency or the School Board of Chesterfield County six (6) months prior to terminating this agreement. However, no student presently enrolled in the program shall be affected.

THE SCHOOL BOARD OF CHESTERFIELD COUNTY BY:

5/28/01
Date

Billy K. Cannaday, Jr., Ed.D, Superintendent

CHESTERFIELD TECHNICAL CENTER BY:

Date

J. Michael Rose, Jr., Principal

THE HEALTH CARE CENTER AT LUCY CORR VILLAGE BY:

Date

Jacob W. Mast, Jr., Administrator

LUCY CORR Village
Continuing The Tradition Of Community

CONTRACT ADDENDUM

This addendum renews the mutual agreement between Lucy Corr Village and Chesterfield County Public Schools for the 2012 - 2013 school year.

IN WITNESS WHEREOF, the parties hereto have caused this understanding to be executed by their respective authorized officers as of the year stated in this agreement.

THE SCHOOL BOARD OF CHESTERFIELD COUNTY BY:

8/15/12
Date

Marcus J. Newsome
Marcus J. Newsome, Ed.D., Superintendent

CHESTERFIELD TECHNICAL CENTER BY:

8/14/12
Date

Dr. Michael Gill, Ed.D., Principal

LUCY CORR VILLAGE BY:

8/8/12
Date

Phyllis Bastone, R.N., LNHA
Administrator, Health Services

HEALTH CENTER COMMISSION FOR THE COUNTY OF CHESTERFIELD

James B. Cowan, *Chair, Matoaca District* • Michele A. Stoll, *Vice Chair, Dale District* • James A. Shultz, Ph.D., *Secretary, At Large*
Steven L. Micas, *Midlothian District* • James G. Kalanges, *Bermuda District* • Janice H. Dial, *Clover Hill District* • James R. Copp, *At Large*
Parham Jaberi, MD, MPH, *Advisory Member* • Sarah C. Snead, *Advisory Member* • James R. Musgrave, *Chief Executive Officer*

P. O. Drawer 170, 6800 Lucy Corr Boulevard, Chesterfield, VA 23832-6657 • 804-748-1511 • www.LucyCorrVillage.com

Dual Enrollment Contract
2009 - 2011
Between
J. Sargeant Reynolds Community College
and
Chesterfield County Public Schools

The purpose of this agreement is to set out the terms and conditions upon which courses will be offered under the "Virginia Plan for Dual Enrollment Between Virginia Public Schools and Community Colleges" established by the Secretary of Education, the VCCS Chancellor, and the Superintendent of Public Instruction in January 2005. 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 towards graduation.

Each party does hereby agree to the following:

1. Under this agreement, J. Sargeant Reynolds Community College (College) will make available college-level courses to students of Chesterfield County Public Schools (School Division) for the 2009 – 2010 and 2010 – 2011 academic years.

   The courses to be offered will be established in advance of each academic year for the fall and spring semesters by mutual agreement of both parties.

   This agreement is tentative until registration for the course(s) is completed and is subject to adequate student enrollment as determined by the College. The College and School Division reserve the right, by mutual agreement of both parties, to cancel any class sections or add sections in advance of each academic year.

2. Tuition & Fees

   Rates for tuition will be in accordance with rates established by the State Board for Community Colleges 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 J. Sargeant Reynolds Community College Board for the applicable term. The College will not assess the parking or student activity fees for any dual enrollment student. The College will assess the technology fee as established by the State Board for Community Colleges.

   If the School Division assumes responsibility for the payment of tuition and fees for the student, the School Division will, prior to registration, identify the students to be sponsored, including the students' full names, student identification number, and college course prefix and number. The College will issue an invoice to the School Division after the census date, which is designated as the end of the period when students may add or drop the class without penalty. Full tuition and fees are due for students who do not drop their classes by the drop deadline (census date). Payment is due from the School Division within thirty (30) days of the date of the invoice.

   If the student is responsible for payment of tuition and fees, payment is due at registration. Payment may be made by check, MasterCard, Visa, Discover, or cash.

3. Textbooks

   The College determines the textbooks used in dual enrollment courses. In a case where the School Division uses a different textbook than the book selected by the College, the School Division may request an exception be made

to allow the proposed School Division text to be used in place of the selected College text. The College will review the proposed text and determine whether it is an acceptable alternative to the selected text. At such time as the textbooks are up for replacement, the School Division agrees to order the textbooks currently being used on campus at the College for said courses. The School Division may purchase texts from the College bookstore or directly from the publisher. Unless the School Division elects to provide textbooks, the provision of dual enrollment textbooks is the responsibility of the student.

4. Payment for Other Services

Payment or reimbursement for other costs and services will be determined by written mutual consent of the School Division and the College.

5. Faculty

a. Selection

(1) Authority to Select/Hire
The selection and supervision of instructional faculty for all community college courses covered by this agreement will be the responsibility of the College and shall meet the requirements of Title 22.1, Chapter 15, Article 2 of the Code of Virginia as amended. The School Division may recommend qualified teachers who are interested in teaching in the dual enrollment program to the College for consideration. Each faculty member teaching in the dual enrollment program shall be a member of the college's full- or part-time faculty or an employee of the school division.

(2) Dual enrollment course faculty must meet the minimum credential requirements set forth by Form VCCS-29 (Attachment 1) and the Southern Association of Colleges and Schools.

b. Payment
If the instructor for dual enrollment course(s) is employed full time by the school division and the course(s) are part of the assigned teaching workload, the College will reimburse the School Division for the services of its employee in lieu of direct compensation to the faculty member. Reimbursement will be made based on the college's actual adjunct faculty per credit hour rate times the number of credits of the course(s) taught. The actual adjunct faculty per credit hour rate will be calculated annually based on the prior year's actual adjunct expenditures. Reimbursement will occur no later than the end of the semester of the course.

If, however, the College employs an instructor that is not affiliated with the School Division, the College will compensate the faculty member directly. Payment of faculty salaries will be in accordance with the Virginia Community College System approved adjunct faculty rates depending on qualifications of the instructor. Payment will occur no later than the end of the semester of the course.

c. Faculty Responsibilities

Instructors will be expected to conform to college policies, including but not limited to, preparing course syllabi, verifying class rosters, reporting student progress to the college, taking attendance, and providing final grades at the end of the semester.

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

6. Students

a. Selection and Eligibility to Participate in Dual Enrollment Program

(1) In order to be eligible to participate in the Dual Enrollment Program, high school students must be high school juniors or seniors, have permission of their parent or guardian, be recommended by their high school principal (or designee) to cross register, and meet course prerequisites. High school freshmen and sophomores will be considered on a case by case basis as noted in 6.a.(3) below.

(2) Students must meet admission and course placement requirements of the college. Requirements for admission include the completion of an application for admission to the college, course request forms, residency forms, and the completion and receipt of satisfactory scores on the college's placement tests when required.

(3) Exceptions to the policies established in 6.a.(1) and 6.a.(2) regarding student eligibility may be made on a case-by-case basis with the approval of the School Division superintendent and the College president.

7. College Administrative Responsibilities

a. The College, through its instructor(s), will provide the appropriate School Division officials with progress reports on each student as agreed by the contracting School Division and College. Release of progress reports by the College shall be conditional upon receipt of a proper authorization for the release of grades by the College to the School Division conforming to the requirements of the US DOE FERPA regulations. At the conclusion of each college academic term, the student will receive a college grade for each course in which he/she was registered and such grades will become part of the student's permanent college record.

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

c. The College will provide a minimum of 800 minutes of instruction (to include testing and evaluation) for each lecture credit or lab contact hour per semester to school division students enrolled in college courses under this agreement.

8. High School Administrative Responsibilities

The School Division will verify enrollments in each class section, and instructors will report grades to the College within a prescribed period of time, according to mutually agreed-upon procedures. Dual enrollment course(s) will conform to the high school calendar. The School Division shall not establish dual enrollment classes with a "mix" of dual enrollment and non-dual enrollment students except as described below:

The College will allow the School division to permit mixed enrollment in a dual enrollment class section during the 2009 -2010 academic year in order to allow adequate planning time for the School Division's master scheduling. During the 2009 – 2010 academic year, all students attending a class section defined as a Dual Enrollment class must meet the academic requirements to be in said class, even if the student is not enrolling for Dual Enrollment credit. Furthermore, the non-dual enrollment student will be required to submit a signed acknowledgment indicating that he/she understands that no college credit will be earned for the course regardless of final grade in the course.

9. Award of Credit

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

10. Course Standards

a. Course Equivalency, Evaluation, and Assessment

Assessment has long been recognized in Virginia as an important aspect of an effective instructional program. In this spirit, all dual enrollment arrangements developed and implemented under the auspices of the Virginia Plan for Dual Enrollment shall include a formal mechanism for evaluation. The College has the responsibility to ensure that all dual enrollment courses taught are equivalent to other instruction offered by the college, specifically in terms of course objectives, components of the syllabi, level and rigor of content, evaluation of students, textbooks, student outcomes and assessment and faculty evaluation.

b. Modifications of Policies

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.

c. Student Performance

The College reserves the right to: (1) advise the student, parents, and school division that the student does not have sufficient skills or abilities to continue in the courses selected after the first semester, or (2) determine that a student cannot enroll in a subsequent course.

11. Agreement Contacts

Contact persons for this agreement are:

- the School Division: Dr. Dale Kalkofen ; Ed Witthoefft
- the School: Mike Rose
- the College: Director of Outreach and Recruitment, 804-523-5935
  Vice-President of Finance and Administration, 804-523-5132

12. Transferability

Normally, academic courses intended for transfer with a grade of "C" or above will transfer to institutions of higher education. However, no guarantee can be made regarding transferability to all colleges and universities. Community college occupational/technical course credits earned 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, students should be advised to consult with transfer institutions in order to determine if their courses will be accepted for transfer.

13. The College reserves the right to enroll other students when courses are offered on campus or sites not at the high school.

14. 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.

15. If either party wishes to terminate this agreement, a written notice must be provided within 90 days of the requested termination date. Termination will not take place until dual enrollment courses in progress are completed.

16. The College or the School Division shall not unlawfully discriminate on the basis of race, nationality, ethnicity, religion, gender, age, or disability in any undertaking pursuant to this agreement.

17. 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:

Gary L. Rhodes, President
J. Sargeant Reynolds Community College

Date: 9/29/09

Marcus J. Newsome, Superintendent
Chesterfield County Public Schools

Date: 9.23.09

Appendix D: Letter of Assurance from Fiscal Agent

Governor's Science, Technology, Engineering and Mathematics (STEM) 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 STEM Academies* outlined in the Guidance Document, 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 Guide for the Establishment of Governor's STEM Academies* document.

3. If the Governor's STEM 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 STEM Academy, and that the applicant will comply with the statements of assurances.

Dr. Marcus Newsome	Superintendent
Typed or Printed Name of Authorized Official	Title
Marcus K Newsome	February 15, 2013
Signature of Authorized Official	Date