Virginia Board of Education Agenda Item

Agenda Item: J. **Date:** May 24, 2012

Title	Final Review of a Proposal from Roanoke County Public Schools to Establish the Governor's STEM Academy at the Burton Center for Arts and Technology		
Presenter	Dr. Cecil Snead, Director of Instruction, Roanoke County Public Schools Lolita B. Hall, Director, Office of Career and Technical Education Services		
E-mail	csnead@rcs.k12.va.us lb.hall@doe.virginia.gov	**Phone**	(540) 562-3900 (804) 225-2051

Purpose of Presentation:
Other initiative or requirement. Specify below:
Final review and acceptance of the Proposal to Establish a Governor's STEM Academy at the Burton Center for Arts and Technology, Roanoke County Public Schools

Previous Review or Action:
Previous review and action. Specify date and action taken below:
First Review: April 26, 2012
Item was accepted for first review.

Action Requested:
Final Review: Action requested at this meeting
Date: May 24, 2012

Alignment with Board of Education Goals: Please indicate (X) all that apply:

X	Goal 1: Expanded Opportunities to Learn
	Goal 2: Accountability of Student Learning
	Goal 3: Nurturing Young Learners
	Goal 4: Strong Literacy and Mathematics Skills
	Goal 5: Highly Qualified and Effective Teachers and Administrators
	Goal 6: Sound Policies for Student Success
	Goal 7: Safe and Secure Schools
	Other Priority or Initiative. Specify: Governor's STEM Academy

Background Information and Statutory Authority:
Goal 1: The Governor's STEM Academy is designed to expand opportunities for the general student population to acquire STEM literacy and other critical skills, knowledge, and credentials that will prepare them for high-demand, high-wage and high-skill careers.

Partnerships establishing academies must include at least one public school division, business and industry, and postsecondary education. On November 29, 2007, the Board of Education approved the criteria to establish a Governor's STEM Academy. Subsequently, on March 19, 2008, the Board approved the standards for the Governor's Career and Technical Education Exemplary Standards

Awards Program, which all Career and Technical Academies must implement.

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

Currently, there are ten Governor's STEM Academies in Virginia. They are located in Arlington County, Chesterfield County, Halifax County, Hampton City, Loudoun County, Richmond City, Russell County, Stafford County, Suffolk City, and Carroll County.

Summary of Important Issues:
The proposal for the Roanoke County Governor's STEM Academy is conceptualized with partnerships consisting of Roanoke County Public Schools; Virginia Western Community College; Mason Mechanical Labs; Virginia Tech University; Roanoke Regional Partnership; Balzer and Associates, Inc.; Development Initiatives, Inc.; Western Virginia Workforce Development Board; Carilion Biomed Institute; Novozymes; Plastics One; East West DyeCom; General Electric; Wireless Medcare; Lionberger Construction; Precision Steel; Carilion TSG; Hughes Associates; Carilion Physics; Accellent Cardiology; Spectrum Engineers; AECOM; Hill Studios; Salem Specialties, Inc.; Synchrony; Shenandoah Machine & Maintenance Co., Inc.; Graham-White Mfg; Sematco, Inc.; E & W Machine; Valley Machine; J. C. Nordt; WSLS 10; WDBJ 7; Roanoke-Times; Access Advertising, The O'Connor Group; Carter Media; Wheeler Broadcasting; Blue Ridge PBS; Arcet; Overfelt & Son Welding; Lincoln Electric; New Millennium Steel; Thermal Dynamics; Miller Welders; NASCAR; Tread Corporation; Mountain Land Machine; DRP Racing; Berglund Automotive.

The Roanoke County Governor's STEM Academy will provide rigorous academic content within its career and technical education (CTE) instruction concentrating on three career pathways: *Engineering and Technology, Journalism and Broadcasting,* and *Facility and Mobile Equipment Maintenance.*

The first pathway, *Engineering and Technology* is in the Science, Technology, Engineering, and Mathematics (STEM) Cluster. Students will examine technology and engineering fundamentals related to solving real-world problems. They will use the latest CAD software, and multimedia presentation software. They will gain a basic understanding of engineering history and design, using mathematical and scientific concepts through hands-on projects in a laboratory setting as they communicate information in team-based presentations, developing proposals and writing technical reports. Students will be exposed to a variety of specialty fields such as environmental, biomedical, industrial, civil, and mechanical engineering and related career choices that will prepare them for postsecondary education.

The second pathway, *Facility and Mobile Equipment Maintenance* is in the Transportation, Distribution and Logistics Cluster. Individuals in this field are involved in the logistics of all types of transportation from road to rail and air to water. Graduates will be prepared for careers in design, fabrication, assembly, and repair. Students will have an opportunity to research the most efficient, safe, cost-effective and environmentally friendly ways to operate equipment and machinery. In a laboratory setting, students will learn skills in basic maintenance, repair, and servicing of vehicles. Emphasis will be placed on the motor sports industry. Designers and mechanical engineers are an integral part of the motor sport industry. Students will engage in diagnostic and problem-solving experiences and learn about hybrid-fuel technologies. They will have an opportunity to build a drag car.

The third pathway, *Journalism and Broadcasting* is in the Arts, Audio and Video Technology and Communications Cluster. Students enrolled in this pathway will have the opportunity to apply creativity in a variety of different areas. They will participate in rigorous courses and learn skills for success in television and video production, Web design, technical and news writing, digital image manipulation, publishing, and advertising. Students will be provided opportunities to gather information, prepare stories, and release broadcasts that inform the public about current issues. They will work with high-tech equipment to record and transmit various broadcasts, and produce interactive multimedia products and services.

Impact on Fiscal and Human Resources:
Funding must be provided at the local level.

Timetable for Further Review/Action:
The proposed beginning date for the Governor's STEM Academy at the Burton Center for Arts and Technology, Roanoke County Public Schools, is fall of 2012.

Superintendent's Recommendation:
The Superintendent of Public Instruction recommends that the Board of Education approve the proposal to establish the Governor's STEM Academy at the Burton Center for Arts and Technology, Roanoke County Public Schools.

Roanoke County Governor's STEM Academy
at the
Burton center for Arts and Technology
Executive Summary
April 9, 2012

Partnership Members:	Roanoke County Public Schools; Virginia Western Community College; Mason Mechanical Labs; Virginia Tech University; Roanoke Regional Partnership; Balzer and Associates, Inc.; Development Initiatives, Inc.; Western Virginia Workforce Development Board; Carilion Biomed Institute; Novozymes; Plastics One; East West DyeCom; General Electric; Wireless Medcare; Lionberger Construction; Precision Steel; Carilion TSG; Hughes Associates; Carilion Physics; Accellent Cardiology; Spectrum Engineers; AECOM; Hill Studios; Salem Specialties, Inc.; Synchrony; Shenandoah Machine & Maintenance Co., Inc.; Graham-White Mfg; Sematco, Inc.; E & W Machine; Valley Machine; J. C. Nordt; WSLS 10; WDBJ 7; Roanoke-Times; Access Advertising, The O'Connor Group; Carter Media; Wheeler Broadcasting; Blue Ridge PBS; Arcet; Overfelt & Son Welding; Lincoln Electric; New Millennium Steel; Thermal Dynamics; Miller Welders; NASCAR; Tread Corporation; Mountain Land Machine; DRP Racing; Berglund Automotive.
Lead Entity:	Burton Center for Arts and Technology
Fiscal Agent:	Roanoke County Public Schools
Contact Person:	Dr. Cecil Snead STEM Academy Coordinator 540-562-3900 csnead@rcs.k12.va.us
Academy Location:	The Governor's STEM Academy at the Burton Center for Arts and Technology 1760 Roanoke Boulevard Salem, Virginia 24153
Number Students:	The Roanoke County Governor's STEM Academy will have the capacity to enroll 226 students, grades 9–12, during the initial school year (2012–2013).
Career Pathways:	Engineering and Technology Facility and Mobile Equipment Maintenance Journalism and Broadcasting
Academy Goals and Description:	The overall goals of the Governor's STEM Academy are to provide students with the 21st-century, STEM-enriched technological skills and knowledge necessary to succeed in postsecondary education and in the world of work through authentic, rigorous, project-based work while building partnerships with parents, community and business leaders to meet these goals.

Specific Governor's STEM Academy objectives include:

- Improve academic achievement of Academy students by increasing academic rigor and relevance within selected pathways.
- Increase completion of dual enrollment courses.
- Provide workplace readiness experiences through strong partnerships with businesses.
- Increase high school graduation rates.
- Reduce dropout rates.
- Increase enrollment and retention in postsecondary education.
- Increase the number of students completing a college and workplace ready curriculum in high school.
- Reduce the number of students requiring remediation in college.
- Increase the number of industry certifications awarded to high school students.
- Increase the number of graduates employed in high-wage, high-skilled careers.

Highlights of the Program:

As a result of participating in the Governor's STEM Academy in the pathways of Engineering and Technology students will:

- Gain a deeper understanding of the skills and knowledge incorporated in their 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 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, real-life, hands-on experiences in their career pathway; and
- Profit from opportunities for internships, mentorships, job shadowing, and cooperative education, which provide students with advantages when entering postsecondary education and/or the workplace.

Attachment B

The State Council of Higher Education for Virginia

Review of Governor's STEM Academy Proposal

Name of Lead Entity on Proposal: Burton Center for Arts and Technology, Roanoke Public Schools

Date of Review: 4-16-2012

The State Council of Higher Education for Virginia recommends approval of the: Roanoke County Governor's STEM Academy at the Burton Center for the Arts and Technology.

Peter Blake
Director
State Council for Higher Education

4/15/12
Date

Virginia Department of Education
Governor's STEM Academy
Proposal Review Checklist

Title of Proposal: Roanoke County Governor's STEM Academy at the Burton Center for Arts And Technology

Lead Entity for Proposal: Burton Center for Arts and Technology, Roanoke County Public Schools

Date of Review: April 5, 2012

Virginia Department of Education
Governor's STEM Academy
Proposal Review Checklist

I. Partnership Capacity

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

Criteria	Documentation			Comments
	Full	Partial	None	
A. An active, ongoing planning committee, including a list of members and signed certifications from each that they are willing and able to serve in that capacity. At a minimum, members must represent K-12 education (superintendent or designee), higher education, and business and industry. All partners must be represented on the committee.	X	.		.
B. An advisory committee, including a list of members and signed certifications from each that they are willing and able to serve in that capacity.	X			
C. A written memorandum of agreement among school divisions, local businesses, postsecondary institutions, and any other partners that outlines ways in which community resources will contribute to the Governor's STEM Academy to broaden the scope of students' educational experiences.	X			
D. A statement of assurances that the Governor's STEM Academy Planning Committee has reviewed provisions of *Administrative Procedures Guide for the Establishment of Governor's STEM Academies* 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, if applicable, an ongoing Governing Board will be established to reflect current Board of Education regulations relative to jointly operated schools and programs (see appendix).				NA
Comments:				

II. Need/Rationale for the Academy

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

Criteria	Documentation			Comments
	Full	Partial	None	
A. Demonstration of the need/rationale for the Academy. This statement should be concise and state the major reasons to have a Governor's STEM Academy, including need at the state, local and/or regional levels.	X			
B. A description of the enhanced or additional offerings in science, technology, engineering, and/or mathematics (STEM) that will meet the need described above.	X			
C. A fiscal agent that is a public entity, including a certification that the entity is willing and able to serve in that capacity.	X			
Comments:				

III. Program Description

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

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

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

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

Criteria	Documentation			Comments
	Full	Partial	None	
1. Improve academic achievement of Academy students;	X			
2. Increase completion of dual enrollment courses;	X			
3. Provide workplace readiness experiences for students through strong partnerships with businesses;	X			
4. Increase high school graduation rates;	X			
5. Reduce dropout rates;	X			.
6. Increase enrollment and retention in postsecondary education;	X			
7. Increase the proportion of students completing a college and workplace ready curriculum in high school;	X			
8. Reduce the proportion of students requiring remediation in college;	X			
9. Increase the number of industry certifications awarded to high school students; and	X			
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. General curriculum design;	X			
5. List of courses to be delivered;	X			
6. Description of how/where the courses will be delivered. Courses may be delivered on a high school, technical center or community college campus, online, or in other innovative ways.	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 STEM Education

	Documentation			Comments
	Full	Partial	None	
	X			.
Comments:				

E. Program and course descriptions

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

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

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

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

Criteria	Documentation			Comments
	Full	Partial	None	
c. Must address regional and local work force demand in a high-wage, high-skill field as identified by employers and work force officials.	X			
d. Of the two pathways described, at least one must be in a STEM-related field. This career pathway should drive the innovative capacity of the region and/or the state.	X			
e. Additional career pathways may address one of the areas described above, or an area identified by the partnership as an area of interest, growth, or expansion for students in the service area of the Academy.	X			
Comments:				

E.2 List of all requirements for successful 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 9 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	X			
b. Internships; or	X			
c. Job Shadowing; or	X			
d. Mentorships; or	X			
e. Project-based learning; or	X			
f. Service learning; or				
g. A combination of the above.				
Comments:				

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

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

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

	Documentation			Comments
	Full	Partial	None	
	X			
Comments:				

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

	Documentation			Comments
	Full	Partial	None	
	X			
Comments:				

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

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

IV. Administrative Procedures

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

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

	Documentation			Comments
	Full	Partial	None	
	X			
Comments:				

B. Student recruitment, selection criteria, and admissions.

	Documentation			Comments
	Full	Partial	None	
	X			
Comments:				

C. Code of student conduct and attendance.

	Documentation			Comments
	Full	Partial	None	
	X			
Comments:				

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

	Documentation			Comments
	Full	Partial	None	
	X			
Comments:				

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

	Documentation			Comments
	Full	Partial	None	
	X			
Comments:				

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

	Documentation			Comments
	Full	Partial	None	
	X			
Comments:				

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

	Documentation			Comments
	Full	Partial	None	
	X			
Comments:				

H. Parent, student and community involvement

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

Documentation of insurance, budget, and other fiscal information

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

Attachment D

Proposal to Establish the

Roanoke County Governor's STEM Academy
at the
Burton Center for Arts and Technology

Submitted
to the
Virginia Board of Education

April 26, 2012

Table of Contents

Introduction 4

Rationale and Enhancements 5

Science, Technology, Engineering, and Mathematics 5

Transportation, Distribution, and Logistics 7

Arts, Audio/Video Technology, and Communications 8

Partnership Capacity 10

Program Description 11

Statement of Goals 11

Program Objectives and Performance Measures 13

Program Details 18

Governor's Exemplary Standards Award Program for CTE 18

Program and Course Descriptions 18

Length of Program and Daily Schedule 19

Statement of Assurances 19

Materials and Equipment 19

Description of Proposed Program Evaluation 20

Administrative Procedures 21

Partnerships 21

Student Recruitment, Selection Criteria, and Admissions 21

Code of Student Conduct and Attendance 23

Transportation 23

Staff Recruitment, Selection, and Assignment 23

Staff Development 24

Staff Evaluation 24

Parent, Student, and Community Involvement 24

Budget and Documentation of Insurance 25

Appendices …… 26

Appendix A: Planning Committee Members…… 27

Appendix B: Advisory Committee Members…… 44

Appendix C: List of Partners……. 62

Appendix D: Memorandum of Agreement with Virginia Tech and Virginia Western Community College……. 64

Appendix E: Internship Agreements……..... 81

Appendix F: Associate Degree…….. 108

Appendix G: Plans of Study……..... 110

Appendix H: Student Admission Forms…… 128

Appendix I: Assurance Statements…….…… 142

Appendix J: Summer Camp Information……..... 145

Appendix K: Budget…….. 148

Appendix L: Certificate of Insurance…… 150

Introduction

The Roanoke County Governor's STEM Academy will develop and expand offerings for the secondary school population of Roanoke County Public Schools. These offerings will emphasize science, technology, engineering, mathematics (STEM), critical knowledge, critical thinking, and credentials that prepare students for high-demand, high-wage, and high-skill careers to meet the evolving work force trends and needs within the Commonwealth, national, and global markets.

The Roanoke Valley is the hub of Southwest Virginia's health care, retail, manufacturing, and technology industries. Roanoke County Public Schools must provide students with the 21st Century Skills needed to meet these work force demands of the Roanoke Valley. Work force development and area demographics make the Roanoke Valley a key factor in Virginia's economic recovery.

The Roanoke County Governor's STEM Academy will integrate STEM education and training opportunities for career and technical education faculty, academic teachers, and administrators in order to fill the work force demands identified in the following career clusters and pathways:

Career Cluster	Pathway
Science, Technology, Engineering, and Mathematics (STEM)	Engineering and Technology
Transportation, Distribution, and Logistics	Facility and Mobile Equipment Maintenance
Arts, Audio/Video Technology, and Communications	Journalism and Broadcasting

The Roanoke County Governor's STEM Academy will be a part of Roanoke County Public Schools' Burton Center for Arts and Technology. The Roanoke County Governor's STEM Academy will serve as the STEM instructional center for all five high schools, offering two to six credits with an alternating day block schedule.

Rationale and Enhancements

The Roanoke County Governor's STEM Academy will focus on three specific cluster areas – Science, Technology, Engineering, and Mathematics; Transportation, Distribution, and Logistics; and Arts, Audio/Video Technology, and Communications. The selected programs will increase options for Roanoke County students to obtain the knowledge and credentials that will prepare them to successfully transition through postsecondary pathways as they prepare for existing and emerging high-demand, high-wage, and high-skill careers in the Roanoke Valley and across the Commonwealth. The Virginia Employment Commission expects long-term (through 2018) growth of 13 percent in media, 5.28 percent in engineering and architecture, and 20.13 percent in computer and mathematical occupations.

Science, Technology, Engineering, and Mathematics

According to the U.S. Bureau of Labor Statistics, engineering employment should grow about 11 percent through 2016. The highest projected growth areas in engineering are environmental, biomedical, industrial, and civil engineering specialties, ranging from 18 to 25 percent. The U.S. Bureau of Labor Statistics estimates that the median annual salary for engineering technologists is $56,850. The *Occupational Outlook Handbook, 2010–11 Edition,* suggests opportunities will be best for individuals with an associate degree or other

postsecondary training in engineering technology. The report also states, "Prospective engineering technicians should take as many high school science and math courses as possible to prepare for programs in engineering technology after high school." The Roanoke County Governor's STEM Academy and its Center for Engineering will meet local and state criteria as students prepare for high-wage, high-skill occupational areas.

Engineering course offerings will include an introduction to engineering, methods, research, internship, statics, and economics. The Roanoke County Governor's STEM Academy will provide pathways to support students seeking both two-year associate degrees and advanced four-year degrees from institutions such as Virginia Tech.

The Roanoke County Governor's STEM Academy will expand on current partnership avenues including, but not limited to, the C-Tech2 - Computers and Technology at Virginia Tech summer engineering camp, professional development programs for CTE teachers in robotics and mechatronics, and robotics competitions mentored by Virginia Tech staff and students. Students in the Roanoke County Governor's STEM Academy interested in mechatronics and robotics will also draw upon the expertise of faculty at Virginia Western Community College as well as the Virginia Tech Department of Mechanical Engineering.

Graduates of a mechatronic engineering program can work in many industries, including automotive, manufacturing, gas and oil, mining, transport, defense, robotics, aerospace, and aviation. In addition, they have a wide variety of multi-disciplinary skills that will allow them to take traditional engineering positions. Discussions with key industry leaders in the Roanoke Valley, including Optical Cable and Accellent, are crucial in maintaining lab and equipment updates with our mechatronics and robotics program. These partnerships ensure that mechatronics and robotics is a relevant focus in our STEM Academy.

Transportation, Distribution, and Logistics

Virginia hosts six of NASCAR's top series racing events each year and is home to NASCAR venues in Bristol, Richmond, and Martinsville. In addition to the NASCAR venues, Virginia is also home to the South Boston Motor Speedway, Virginia's International Raceway, the AMA Pro Motocross and Extreme Dirt Tracks, the Motor Mile Speedway, The Lonesome Pine Raceway, and the Franklin County Speedway. A report by Dick Dell, the Executive Director for the Advanced Vehicle Research Center in southwest Virginia, noted that "the region has significant assets that support the auto racing industry."

Major Roanoke area employers include auto dealers and body shops seeking employees with upper-level technical skills. Local employment forecasts indicate approximately 2,500 potential positions in related pathway fields over the next six years. Nationally, NASCAR teams alone employ more than 20,000 workers. Through the natural blending of STEM curriculum with the CTE content, graduates of this pathway will be prepared for careers in design, fabrication, assembly, and repair. Our business partners, such as Berglund Automotive, Lincoln Electric, Thermal Dynamics, DRP Racing, and NASCAR, continually advise us that according to the U.S. Department of Labor's *Occupational Outlook Handbook, 2010–11 Edition*, designers and mechanical engineers are an integral part of the motorsports industry during the design stage to improve product reliability and manufacturing efficiency.

In addition to motorsports, data from the Virginia Workforce Connection's occupational profile states that the need for technicians and mechanics is expected to increase by 5 percent over the next seven years and that "technicians and mechanics must continually adapt to changing technology and repair techniques." The report also notes that "**…** the increasing use of advanced technology in automobiles will also lead to new opportunities for repair technicians,

especially those with specialized skills or certifications. Workers with expertise in certain makes or models of vehicles, or with an advanced understanding of certain systems, such as hybrid-fuel technology, will be in demand." The report also notes a strong need for people with good diagnostic and problem-solving skills. Roanoke County Governor's STEM Academy's motorsports curriculum also supports the skill sets of reparation, electronic diagnostics, and hybrid-fuel technologies. Through the Roanoke County Governor's STEM Academy, students will be afforded a combination of foundational coursework in motorsports, auto service technology, welding, mechatronics, CADD, robotics, and precision machining.

Arts, Audio/Video Technology, and Communications

The Roanoke Valley area is home to more than thirty broadcast and media outlets reaching as far as the Alleghany Highlands, Southside Virginia, and far Southwest Virginia to serve more than 300,000 people. In addition to the broadcast and media outlets, there are numerous advertising agencies and Web-design firms with national and global client bases. With the Virginia Employment Commission expecting long-term growth of 13 percent in media, the Roanoke County Governor's STEM Academy and its Center for Mass Communication are well positioned to meet the work force demands of this highly technical industry.

Students will participate in rigorous courses that teach the necessary skills to be successful in areas such as television and video production, Web design, technical and news writing, digital image manipulation, publishing, and advertising. The internship opportunities with the Roanoke County Governor's STEM Academy's business partners will provide our students real-world experience and training in all of the aforementioned areas. Television stations WSLS and WDBJ; Wheeler Broadcasting radio stations K92, Q99, Star County, and WFIR; the *Roanoke Times* newspaper; Access Advertising; The O'Connor Group; and Carter

Media all allow extended placement of our students for the purposes of training, job shadowing, and gaining hands-on experience in a broad variety of communications and media.

As much as any industry, media continues to evolve in a highly technical direction. According to the *Occupational Outlook Handbook, 2010-11 Edition*, potential employees in the media industry who have extensive training in these new technologies have a significant advantage when competing for jobs. Roanoke County Governor's STEM Academy will offer state-of-the-art equipment and software to ensure students gain proficiency in digital manipulation, program production, and video editing. STEM education and training, ongoing professional development, and partnerships with Virginia Western Community College and Virginia Tech will help our highly-trained faculty stay abreast of industry trends and will keep the program at the forefront of evolving technology.

Throughout the process, the planning committee has identified additional pathways that will afford more STEM opportunities for students. An ongoing analysis of occupational trends will continue with the planning and advisory committees to ensure the relevance of future pathways. A focus on 21st Century Skills development enmeshed with the global landscape will be the foundation for all program development at the Roanoke County Governor's STEM Academy.

Partnership Capacity

Partnerships, both business and higher education, are integral to the success of Roanoke County Governor's STEM Academy at the Burton Center for Arts and Technology (BCAT). With deepening commitments from long-established partners and the fostering of new relationships, STEM Academy students will be exposed to cutting-edge research, the latest technologies, and real-world job shadowing and internships. In addition, students will meet and make connections with potential employers and prominent departmental personnel within institutes of higher education. In addition to the experiences they will offer our students, business partners will also provide materials and financial support to the Academy. Business partners will also be well represented on individual and Academy-wide advisory committees referenced below. It is through this process that the STEM Academy will provide students with the workplace readiness skills needed both locally and globally, now and in the near future.

Planning and advisory committees have been formed to ensure consistent and smooth operation of the Roanoke County Governor's STEM Academy. These committees will develop procedures, policies, and programs in alignment with Roanoke County Public School policy; Governor's Exemplary Standards Award Program; and Governor's Science, Technology, Engineering, and Mathematics Academy guidance manual. The advisory committee will confer as needed to assess the progress and to address challenges that may become evident in the operation of the Academy.

Each of the plans of study pathways will have an advisory board that will meet semiannually to oversee and guide the programs. These advisory boards are composed of educational professionals and industry partners. It is also the task of these boards to consider

requests and address concerns from the board itself, teachers, parents, students, and the community at large.

Cooperative partnerships are invaluable to the Academy and will remain a priority in the planning and growth of the STEM Academy. For planning and advisory committee members and cooperative partnership agreements, including the Virginia Tech College of Engineering articulation agreement and the MOAs with Virginia Western Community College, see Appendices A - E.

Program Description

Statement of Goals

The Roanoke County Governor's STEM Academy will provide rigorous academic content within its career and technical education (CTE) instruction concentrating on three career pathways: Engineering and Technology, Journalism and Broadcasting, and Facility and Mobile Equipment Maintenance. Student learning and achievement will be enhanced through the integration of academics, STEM curriculum, applied technology, and increased participation in career and technical student organization leadership events.

The Academy will include professional development opportunities utilizing integrated lesson plan development between academics, STEM, and CTE staff, along with concentrations on integrated application of mathematics and science. Academic content integration will be facilitated through enrollment opportunities in the Integrative STEM Education graduate program at Virginia Tech. Coursework in STEM Education Foundations, Pedagogy, Trends, Literacy, Research, and Design may be included as part of the certificate or degree program. Faculty and guidance department staff will participate in career cluster professional development

to further facilitate student enrollment. Each of these tools will be used to connect and integrate academic content areas.

Plans of study will be jointly developed with all five high schools to provide cross-disciplinary experiences within the Roanoke County Governor's STEM Academy. As a result of this collaboration, a STEM Curriculum Resource Guide will be developed during the 2012–2013 school year for distribution to the high schools focusing on science, technology, engineering, and mathematics applications. The Roanoke County Governor's STEM Academy will continue to grow and enhance the rigor of career and technical content by expanding certification and licensure offerings; increasing dual enrollment status; increasing workplace experiences and internships; utilizing state-of-the-art technology; and expanding the college and workplace readiness curriculum.

In coordination with Roanoke County Public Schools' guidance services, individualized high school plans are initiated in a variety of ways. Interest surveys and career planning begin early in middle school to help outline course selection in preparation for high school entrance and beyond. A three-step process is outlined within the program of studies, including selecting a career cluster or pathway; deciding upon a diploma type; and choosing courses related to the career pathway and diploma choice. This process ensures that course selection for these individualized high school plans of study help students align with postsecondary transition for their career goals and complete a college and work readiness curriculum for a particular career pathway.

A goal for the Roanoke County Governor's STEM Academy graduates will be to complete rigorous academic content with career and technical college and work readiness curriculum. Students will strive to earn Virginia's Advanced Mathematics and Technology Seal

as well as the Career and Technical Education Seal upon graduation. High school diploma requirements will include up to nine high school CTE course credits that can be earned from the Roanoke County Governor's STEM Academy, including corresponding credentials and license. The Academy will seek to integrate the STEM curriculum so that students may achieve the requirements for an Advanced Diploma. Additionally, three or more CTE elective course options will broaden the traditional high school experience by offering postsecondary opportunities, industry certification, and additional field experience to enhance the students' STEM education and to emphasize STEM career pathways. Completion of this goal will be evidenced through student transcripts, earned diploma seals, and industry certifications.

Each CTE course utilizes Virginia's Workplace Readiness Skills and teachers develop individual class lessons supporting these competencies. Business partners work with program areas to offer enrichment seminars addressing these skills via program area advisory councils. Internships and workplace shadowing experiences offer Academy students reinforcement and mentoring. Each teacher also has access to the Virginia Workplace Readiness Skills Instructional Resources, provided through the Virginia DOE and the CTE Resource Center. Students have the opportunity to take the Workplace Readiness Skills for the Commonwealth assessment.

Program Objectives and Performance Measures

The Roanoke County Governor's STEM Academy will address the program objectives outlined in the Virginia Board of Education's *Criteria for Governor's Career and Technical Academies.* Baseline data will be collected during the 2012-13 school year. The Roanoke County Governor's STEM Academy goals and performance measures are outlined below:

1. *Improve academic achievement of Academy students by increasing academic rigor and relevance within selected pathways.*

    - Increase the percent of students taking Algebra II upon graduation **by** 3.5 percent over the next three years.
    - Increase the percent of students taking four years of science and mathematics upon graduation by 3.5 percent over the next three years.
    - Increase the number of Academy students meeting the requirements of the Advanced Studies Diploma by 3.5 percent over the next three years.
    - Within three years close the achievement gap in math and science between the division averages in algebra II and chemistry SOL scores and the academy mechatronics/robotics and motorsports students. Using the spring 2011 scores as a baseline, mechatronics/robotics and motorsports students scored 7 percent lower in algebra II and 3 percent lower in chemistry.
    - Continue SOL incremental growth in Engineering and Mass Communication pathways based upon 2012-13 SOL data followed by a goal setting at 50 percent above the state average's difference from 100 percent for pass advanced scores.

2. *Increase completion of dual enrollment courses.*

    - Each Academy pathway is articulated with a postsecondary institution with a minimum of nine potential dual enrollment credits.
    - Dual enrollment and Advanced Placement course completion within Roanoke County Public Schools has increased by 26 percent since 2009.

An increase in student enrollment within these programs is a direct result of the partnership with Virginia Western Community College (VWCC), Virginia Polytechnic Institute and State University (VT), and the Virginia Advanced Study Strategies (VASS). Through continuing partnerships with these entities, the Academy plans to increase the number of Academy students earning dual enrollment or AP credit in the 2013-2014 school year by a 3 percent – 5 percent margin over 2012-13 baseline data.

3. *Provide workplace readiness experiences through strong partnerships with businesses.*
    - Faculty, Advisory Board Members, and other stakeholders will continue to recruit exceptional business partnerships for student exposure to the work world and perspective careers.
    - Workplace experiences will include: supervised internships, job shadowing, mentoring, simulations, project-based learning, and guest speakers for 100 percent of Academy attendees.
    - Students will apply workplace readiness skills and concepts mastered through their CTE programs of study in their workplace internships, job shadowing and cooperative education experiences for 100 percent of Academy attendees.
4. *Increase high school graduation rates.*
    - The Roanoke County Public Schools 2010-2011 high school graduation rate was 91.8 percent which is 11.8 percent higher than the state average of 80 percent. We anticipate an increase of 0.1 percent - 0.2 percent over the next four years as a result of the STEM Academy.

- The Academy will seek to increase the number of Academy participants who will meet the requirements for an Advanced Studies Diploma by 3.5 percent over the next three years.

5. *Reduce dropout rates.*
    - The Roanoke County Public Schools 2010-2011 dropout rate was 0.67 percent which is 0.96 percent lower than the state average.
    - The Academy will strive to further reduce the Roanoke County Public Schools' dropout rate by 0.07 percent over the next 4 years.
6. *Increase enrollment and retention in postsecondary education.*
    - Academy students will have an opportunity to earn at least nine dual enrollment college credits giving students a community college transcript prior to graduating from high school.
    - Academy students may potentially meet all requirements for a transferable Associate's Degree prior to high school graduation.
    - Academy graduates will take the CTE Completer Follow-Up Report survey to determine successful enrollment and retention in postsecondary institutions one year after high school graduation.
    - Academy graduates will participate in Senior Exit surveys and interviews conducted by the Roanoke County Guidance Department.
7. *Increase the number of students completing a college and workplace ready curriculum in high school.*
    - Increase enrollment in Academy programs annually for one more section in each pathway over the course of the next four years.

- Baseline data will be established in the 2012-2013 school year with criteria including: diploma type, dual enrollment credit earned, program completer status, and industry credentials earned.
- Increase the enrollment of nontraditional populations in Academy programs by ten over the next four years.

8. *Reduce the number of students requiring remediation in college.*
    - Academy students will meet the basic entrance criteria determined by the VCCS.
    - Preparation and remediation sessions will be provided for Academy students who are struggling in English and Mathematics classes.
    - Increase the percentage of students who earn advance proficiency on the English 11 and algebra II SOLs by 3.5 percent in 2013-2014 using 2012-2013 baseline data.
9. *Increase the number of industry certifications awarded to high school students.*
    - Baseline data will be established in the 2012-2013 school year with the criterion to include industry licensure and credentials earned.
    - Increase the percent of Academy students earning industry credentials or licensures to provide well-trained workers to benefit the Southwest Virginia work force and to meet employment needs across the Commonwealth by 5 percent within the next three years.
10. *Increase the number of graduates employed in high-wage, high-skilled careers.*
    - Academy graduates will be prepared for employment within identified career pathways and related occupations as indicated through US Census

and Virginia Employment Commission demographic data collection instruments by 100 percent.

Program Details

The Roanoke County Governor's STEM Academy's primary location will be the Burton Center for Arts and Technology. Core STEM courses within each pathway will be taken at Burton Center, while other required and elective classes will be taken face-to-face at the student's base high school or online through Roanoke County Public Schools Virtual School. Based on current enrollment trends, the anticipated number of students to be served is 226 in grades nine through twelve during 2012–2013. The programs will run on a full-day academic-year schedule.

Governor's Exemplary Standards Award Program for CTE

The Roanoke County Governor's STEM Academy will adhere to the Governor's Exemplary Standards Award Program for Career and Technical Education.

Program and Course Descriptions

Roanoke County Governor's STEM Academy plans of study are attached in Appendix G. These plans of study include all requirements for successful program completion. See Appendix G for industry certifications and dual enrollment and/or AP credits. See Appendix F for early Associates Degree opportunity. CTE course descriptions, along with CTSO affiliations and sample leadership events, are available in Appendix G.

Internships or project-based learning experience are requirements for all Roanoke County Governor's STEM Academy plans of study.

Length of Program and Daily Schedule

Each plan of study is a full-day, academic-year program. The Center for Engineering and the Center for Mass Communication are four-year programs that combine coursework at Burton Center for Arts and Technology and students' base schools. The Motorsports Technology program and the Mechatronics/Robotics program will be taken at the Burton Center for Arts and Technology. All other courses in the two plans of study will be taken at the base school.

Statement of Assurances

See Appendix I.

Materials and Equipment

Materials and equipment for the Roanoke County Governor's STEM Academy will follow state purchasing guidelines and may be obtained through donations from local industry and higher education partners, local school division funds, state equipment funds, and the Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV).

Materials purchased for the Roanoke County Governor's STEM Academy will be obtained through local school division instructional and career and technical education budget funds.

Equipment purchased with state or federal funds will be selected from the state-approved equipment list for CTE programs. Equipment purchased through the Perkins Grant will meet the following applicable regulations.

- R-1 Strengthen the academic and career and technical skills of students participating in career and technical education programs, by strengthening the academic and career and technical education programs, by strengthening the academic and career and technical education components of such programs through the integration of academics with career and technical education programs through a coherent sequence of courses, such as career

and technical programs of study described in the section 122©(1)(A) to ensure learning in:

A. The core academic subjects

B. Career and technical education subjects

- R-2 Link career and technical education at the secondary level and career and technical education at the postsecondary level, including offering the relevant elements of not less than one career and technical program of study
- R-3 Provide students with a strong experience in and understanding of all aspects of an industry, including work-based learning experiences
- R-4 Develop, improve, or expand the use of technology in career and technical education, including (B) providing career and technical education students with the academic and career and technical skills (including mathematics and science knowledge that provides a strong basis for such skills) that lead to entry into the technology fields
- R-7 Initiate, improve, expand, and modernize quality career and technical education programs, including relevant technology

Description of Proposed Program Evaluation

The aforementioned planning and advisory committees, the individual program advisory boards, the divisionwide instructional evaluation process, and various academic and CTE assessments provide feedback and data for internal evaluation of the Roanoke County Governor's STEM Academy. STEM Academy planning and advisory committees will continue to meet regularly throughout the establishment process, and once the Academy is established, a specific and purposeful schedule will be developed. The individual advisory boards will meet annually and confer as needed to ensure fidelity to articulated goals and direction. Roanoke County Public Schools will incorporate its ongoing instructional evaluation process into all STEM Academy programs and applicable courses. This process was initiated by the superintendent two years ago and includes weekly student performance evaluations by school leadership teams shared monthly with a central office governance committee to ensure early and

appropriate interventions for struggling students. This process also serves as a professional learning community to aid faculty and staff in the acquisition and use of best practices. In addition, reports to the Virginia Department of Education, including the CTERS report, and the SEDF report, and the state report card, provide feedback for the internal evaluation process.

Administrative Procedures

Partnerships

As outlined in the Partnership Capacity section on page nine, business and higher education partnerships are the cornerstone for Roanoke County's Governor's STEM Academy at the Burton Center for Arts and Technology. The Academy is being developed in cooperation with its business and higher education partners, and they will continue to guide and give direction as it matures.

Student Recruitment, Selection Criteria, and Admissions

Student recruitment plays an important role in the successful placement of students in their career choice pathway. The Roanoke County Public School System provides comprehensive guidance and information to students and parents to assist students with selecting coursework appropriate for individual career selection. Recruitment for potential STEM Academy students will begin in middle school. Students build individual Academic and Career Portfolios, based on developmental research and surveys of each student's interests, values, and abilities. Guidance personnel work individually with students to assist with career aptitude and interest surveys, and individualized plans of study. These activities lay the foundation for students to select course-appropriate curriculum to help them reach their goals.

Middle school CTE curriculum includes an introduction to Robotics for seventh and eighth graders. Using resources, including the Technology Student Association, Synergistic modules, and First Lego League competitions, students in the Technological Systems course have opportunities to explore career pathways that promote Academy recruitment. Summer camps are available for rising sixth- through rising eighth-grade students in Robotics and TV Production, held at Burton Center for Arts and Technology (BCAT). See Appendix J for Description and Registration Form.

In the fall of the eighth-grade year, presentations regarding all Specialty Centers, including the STEM Academy programs and other BCAT programs are made in-person to entire eighth-grade classes at each middle school. This is followed by a tour for all eighth graders of BCAT, where they see students taking part in these classes. Additionally, following the tours, there is an evening Open House for all parents and students at BCAT.

Counselors in the individual schools then go to classrooms to present the registration process to all students. Our registration guide is available in print to all eighth-grade students and is posted online in early January. An additional booklet highlights our specialty centers and gives more in-depth information about them. Elective fairs are available at each middle and high school to give the students an opportunity to ask specific questions of representatives of all BCAT programs. PTAs sponsor an evening registration orientation for parents at each middle and high school just prior to the registration process. At any time, counselors and teachers from home schools, as well as BCAT, will meet with parents and students to answer individual questions.

Engineering Center and Mass Communications Center applications require general information, a writing sample, teacher-rating scales, a school counselor record form, and a

transcript. Engineering Center applicants also complete a short form entitled Metropolitan Achievement Test (MAT). Applications for Mechatronics/Robotics and Motor Sports Technology programs are also required. A rubric will be used to assist with the objective review of the applications and the student interviews. Special recruitment for non-traditional students and special-population students will be included. Please see Appendix H for samples of the applications for each of these STEM programs.

Code of Student Conduct and Attendance

Roanoke County Public Schools outline student conduct, attendance requirements, and transportation in the Student Conduct Code publication provided annually to each Roanoke County Public Schools' student. Each student and parent is required to sign an "acknowledgment of receipt" of the publication each school year. This publication would also be issued to students in the Roanoke County Governor's STEM Academy.

Transportation

Transportation to and from Burton Center for Arts and Technology will be provided by Roanoke County Public Schools. Schedules are coordinated with students' base schools.

Staff Recruitment, Selection, and Assignment

The policy, procedures, and regulations for the Governor's STEM Academy at the Burton Center for Arts and Technology (BCAT) will be subsumed under the current Roanoke County Public Schools' policy, procedures, and regulations. The recruiting process is networked throughout our community to attract specialists in each field of special study. Interviews of selected personnel are conducted by the building level administrator at BCAT, the director of instruction, a subject area coordinator, and any other individual deemed necessary to the process. Selections are made based upon the candidate's expertise in the field, licensure requirements,

and criteria for acceptance by the Virginia Western Community College (VWCC) and Southern Association of Colleges and Schools (SACS).

Staff Development

Roanoke County Public Schools provide high-quality professional development "to facilitate the successful implementation of instructional programs that promote student achievement at the school and classroom levels" (Policy 5.47). Academy faculty will be provided opportunities to complete industry certifications relevant to the content area and attend STEM and CTE regional, state, and national workshops. In-house training opportunities and consultants will be used as appropriate. Workshops that demonstrate successful CTE/STEM integration techniques will be included, as well as cross trainings with guidance and Academy representatives.

Staff Evaluation

Staff will be evaluated according to Roanoke County Public Schools' licensed employee evaluation procedures. Tenured teachers are to be evaluated annually, alternating between full evaluation and partial evaluation every other year. Untenured teachers are to be evaluated annually.

Parent, Student, and Community Involvement

1. Preparation

Students will have the opportunity in the eighth grade to tour the Academy programs, to meet with faculty and students to discuss the Academy's curriculum and learning environment, and to complete relevant interest and aptitude surveys to help identify career pathway.

2. Collaboration: Students, parents, teachers, and counselors will work collaboratively.

a. Students will complete interest inventories in middle school, and throughout high school, under the guidance of school counselors or classroom instructors who monitor and access individual career pathways identified by the students.
b. Students will work with counselors to create academic and career plans outlining an intended course of study in high school. These career plans will be reviewed annually prior to course registration and adjusted as needed to meet the needs and interests of the learner.
c. Postsecondary pathways will be reviewed and discussed with the learner's career plan. Where appropriate, program options, including industry certifications and credentialing, career studies, associate or technical college degrees, and advanced college degree programs will be reviewed.
d. Career assessments will be available to students through the guidance department and classroom curriculum to help students identify areas that will strengthen their qualifications for selected pathways.
e. Diplomas, seals, other recognitions, and admission requirements to specialized programs, such as the Governor's Academies, are discussed with the learner and parents through parent-teacher conferences, student registration meetings and guidance programs offered at the school. Information and criteria descriptions are also available in the student registration guide and through the school division's Web site.

Budget

The Governor's STEM Academy has an operating budget of over $350,000. An additional $148,000 has been identified as in-kind contributions. State, local, and federal funds will be used to support activities of the Academy. The majority of the funds will be allocated for personnel and equipment. See Appendix K for the complete budget.

Documentation of Insurance

See Appendix L

Appendices

Appendix A:

Planning Committee Members

Roanoke County Governor's STEM Academy
Planning Committee

Part A

Name	Affiliation	Title
Julian Barnes	RCPS	Coordinator of Science
Dr. Kathy Beard	RCPS	Coordinator of CTE
Linda Bowden	RCPS	Coordinator of Mathematics
Dan Horine	VWCC	Automated Manufacturing Instructor
Fran Kiker	RCPS	Coordinator of Guidance
Joe LeGault	RCPS	Coordinator of English
Dr. Sue Magliaro	Virginia Tech - School of Education	Director
Reedy Mason	Mason Mechanical Labs	Part Owner
Chris Overfelt	RCPS/VWCC	Instructor/Adjunct Faculty
Jim Poythress	VWCC – School of Business, Engineering, and Technology	Dean
Jeannette Rader	VWCC	Career Coach
Eric Salo	RCPS	Director, The Center Mass Communication
Susheela Shanta	Development Initiatives Inc./RCPS	President/Director, The Center for Engineering
Dr. Cecil Snead	RCPS	Director of Instruction, Technology, CTE, and Adult Education
Jason Suhr	RCPS	Principal of BCAT

Planning Committee Certification

Roanoke County STEM Academy at The Burton Center for The Arts and Technology

Planning Committee Member

Name: Julian Barnes

Title: Coordinator of Science

Affiliation: RCPS

My signature below certifies my willingness to actively participate on the Planning Committee for the proposed Roanoke County STEM Academy at The Burton Center for The Arts and Technology.

Julian J Barnes
Signature

11.29.11
Date

Planning Committee Certification

Roanoke County STEM Academy at The Burton Center for The Arts and Technology

Planning Committee Member

Name: Dr. Kathryn H. Beard

Title: Coordinator, Career and Technical Education

Affiliation: Roanoke County Schools

My signature below certifies my willingness to actively participate on the Planning Committee for the proposed Roanoke County STEM Academy at The Burton Center for The Arts and Technology.

K Beard

Signature

11/28/11

Date

Planning Committee Certification

Roanoke County STEM Academy at The Burton Center for The Arts and Technology

Planning Committee Member

Name: Linda Bowden

Title: Coordinator of Mathematics

Affiliation: RCPS

My signature below certifies my willingness to actively participate on the Planning Committee for the proposed Roanoke County STEM Academy at The Burton Center for The Arts and Technology.

Linda W. Bowden
Signature

November 29, 2011
Date

Planning Committee Certification

Roanoke County STEM Academy at The Burton Center for The Arts and Technology

Planning Committee Member

Name: Dan Horine

Title: Program Head, Mechatronics/Energy Management Systems

Affiliation: Virginia Western Community College

My signature below certifies my willingness to actively participate on the Planning Committee for the proposed Roanoke County STEM Academy at The Burton Center for The Arts and Technology.

Signature

11-29-11
Date

Planning Committee Certification

Roanoke County STEM Academy at The Burton Center for The Arts and Technology

Planning Committee Member

Name: Fran Kiker

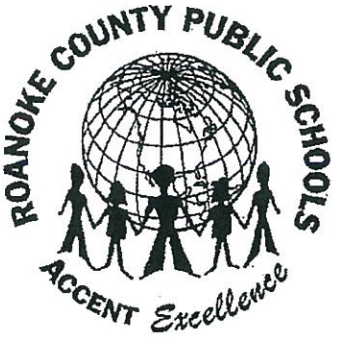
Title: Coordinator of Guidance

Affiliation: RCPS

My signature below certifies my willingness to actively participate on the Planning Committee for the proposed Roanoke County STEM Academy at The Burton Center for The Arts and Technology.

Fran Kiker
Signature

29 Nov 2011
Date



Planning Committee Certification

Roanoke County STEM Academy at The Burton Center for The Arts and Technology

Planning Committee Member

Name: Joe LeGault

Title: Coordinator of English, ESL, and Virtual School

Affiliation: RCPS

My signature below certifies my willingness to actively participate on the Planning Committee for the proposed Roanoke County STEM Academy at The Burton Center for The Arts and Technology.

Joe LeGault
Signature

11/29/2011
Date

Planning Committee Certification

Roanoke County STEM Academy at The Burton Center for The Arts and Technology

Planning Committee Member

Name: Susan G. Magliaro

Title: Director, School of Education

Affiliation: Virginia Tech

My signature below certifies my willingness to actively participate on the Planning Committee for the proposed Roanoke County STEM Academy at The Burton Center for The Arts and Technology.

Susan G. Magliaro
Signature

November 23, 2011
Date

Planning Committee Certification

Roanoke County STEM Academy at The Burton Center for The Arts and Technology

Planning Committee Member

Name: J. Reedy Mason

Title: Teacher at Burton Center for the Arts and Technology

Affiliation: Roanoke County Schools

My signature below certifies my willingness to actively participate on the Planning Committee for the proposed Roanoke County STEM Academy at The Burton Center for The Arts and Technology.

Signature

November 29, 2011
Date

Planning Committee Certification

Roanoke County STEM Academy at The Burton Center for The Arts and Technology

Planning Committee Member

Name: Chris Overfelt

Title: Welding Teacher

Affiliation: RCPS

My signature below certifies my willingness to actively participate on the Planning Committee for the proposed Roanoke County STEM Academy at The Burton Center for The Arts and Technology.

Christopher C. Overfelt
Signature

11/28/11
Date

Planning Committee Certification

Roanoke County STEM Academy at The Burton Center for The Arts and Technology

Planning Committee Member

Name: James W. Poythress

Title: Dean, School of Business, Engineering, & Technology

Affiliation: Virginia Western Community College

My signature below certifies my willingness to actively participate on the Planning Committee for the proposed Roanoke County STEM Academy at The Burton Center for The Arts and Technology.

James W. Poythress
Signature

11/23/11
Date

Planning Committee Certification

Roanoke County STEM Academy at The Burton Center for The Arts and Technology

Planning Committee Member

Name: S. Jeanette Rader

Title: Career Coach

Affillation: Virginia Western Community College

My signature below certifies my willingness to actively participate on the Planning Committee for the proposed Roanoke County STEM Academy at The Burton Center for The Arts and Technology.

S. Jeanette Rader
Signature

11/29/11
Date

Planning Committee Certification

Roanoke County STEM Academy at The Burton Center for The Arts and Technology

Planning Committee Member

Name: Eric Salo

Title: Director of the Center for Mass Communications at Burton

Affiliation: RCPS

My signature below certifies my willingness to actively participate on the Planning Committee for the proposed Roanoke County STEM Academy at The Burton Center for The Arts and Technology.

Signature

Date 11/28/11

Planning Committee Certification

Roanoke County STEM Academy at The Burton Center for The Arts and Technology

Planning Committee Member

Name: SUSHEELA SHANTA

Title: DIRECTOR - CENTER FOR ENGINEERING

Affiliation: RCPS

My signature below certifies my willingness to actively participate on the Planning Committee for the proposed Roanoke County STEM Academy at The Burton Center for The Arts and Technology.

Susheela Shanta
Signature

Nov. 28, 2011
Date

Planning Committee Certification

Roanoke County STEM Academy at The Burton Center for The Arts and Technology

Planning Committee Member

Name: Cecil Snead

Title: Director of Secondary Instruction/Technology, CTE & Adult Ed.

Affiliation: RCPS

My signature below certifies my willingness to actively participate on the Planning Committee for the proposed Roanoke County STEM Academy at The Burton Center for The Arts and Technology.

Signature _____ Date 11-29-11

Planning Committee Certification

Roanoke County STEM Academy at The Burton Center for The Arts and Technology

Planning Committee Member

Name: Jason Suhr

Title: Principal, Burton Center for Arts and Technology

Affiliation: Roanoke County Public Schools Employee

My signature below certifies my willingness to actively participate on the Planning Committee for the proposed Roanoke County STEM Academy at The Burton Center for The Arts and Technology.

Signature

11/22/11
Date

Appendix B:

Advisory Committee Members

Roanoke County Governor's STEM Academy
Advisory Committee

Part B.

Name	Affiliation	Title
Craig Balzer	Balzer and Associates Inc.	Chairman of the Board
Julian Barnes	RCPS	Coordinator of Science
Dr. Kathy Beard	RCPS	Coordinator of CTE
Linda Bowden	RCPS	Coordinator of Math
Dr. Brenda Brand	Virginia Tech – Science Education	Associate Professor
Dan Horine	VWCC	Automated Manufacturing Instructor
John M. Hull	Roanoke Regional Partnership	Director of Research
Fran Kiker	RCPS	Coordinator of Guidance
Dr. Betti Kreye	Virginia Tech – Mathematics Education	Clinical Assistant Professor
Dr. Lorraine Lange	RCPS	Superintendent
Joe LeGault	RCPS	Coordinator of English
Dr. Sue Magliaro	Virginia Tech – School of Education	Director
Jim Poythrress	VWCC - School of Business, Engineering, and Technology	Dean
Dr. Cecil Snead	RCPS	Director of Instruction, Technology, CTE, and Adult Education
Jason Suhr	RCPS	Principal of BCAT
Deloris Vest	Western Virginia Workforce Development Board	President

Advisory Committee Certification

Roanoke County STEM Academy at The Burton Center for The Arts and Technology

Advisory Committee Member

Name: R. CRAIG BALZER

Title: CHAIRMAN

Affiliation: GENERAL ADVISORY COUNCIL TO CAREER AND TECH ED

My signature below certifies my willingness to actively participate on the Advisory Committee for the proposed Roanoke County STEM Academy at The Burton Center for The Arts and Technology.

R. Craig Balzer
Signature

12/12/11
Date

Advisory Committee Certification

Roanoke County STEM Academy at The Burton Center for The Arts and Technology

Advisory Committee Member

Name: Julian Barnes

Title: Coordinator of Science

Affiliation: RCPS

My signature below certifies my willingness to actively participate on the Advisory Committee for the proposed Roanoke County STEM Academy at The Burton Center for The Arts and Technology.

Julian J. Barnes
Signature

11-29-11
Date

Advisory Committee Certification

Roanoke County STEM Academy at The Burton Center for The Arts and Technology

Advisory Committee Member

Name: Dr. Kathryn H. Beard

Title: Coordinator, Career and Technical Education

Affiliation: Roanoke County Schools

My signature below certifies my willingness to actively participate on the Advisory Committee for the proposed Roanoke County STEM Academy at The Burton Center for The Arts and Technology.

Dr Kathryn Beard
Signature

11/22/11
Date

Advisory Committee Certification

Roanoke County STEM Academy at The Burton Center for The Arts and Technology

Advisory Committee Member

Name: Linda Bowden

Title: Coordinator of Math

Affiliation: RCPS

My signature below certifies my willingness to actively participate on the Advisory Committee for the proposed Roanoke County STEM Academy at The Burton Center for The Arts and Technology.

Linda W. Bowden
Signature

November 29, 2011
Date

Advisory Committee Certification

Roanoke County STEM Academy at The Burton Center for The Arts and Technology

Advisory Committee Member

Name: Brenda Brand

Title: Associate Professor in Science Education

Affiliation: Virginia Tech

My signature below certifies my willingness to actively participate on the Advisory Committee for the proposed Roanoke County STEM Academy at The Burton Center for The Arts and Technology.

Brenda R. Brand

Signature

11/23/2011

Date

Planning Committee Certification

Roanoke County STEM Academy at The Burton Center for The Arts and Technology

Planning Committee Member

Name: Dan Horine

Title: Program Head, Mechatronics/Energy Management Systems

Affiliation: Virginia Western Community College

My signature below certifies my willingness to actively participate on the Planning Committee for the proposed Roanoke County STEM Academy at The Burton Center for The Arts and Technology.

Signature

11-29-11
Date

Advisory Committee Certification

Roanoke County STEM Academy at The Burton Center for The Arts and Technology

Advisory Committee Member

Name: John M. Hull

Title: Director of Research

Affiliation: Roanoke Regional Partnership

My signature below certifies my willingness to actively participate on the Advisory Committee for the proposed Roanoke County STEM Academy at The Burton Center for The Arts and Technology.

John M. Hull
Signature

11-29-11
Date

Advisory Committee Certification

Roanoke County STEM Academy at The Burton Center for The Arts and Technology

Advisory Committee Member

Name: Fran Kiker

Title: Coordinator of Guidance

Affiliation: RCPS

My signature below certifies my willingness to actively participate on the Advisory Committee for the proposed Roanoke County STEM Academy at The Burton Center for The Arts and Technology.

Fran Kiker
Signature

29 Nov 2011
Date

Advisory Committee Certification

Roanoke County STEM Academy at Burton Center for Art and Technology

Advisory Committee Member

Name: Betti Kreye

Title: Clinical Associate Professor

Affiliation: Virginia Tech

My signature below certifies my willingness to actively participate on the Advisory Committee for the proposed Roanoke County STEM Academy at Burton Center for Arts and Technology.

Betti C Kreye
Signature

12-6-11
Date

Advisory Committee Certification

Roanoke County STEM Academy at The Burton Center for The Arts and Technology

Advisory Committee Member

Name: Lorraine S. Lange

Title: Superintendent

Affiliation: RCPS

My signature below certifies my willingness to actively participate on the Advisory Committee for the proposed Roanoke County STEM Academy at The Burton Center for The Arts and Technology.

Lorraine S Lange
Signature

11/29/11
Date

Advisory Committee Certification

Roanoke County STEM Academy at The Burton Center for The Arts and Technology

Advisory Committee Member

Name: Joe LeGault

Title: Coordinator of Language Arts

Affiliation: RCPS

My signature below certifies my willingness to actively participate on the Advisory Committee for the proposed Roanoke County STEM Academy at The Burton Center for The Arts and Technology.

Joe LeGault
Signature

11/29/2011
Date

Advisory Committee Certification

Roanoke County STEM Academy at The Burton Center for The Arts and Technology

Advisory Committee Member

Name: Susan G. Magliaro

Title: Director, School of Education

Affiliation: Virginia Tech

My signature below certifies my willingness to actively participate on the Advisory Committee for the proposed Roanoke County STEM Academy at The Burton Center for The Arts and Technology.

Susan G Magliaro
Signature

November 23, 2011
Date

Advisory Committee Certification

Roanoke County STEM Academy at The Burton Center for The Arts and Technology

Advisory Committee Member

Name: James W. Poythress

Title: Dean, School of Business, Engineering, & Technology

Affiliation: Virginia Western Community College

My signature below certifies my willingness to actively participate on the Advisory Committee for the proposed Roanoke County STEM Academy at The Burton Center for The Arts and Technology.

James W. Poythress
Signature

11/23/11
Date

Advisory Committee Certification

Roanoke County STEM Academy at The Burton Center for The Arts and Technology

Advisory Committee Member

Name: Cecil Snead

Title: Director of Secondary Instruction/Technology, CTE & Adult Ed.

Affiliation: RCPS

My signature below certifies my willingness to actively participate on the Advisory Committee for the proposed Roanoke County STEM Academy at The Burton Center for The Arts and Technology.

Signature

11-29-11

Date

Advisory Committee Certification

Roanoke County STEM Academy at The Burton Center for The Arts and Technology

Advisory Committee Member

Name: Jason Suhr

Title: Principal, Burton Center for Arts and Technology

Affiliation: Roanoke County Public Schools

My signature below certifies my willingness to actively participate on the Advisory Committee for the proposed Roanoke County STEM Academy at The Burton Center for The Arts and Technology.

Signature _____ Date 11/22/11

Advisory Committee Certification

Roanoke County STEM Academy at The Burton Center for The Arts and Technology

Advisory Committee Member:

Name: **Doloris E. Vest**

Title:**President**

Affiliation:

Western Virginia Workforce Development Board
108 N. Jefferson St. Roanoke, VA 24016, 540-767-6149

My signature below certifies my willingness to actively participate on the Advisory Committee for the proposed Roanoke County STEM Academy at The Burton Center for The Arts and Technology.

Doloris E Vest
Signature

November 29, 2011
Date

Appendix C:

List of Partners

Partnerships

Accellent Cardiology
Access Advertising
AECOM
Arcet
Berglund Automotive
Balzer and Associates, Inc.
Blue Ridge PBS
Carilion Biomed Institute
Carilion Physics
Carilion TSG
Carter Media
Development Initiatives, Inc.
DRP Racing
East West DyeCom
E & W Machine
General Electric
Graham-White Mfg.
Hill Studios
Hughes Associates
J. C. Nordt
Lionberger Construction
Lincoln Electric
Mason Mechanical Labs
Miller Welders
Mountain Land Machine
NASCAR
New Millennium Steel
Novozymes
Overfelt & Son Welding
Plastics One
Precision Steel
Roanoke County Public Schools
Roanoke Regional Partnership
Roanoke-Times
Salem Specialties, Inc.
Synchrony
Sematco, Inc.
Shenandoah Machine & Maintenance Co., Inc.
Spectrum Engineers
The O'Connor Group
Thermal Dynamics
Tread Corporation
Valley Machine
Virginia Tech University
Virginia Western Community College
WDBJ 7
WSLS 10
Western Virginia Workforce Development Board
Wheeler Broadcasting
Wireless Medcare

Appendix D:

Memorandum of Agreement with Virginia Tech and Virginia Western Community College

Guaranteed Admission Agreement Between
Virginia Polytechnic Institute and State University's
College of Engineering
and the
Virginia Community College System

Section 1: General Requirements

In order to meet the requirements of this agreement and be guaranteed admission for a Summer or Fall term, a student must have:

- Completed a transferable engineering Associate Degree[1] including a minimum of 60 semester credit hours of undergraduate college-level study;
- Achieved a cumulative grade point average of not less than 3.0 (in a 4.0 system) at the time of the degree award, at the community college awarding the Associate Degree, as determined by the Virginia Tech Undergraduate Admissions Office[2]; and
- Completed six semester hours of a single foreign language at the college level, or two years of a single foreign language study during high school, or demonstrate proficiency.[3]

Associate Degree holders accepted for transfer under this agreement will not be subject to special requirements beyond those specified as major department, general education, and/or graduation requirements for students who originally enrolled in Virginia Polytechnic Institute and State University as freshmen. Virginia Tech will consider students admitted under this guaranteed admission agreement on the same basis as native students (students who began as freshmen at Virginia Tech) for admission to competitive programs, registration, financial aid, scholarship, student housing, parking, and any other opportunities open to native students with junior standing.

Virginia Tech waives its application fee for students with demonstrated financial need. An interested student should submit a written request, which includes an explanation of financial hardship, to the Virginia Tech Office of Undergraduate Admissions by February 15 prior to the Summer or Fall term of application.

Virginia Community College students who have completed an engineering Associate Degree and have a cumulative GPA of 3.0 (with minimum grades of "B" or better in all engineering, math and science courses) at the time of Associate Degree completion are guaranteed admission to General Engineering at Virginia Polytechnic Institute and State University. Admission to a specific department is subject to space availability and specific departmental entrance requirements. Eligible students will be admitted to alternate engineering majors if the first choice of major is not available.

---

[1] Degree must be transferable, not an Associate of Applied Science.
[2] All course grades on the VCCS transcript, including repeated classes, will be re-calculated to determine the overall GPA
[3] Students attending a Virginia community college will be allowed to complete the required foreign language units after enrollment at Virginia Polytechnic Institute and State University. These credits fulfill a university entrance requirement and may not be counted as credits toward graduation requirements.

Graduation credit hour requirements for the various departments of the College of Engineering range from 120 to 136. The College of Engineering will transfer from the community college up to one-half of the credit hours required for graduation. The College of Engineering may require more than two years of course work for the Baccalaureate Degree and will specify major course requirements.

Students without the engineering Associate Degree or with credits or grade point average lower than that specified above may be considered for transfer admission on an individual, competitive basis; however, credit earned does not come under the protection of this agreement. A student who simultaneously receives an Associate Degree in engineering and high school diploma is not eligible for admission via this agreement.

Virginia Tech reserves the right to deny admission to students who have been dismissed or suspended for academic or disciplinary reasons or to those convicted of a felony or a serious misdemeanor impacting the safety of the university community.

Acceptance of course credits for transfer will be evaluated by the College of Engineering on the basis of applicability of the courses to the baccalaureate program. Any advanced standing, Advanced Placement, or International Baccalaureate credits awarded by the VCCS will be re-evaluated by Virginia Tech to determine course equivalency at Virginia Tech.

VCCS transfer students applying to the College of Engineering may be eligible for Lifeline Scholarships administered by Virginia Tech. More information is available at
http://www.finaid.vt.edu/types_of_aid/scholarships/vt-vccs-lifeline/index.html
http://www.finaid.vt.edu/types_of_aid/scholarships/presidential_campus_enrichment/vt-vccs-lifeline.html
The College of Engineering also has a scholarship available to any VCCS graduate with a transferable engineering Associate Degree. The Leo Padis scholarship is awarded by the College of Engineering to students in their first year of study at Virginia Tech; the scholarship award is $1000 ($500/semester) and awarded at the beginning of a fall semester only. This scholarship process requires an application, to be submitted to Virginia Tech no later than June 1 prior to the Summer or Fall term of admission application. Scholarship applications can be obtained from the Transfer Counselors at the VCCS sites offering transferable engineering Associate Degrees, or from the Engineering Department at the same VCCS sites.

SECTION 2: Guaranteed Admission Status

Guaranteed admission status will be granted to any Virginia community college student who has completed an engineering Associate Degree containing the following minimum core:

Subject/hour requirement	VCCS course numbers	VT course numbers
English Composition 6 hours	ENG 111 + 112	ENGL 1105 & 1106
Natural and Physical Science Minimum 12 hours	CHM 111 & PHY 231+232 or PHY 241+242	CHEM 1035 & 1045 and PHYS 2305 & 2306
Mathematics 8 – 18 hours	Required: MTH 173+174 (or 273+274) or 175+176+ 177+178 Additional preferred courses: MTH 177or 285; MTH 277; & MTH 279 or 291	MATH 1205, 1206, 1224 (and preferably 1114, 2214 & 2224)
Social Sciences 6 hours	Any transferable equivalent.	6 semester hours
Humanities 6 hours	Any transferable equivalent.	6 semester hours
		Total= 38-48 semester hours of General Education*
Engineering Minimum 16 hours	Course numbers vary by site.	Preferably include transferable equivalents (determined at the time the course is taken) of ENGE 1024 + 1104/1114[3]; remainder of required hours to be equivalent based on student's choice of major, but to include any of the following: CSC 1114 or 2505; ECE 1574, 2004 or 3054; ENGE 2314 or 2324; ESM 2104, 2304 or 2204; ISE 2014; or ME 3114

*These 38-48 semester hours will be applied toward the fulfillment of the university's and the College of Engineering's general education requirements. Completion of a native engineering Associates Degree (all college credits earned solely from VCCS schools) will guarantee completion of the Virginia Tech Liberal Education (general education) component of the undergraduate curriculum. While a non-native degree does not impact guaranteed admission under this agreement, Virginia Tech will guarantee completion of the Virginia Tech Liberal Education component of the undergraduate curriculum only for students with a native transfer engineering associate degree. Virginia Tech considers any AP, Advanced Standing, Military credit, or CLEP as part of a native degree.

[3] Transferability of ENGE 1024, 1104 & 1114 is determined on a college-by-college basis (not as a blanket approval for all VCCS colleges). Prospective transfers should consult the *Transfer Guide* (available on-line at www.vt.edu) to see if equivalents exist at their site.

Remaining credits will be accepted by the College of Engineering and may or may not satisfy the requirements of the degree program into which the student transfers. Subsequent graduation from the College of Engineering, therefore, is not assured within a two-year period of full-time study.

Remedial, developmental, and/or vocational courses (including drafting and engineering technology courses) will not be counted for academic credit in transfer.

All courses completed at the community college and offered for transfer credit to the university must be passed with a grade of C or better (for purposes of complying with this agreement, guaranteeing admission, all grades in engineering, math and science courses should be "B" or better).

SECTION 3: Nontraditional Credit

The evaluation of nontraditional credit will be the same for transfer and non-transfer students.

SECTION 4: Publication of Requirements

All requirements for admission to the university should be set forth with precision and clarity. The University catalog will include a description of this articulation agreement in both the Engineering and Admissions sections.

Checksheets, with graduation requirements for each engineering major, will be available in the Office of the Associate Dean for Engineering Academic Affairs. Checksheets are available to VCCS faculty and advisors through the Registrar's website at http://www.registrar.vt.edu/registration/degree_checksheet.php

SECTION 5: Terms of Articulation Agreement

The terms of this articulation agreement shall be effective with the academic year beginning August 2011 and apply only to the College of Engineering. It shall be reviewed every two years at the Virginia Tech Engineering Articulation Conference.

Virginia Tech will provide tracking data annually on the performance of students enrolling in the College of Engineering under this agreement, to include comparison with native-to-Virginia Tech students. The specific data elements and the timing of the report will be determined by the institutional research staffs at VCCS and Virginia Tech.

SECTION 6: Agreement Withdrawal

Either party to this agreement (the Virginia Community College System and Virginia Polytechnic Institute and State University's College of Engineering) may withdraw from this agreement by providing written notice to the appropriate parties. The following must be notified two years in advance of their intention to withdraw: Virginia Polytechnic Institute and State University Provost, Dean of the College of Engineering, and the Vice Chancellor of Academic Services & Research of the Virginia Community College System.

Agreed to this 14th day of February 2012.

Signed:

Richard Benson
Dean, College of Engineering
Virginia Polytechnic Institute
and State University

Daniel Wubah
Vice President and Dean
for Undergraduate Education
Virginia Polytechnic
Institute and State University

Glenn DuBois
Chancellor for
Virginia Community
College System

VIRGINIA WESTERN
COMMUNITY COLLEGE

WE'LL TAKE YOU THERE

VICE PRESIDENT OF ACADEMIC STUDENT AFFAIRS

July 15, 2011

Dr. Cecil Snead
Director of Instruction
Roanoke County Public Schools
5937 Cove Road
Roanoke, Virginia 24019

Dear Dr. Snead:

I have enclosed the 2011-2012 dual enrollment contract between Roanoke County Public Schools and Virginia Western Community College for dual classes to be offered at William Byrd High School, Cave Spring High School, Hidden Valley High School, Glenvar High School, Arnold Burton Center for Arts and Technology, Northside High School, and for those classes being taught through the Virginia Western Academy for Advanced Technology.

Immediately following the title page of the contract is an additional page of contract provisions. These provisions outline the duties and responsibilities of the dual enrollment instructors along with various due dates for enrolling students into our student information system and for checking class rosters and for entering grades by the dual enrollment instructors. Also, please note the attachments at the end of the contract.

As soon as you have reviewed and signed the contract, please return it to me as soon as possible at my address listed below, and make a copy of the contract for your school system files.

Virginia Western Community College looks forward to a successful partnership with Roanoke County Public Schools during the 2011-2012 school year. Please call me at 857-7235 if you have any questions.

Sincerely yours,

William A. Salyers, Jr.
Coordinator, Dual Enrollment
Virginia Western Community College
POB 14007
Roanoke, VA 24038

DUAL ENROLLMENT CONTRACT

between

VIRGINIA WESTERN COMMUNITY COLLEGE

and

ROANOKE COUNTY PUBLIC SCHOOLS

for

2011-2012

Please note that the information contained on the next page of this agreement provides additional contract provisions which are essential to Virginia Western's ability to manage its student information system (PeopleSoft) in a manner which allows for efficient, accurate, and timely processing of student information within the parameters of this new system.

As a result, although this information has been disseminated to counseling coordinators in each school, it remains the responsibility of the Roanoke County Public Schools to insure that instructors conform to the mandates set forward in these provisions as well as those outlined in its dual enrollment contract and subsequent attachments.

ADDITIONAL CONTRACT PROVISIONS
2011-2012

Virginia Western Community College is in the process of preparing documentation for the SACS reaffirmation process in order to maintain the institution's accreditation. Over the course of the last few years, the Southern Association of Colleges and Schools (SACS) has focused more of its attention on dual enrollment programs offered through community colleges. As a result, SACS has become even more stringent in its expectation of the accountability of dual enrollment programs and instructors in the accreditation process.

Since some members of your faculty teach dual enrolled courses sponsored in partnership with Virginia Western Community College, these instructors are also adjunct faculty to the college, and, as such, come under the same guidelines and requirements as any other faculty member who teaches on campus at VWCC.

Over the years, however, the institution has experienced varying degrees of success in securing various forms of documentation, which are requested in written form from your dual faculty for each semester a dual class is taught. A listing of these materials follows:

1. A course outline or syllabus for each semester the course is taught and which is clearly labeled with the instructor's name, course title (both yours and VWCC's), and the semester the course is being offered.

2. A copy of each semester's final examination.

3. Samples of student writing given by instructors—especially those in any college- level English classes, but any class which requires a student essay in any subject area.

4. Student evaluations of dual faculty are mailed to each instructor by the colleges' academic divisions for distribution and completion by students in each dual class. These student evaluations are mailed to each dual instructor and should be submitted to students to complete, so the instructor can mail them back to the division office in the addressed, return envelope by the due date indicated by the division.

5. A link to the Dual Enrollment web page provides additional information for instructors:

   http://www.virginiawestern.edu/student_life/for_dual_enrollment/

Each of these items is enumerated in two yearly communications which are mailed to dual enrollment instructors in August –before the beginning of the fall semester, and in December—before the beginning of the spring semester. Needless to say, we have some very diligent instructors who return all of the documentation requested, but we have quite a few who return part of the documentation we require, and some who do not return any.

Each item listed on this previous page is used in the instructor evaluation process conducted for dual enrollment instructors by the academic divisions at Virginia Western and are essential in maintaining the requirements of the Virginia Community College System as well as those of the Southern Association of Colleges and Schools.

In order to ensure the college is in compliance with all requirements of both agencies, and to ensure the efficacy of our dual instructors, we need your assistance in encouraging your dual enrollment instructors to submit these materials in a timely fashion and according to the timeline set forward in our communications. Please communicate these requirements to your dual instructors.

over, please .....

Because our student information system, registration procedures, enrollment deadlines, and census dates are prescribed for dual enrollment classes by our student information system, PeopleSoft, the following procedures need to be followed by teachers, guidance coordinators, and school administrators:

FALL, 2011

1. Dual enrollment class rosters for fall 2011 classes will need to be ready for pickup at the guidance coordinator's office in each school **no later than Tuesday, September 13, 2011. Class rosters must have the name of the class listed on the roster as well as the instructor's name. Finally, a student's EMPL ID number, which was issued by Virginia Western's on line application process must appear on the roster next to the name of each student enrolled in each dual enrollment class.** Since some students in dual enrollment classes are not taking these classes for dual enrollment credit, instructors will need to mark through the names of these students on their class rosters so our Admissions staff will know which students should be registered for classes and which students should not be registered. Any student who has not paid your school system for the class(es) should be dropped from the roster; otherwise, your school system will be charged for any student whose name appears on the roster.

2. **Dual enrollment class grades for fall 2011 will need to be entered into our student information system by going to http://www.virginiawestern.edu/ and finding MY VWCC at upper left hand corner of the web page. Grades must be entered no later than Friday, February 3, 2012 by each instructor who teaches a dual enrollment class.** Grades are required to be reviewed by each instructor's supervisor or guidance coordinator to insure they are correct and complete before being entered.

SPRING, 2012

1. Dual enrollment class rosters for spring 2012 classes will need to be ready for pickup at the guidance coordinator's office in each school **no later than Wednesday, February 8, 2012. Class rosters should have the name of the class listed on the roster as well as the instructor's name. Finally, a student's EMPL ID number, which was issued by Virginia Western's on line application process must appear on the roster next to the name of each student enrolled in each dual enrollment class.** Since some students in dual enrollment classes are not taking these classes for dual enrollment credit, instructors will need to mark through the names of these students on their class rosters so our Admissions staff will know which students should be registered for classes and which students should not be registered. Any student who has not paid your school system for the class(es) should be dropped from the roster; otherwise, your school system will be charged for any student whose name appears on the roster.

2. **Dual enrollment class grades for spring 2012 will need to be entered into our student information system by going to http://www.virginiawestern.edu/ and finding MY VWCC at upper left hand corner of the web page. Grades must be entered no later than Friday, June 15, 2012 by each instructor who teaches a dual enrollment class.** Grades are required to be reviewed by each instructor's supervisor or guidance coordinator to insure they are correct and complete before being entered

PLEASE NOTE: It would be extremely helpful if these pages were included in a memorandum under your name and sent to each guidance coordinator in your school system that has responsibility for dual enrollment procedures.

DUAL ENROLLMENT CONTRACT

between

VIRGINIA WESTERN COMMUNITY COLLEGE

and

ROANOKE 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 part does hereby agree to the following:

1. Under this agreement, Virginia Western Community College will make available college-level courses to students of Roanoke County Public Schools for the 2011-2012 academic year.

The courses to be offered will be established by mutual agreement of both parties for the fall and spring semesters. **A LISTING OF THE COURSES CAN BE FOUND AS ATTACHMENT I AT THE END OF THIS CONTRACT.**

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 Roanoke County Public Schools reserve the right to cancel any class sections or add sections, not later than the census date for the class as determine by the college.

2. Tuition and Fees

The Roanoke County School Board agrees to pay to Virginia Western Community College the state mandatory tuition and any mandatory fee established by the State Board for Community Colleges and in effect at the time the classes begin plus any per credit hour fees established by the Virginia Western Community College Board. Virginia Western Community College will bill Roanoke County Public Schools on a semester basis for tuition charges incurred under this agreement for a specific academic semester. Virginia Western Community College will bill Roanoke County Public Schools within 30 days after the commencement of classes on a semester basis for tuition charges incurred under this agreement for a specific academic semester.

2011-2012 Tuition & Fees*

(Fees include: Instruction for dual enrollment classes, administrative expenses, room utility costs and any maintenance of facilities.)

***Virginia Resident - $129.09 per credit**

***NOTE: Tuition and Fees may be subject to change.**

If a student drops a course before the cut-off dates shown below, Roanoke County Public Schools will not be billed for the student.

Cut-Off Dates for Registering or Dropping Students Without Penalty

Fall Semester 2011 – by Friday, September 30, 2011
Spring Semester 2012 – by Friday, February 24, 2011

3. Textbooks

The college reserves the right to determine the textbooks used in dual enrollment courses. Providing dual enrollment textbooks in all classes being offered is the responsibility of Roanoke County Public Schools.

4. Payment for Other Services

Tuition fees will be reimbursed to Roanoke County Public Schools at the rate of 75% of the total cost of these tuition and fees. **AN EXAMPLE OF HOW TUITION FEES WILL BE REIMBURSED APPEARS AT THE END OF THIS CONTRACT AS ATTACHMENT II.**

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 Virginia Western Community College. Roanoke County Public Schools may recommend qualified teachers who are interested in teaching in the dual enrollment program to Virginia Western Community 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 Roanoke County Public Schools.

(2) Dual enrollment course faculty must meet the minimum credential requirements set forth by Form VCCS-29 and the Southern Association of Colleges and Schools. **FORM VCCS-29 CAN BE FOUND AS ATTACHMENT III AT THE END OF THIS CONTRACT.**

b. Payment

If the instructor for dual enrollment course(s) is employed full time by Roanoke County Public Schools and the course(s) are part of the assigned teaching workload, the college will reimburse Roanoke 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 Roanoke 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 the qualifications of the instructor and 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 such as verifying class rosters, reporting student progress to the college at mid-semester, 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 have permission of their parent or guardian to participate, be recommended by their high school principal or guidance counselor to cross register, and meet any course prerequisites.

(2) Students must meet admission and course placement requirements of Virginia Western Community College. Requirements for admission include the completion of an application for admission to the college, any transcript request forms, the completion and receipt of satisfactory scores on the college's COMPASS placement tests when required (or exemption

certificates), signed permission forms from high school principals, and INS documentation for students who are not United States citizens.

(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.

7. College Administrative Responsibilities

a. The college, through its instructor(s), will provide the appropriate Roanoke County Public School officials with progress reports on each student from time to time as shall be agreed by the contracting school system and the 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 Roanoke County Public Schools 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 part of the permanent college record maintained by the college's Admissions and Records offices. Transcripts will be sent to college/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 Roanoke County Public School students enrolled in college courses under this agreement.

8. High School Administrative Responsibilities

Roanoke County Public Schools will follow the procedures outlined on the dual enrollment calendar. **THE CALENDAR FOR THE 2011-2012 ACADEMIC YEAR CAN BE FOUND AS ATTACHMENT IV AT THE END OF THIS CONTRACT.**

Class rosters for each dual enrollment class offered by Roanoke County Public Schools will be verified by the instructor on the college's web site under: MY VWCC and any discrepancies in student enrollments will be reported to Bill Salyers at bsalyers@virginiawestern.edu within two weeks of the START DATE of the dual enrollment calendar for each semester. During this two week period, students may be added to a class or dropped from a class without penalty to the student or cost to the school system. After the **LAST OFFICIAL DATE THAT STUDENTS MAY BE REGISTERED OR DROPPED FROM A DUAL ENROLLMENT CLASS, NO INSTRUCTORS WILL BE ALLOWED TO DROP OR ADD STUDENTS FROM A CLASS. ROANOKE COUNTY**

PUBLIC SCHOOLS WILL BE CHARGED FOR ALL STUDENTS REGISTERED FOR A CLASS AFTER THE LAST OFFICIAL DATE FOR DROPPING AND ADDING STUDENTS HAS EXPIRED—SEE ATTACHMENT IV FOR SPECIFIC DATES.

Once the drop/add period has expired, instructors may **WITHDRAW** students from a dual enrollment class **BY THE LAST OFFICIAL DATE TO WITHDRAW STUDENTS—SEE ATTACHMENT IV FOR SPECIFIC DATES. A STUDENT WILL BE WITHDRAWN FROM A DUAL ENROLLMENT CLASS WITH A 'W' WHICH WILL APPEAR ON THE STUDENT'S PERMANENT COLLEGE TRANSCRIPT.**

Dual Enrollment Program instructors will need to process their grades for each student by the official **DEADLINE** date for entering grades into each instructor's **MY VWCC** account. See **ATTACHMENT IV** for specific dates.

9. Award of Credit

College and high school credit will 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. All dual enrollment arrangements developed and implemented under the auspices of the Virginia Plan for Dual Enrollment shall include a formal mechanism for evaluation. Virginia Western Community 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. Modification 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

Virginia Western Community College reserves the right to advise the student, parents, and the school system when the student does not have

sufficient skills or abilities to continue in the courses selected after the first semester of enrollment in the Dual Enrollment Program.

11. Agreement Contacts

Contact persons for this agreement are:

Dr. Cecil Snead, Director of Instruction, Roanoke County Public Schools
Mr. Bill Salyers, Jr., Coordinator, Dual Enrollment, Virginia Western CC

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, no unified policy on the transfer of VCCS courses exists. Students should be advised to consult with transfer institutions in order to determine if their courses will be accepted for transfer.

13. Virginia Western Community College reserves the right to enroll other students under this agreement when courses are offered on campus or sites not at the high school. Non-dual enrollment students are not allowed in dual classes offered in 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 30 days of the requested termination date. Termination will not take place until dual enrollment courses in progress are completed.

16. Neither Virginia Western Community College nor Roanoke County Public Schools shall unlawfully discriminate on the basis of face, nationality, ethnicity, religion, gender, age, or disability in any undertaking pursuant to this agreement.

17. Northing herein shall be construed as a waiver of the sovereign immunity of the

Commonwealth of Virginia nor the assumption of any liability contrary to the laws and statutes of Virginia.

SIGNATURES

Roanoke County Public Schools

By Lorraine Lange Date 8/11/12
Dr. Lorraine Lange
Superintendent

By [signature] Date 8-2-11
Dr. Cecil Snead
Direction of Instruction

Virginia Western Community College

By Robert H. Sandel Date 7-29-11
Dr. Robert H. Sandel
President

By Tresia B. Samani Date 7/18/11
Dr. Tresia B. Samani, Vice President
Academic and Student Affairs

By [signature] Date 7/18/11
Ms. Cheryl Miller,
Vice President of Financial
and Administrative Services

Appendix E:

Internship Agreements

Engineering Internship Agreement – Spring 2011

Student's Name Ben Brisley Program Engineering

School Burton Center for Arts & Technology School Division Roanoke County Schools

Internship Site Hill Studio PC Address 1760 Boulevard, Salem, VA

Job Title Student Intern On-job Supervisor David Hill, ASLA
Marshall Merrillion - Zapf

***PURPOSE:** The purpose of this agreement is to provide a way of recording the terms of the student's internship and to outline the responsibilities of all parties involved with that internship to comply with local, federal and state requirements.

STUDENT INTERNS agree to:

1. Attend school and work regularly. The student intern will notify the school and employer by a designated time on any day absent. When a student is absent, he/she is **not** permitted to work that day unless advance permission has been given by the teacher-coordinator.
2. Perform internship responsibilities efficiently.
3. Show honesty, punctuality, courtesy, a cooperative attitude, proper health and grooming habits, appropriate dress, and a willingness to learn.
4. Conform to the rules and regulations, including all safety requirements, of the internship site.
5. Furnish the teacher-coordinator with necessary information about their internship and complete promptly all necessary reports.
6. Consult the teacher-coordinator about any difficulties arising at the internship site or related to the internship program.
7. Check and respond to all messages (email and text) from teacher and mentor in a timely fashion. Check Blackboard for announcement every day. Keep teacher and mentor informed on a regular basis.

MENTORS agree to:

1. Provide students the opportunity to receive on-the-job experiences. Students will attend the internship site on Tuesdays, Thursdays and every other Friday from 8:00 to 10:30 at a minimum to complete a minimum of 70 hours. Tentative dates for 2011 are attached.
2. Provide varied occupational experiences which expose students to as many aspects of the operation as possible.
3. Assist students in completing job-related projects and provide available instructional materials and occupational guidance.
4. Adhere to federal and state regulations regarding labor laws, safety regulations, and other applicable legislation.
5. Consult the coordinator as soon as possible regarding work-related problems.
6. Continue with interns throughout the semester, provided their job and school performances remain satisfactory.
7. Provide time for consultation with the teacher-coordinator to evaluate students' on-the-job performance.

Meets requirements of the *Work-Training Student Learner Agreement, Virginia Department of Labor and Industry

PARENTS/GUARDIANS agree to:

1. Support the internship method of education and encourage competent participation of student interns.

*2. Assume responsibility for the safety of students from the time they leave home or school until they report to the job and from the time they leave the job until they arrive at home or at school.

3. Be responsible for transportation of students to and from the internship site.

4. Cooperate with all rules and policies of the school and internship site.

5. Be aware that students are not allowed to report to the training station on days they are absent from school unless they receive permission from the teacher-coordinator.
6. Be aware that students will be evaluated by mentors as well as teachers.

TEACHER-COORDINATORS agree to:

*1. Provide related classroom instruction, including safety procedures.

*2. Assume responsibility for initiating and developing individual internship experiences.

*3. Cooperate with internship sites in developing appropriate training activities related to student interns' career interests.

*4. Make periodic visits to internship sites to observe student interns, consult with internship mentors, and assist student interns with any problems.

5. Assist in evaluation of student interns.

6. Provide mentors with current information concerning students' progress in school.

Meets requirements of the *Work-Training Student Learner Agreement, Virginia Department of Labor and Industry

Signatures:

Student _____ 1/19/11 (Sign) (Date)

Parent/Guardian _____ 1/18/11 (Sign) (Date)

School Administrator _____ 1/10/11 (Sign) (Date)

Employer/Mentor _____ (Sign) (Date)

Teacher/ Coordinator _____ 1/13/11 (Sign) (Date)

Internship dates for 2011

January – ~~13~~, 20, 25, 27, 28
February – 3, 4, 8, 10, 15, 17, 18, 22, 24
March – 1, 3, 4, 8, 10, 15, 17, 22, 24, 29, 31
April – ~~5~~, 7, 8, 12, 14, 19, 21
May 3, 5, 10, 12, 13, 17, 19, 20

Engineering Internship Agreement – Spring 2011

Student's Name Jeffrey Camper Program Engineering

School Burton Center for Arts & Technology School Division Roanoke County Schools

Internship Site Spectrum PC Address 1760 Boulevard, Salem, VA

Job Title Student Intern On-job Supervisor _____

***PURPOSE:** The purpose of this agreement is to provide a way of recording the terms of the student's internship and to outline the responsibilities of all parties involved with that internship to comply with local, federal and state requirements.

STUDENT INTERNS agree to:

1. Attend school and work regularly. The student intern will notify the school and employer by a designated time on any day absent. When a student is absent, he/she is **not** permitted to work that day unless advance permission has been given by the teacher-coordinator.
2. Perform internship responsibilities efficiently.
3. Show honesty, punctuality, courtesy, a cooperative attitude, proper health and grooming habits, appropriate dress, and a willingness to learn.
4. *Conform to the rules and regulations, including all safety requirements, of the internship site.
5. Furnish the teacher-coordinator with necessary information about their internship and complete promptly all necessary reports.
6. Consult the teacher-coordinator about any difficulties arising at the internship site or related to the internship program.
7. Check and respond to all messages (email and text) from teacher and mentor in a timely fashion. Check Blackboard for announcements every day. Keep teacher and mentor informed on a regular basis.

MENTORS agree to:

1. Provide students the opportunity to receive on-the-job experiences. Students will attend the internship site on Tuesdays, Thursdays and every other Friday from 8:00 to 10:30 at a minimum to complete a minimum of 70 hours. Tentative dates for 2011 are attached.
2. Provide varied occupational experiences which expose students to as many aspects of the operation as possible.
3. *Assist students in completing job-related projects and provide available instructional materials and occupational guidance.
4. *Adhere to federal and state regulations regarding labor laws, safety regulations, and other applicable legislation.
5. Consult the coordinator as soon as possible regarding work-related problems.
6. Continue with interns throughout the semester, provided their job and school performances remain satisfactory.
7. Provide time for consultation with the teacher-coordinator to evaluate students' on-the-job performance.

Meets requirements of the *Work-Training Student Learner Agreement, Virginia Department of Labor and Industry

PARENTS/GUARDIANS agree to:

1. Support the internship method of education and encourage competent participation of student interns.

*2. Assume responsibility for the safety of students from the time they leave home or school until they report to the job and from the time they leave the job until they arrive at home or at school.

3. Be responsible for transportation of students to and from the internship site.

4. Cooperate with all rules and policies of the school and internship site.

5. Be aware that students are not allowed to report to the training station on days they are absent from school unless they receive permission from the teacher-coordinator.
6. Be aware that students will be evaluated by mentors as well as teachers.

TEACHER-COORDINATORS agree to:

*1. Provide related classroom instruction, including safety procedures.

*2. Assume responsibility for initiating and developing individual internship experiences.

*3. Cooperate with internship sites in developing appropriate training activities related to student interns' career interests.

*4. Make periodic visits to internship sites to observe student interns, consult with internship mentors, and assist student interns with any problems.

5. Assist in evaluation of student interns.

6. Provide mentors with current information concerning students' progress in school.

*Meets requirements of the *Work-Training Student Learner Agreement, Virginia Department of Labor and Industry*

Signatures:

Student (Sign) 1/17/11 (Date) **Parent/Guardian** (Sign) 1/17/11 (Date)

School Administrator (Sign) 1/18/11 (Date) **Employer/Mentor** (Sign) 1/20/11 (Date)

Teacher/ Coordinator (Sign) 1/13/11 (Date)

Internship dates for 2011

January – ~~15~~, 20, 25, 27, 28
February -- 3, 4, 8, 10, 15, 17, 18, 22, 24
March – 1, 3, 4, 8, 10, 15, 17, 22, 24, 29, 31
April – ~~5~~, 7, 8, 12, 14, 19, 21
May 3, 5, 10, 12, 13, 17, 19, 20

Engineering Internship Agreement – Spring 2011

Student's Name David Vieth Program Engineering

School Burton Center for Arts & Technology School Division Roanoke County Schools

Internship Site Spectrum PC Address 1760 Boulevard, Salem, VA

Job Title Student Intern On-job Supervisor _____

*PURPOSE: The purpose of this agreement is to provide a way of recording the terms of the student's internship and to outline the responsibilities of all parties involved with that internship to comply with local, federal and state requirements.

STUDENT INTERNS agree to:

1. Attend school and work regularly. The student intern will notify the school and employer by a designated time on any day absent. When a student is absent, he/she is **not** permitted to work that day unless advance permission has been given by the teacher-coordinator.
2. Perform internship responsibilities efficiently.
3. Show honesty, punctuality, courtesy, a cooperative attitude, proper health and grooming habits, appropriate dress, and a willingness to learn.
*4. Conform to the rules and regulations, including all safety requirements, of the internship site.
5. Furnish the teacher-coordinator with necessary information about their internship and complete promptly all necessary reports.
6. Consult the teacher-coordinator about any difficulties arising at the internship site or related to the internship program.
7. Check and respond to all messages (email and text) from teacher and mentor in a timely fashion. Check Blackboard for announcements every day. Keep teacher and mentor informed on a regular basis.

MENTORS agree to:

1. Provide students the opportunity to receive on-the-job experiences. Students will attend the internship site on Tuesdays, Thursdays and every other Friday from 8:00 to 10:30 at a minimum to complete a minimum of 70 hours. Tentative dates for 2011 are attached.
2. Provide varied occupational experiences which expose students to as many aspects of the operation as possible.
*3. Assist students in completing job-related projects and provide available instructional materials and occupational guidance.
*4. Adhere to federal and state regulations regarding labor laws, safety regulations, and other applicable legislation.
5. Consult the coordinator as soon as possible regarding work-related problems.
6. Continue with interns throughout the semester, provided their job and school performances remain satisfactory.
7. Provide time for consultation with the teacher-coordinator to evaluate students' on-the-job performance.

*Meets requirements of the *Work-Training Student Learner Agreement, Virginia Department of Labor and Industry*.

PARENTS/GUARDIANS agree to:

1. Support the internship method of education and encourage competent participation of student interns.

*2. Assume responsibility for the safety of students from the time they leave home or school until they report to the job and from the time they leave the job until they arrive at home or at school.

3. Be responsible for transportation of students to and from the internship site.

4. Cooperate with all rules and policies of the school and internship site.

5. Be aware that students are **not** allowed to report to the training station on days they are absent from school unless they receive permission from the teacher-coordinator.
6. Be aware that students will be evaluated by mentors as well as teachers.

TEACHER-COORDINATORS agree to:

*1. Provide related classroom instruction, including safety procedures.

*2. Assume responsibility for initiating and developing individual internship experiences.

*3. Cooperate with internship sites in developing appropriate training activities related to student interns' career interests.

*4. Make periodic visits to internship sites to observe student interns, consult with internship mentors, and assist student interns with any problems.

5. Assist in evaluation of student interns.

6. Provide mentors with current information concerning students' progress in school.

*Meets requirements of the ***Work-Training Student Learner Agreement, Virginia Department of Labor and Industry***

Signatures:

Student David Vieth 1-19 (Sign) (Date)

Parent/Guardian [signature] 1-17-11 (Sign) (Date)

School Administrator [signature] 1/20/11 (Sign) (Date)

Employer/Mentor [signature] 1/20/11 (Sign) (Date)

Teacher/ Coordinator Shanta 1/13/11 (Sign) (Date)

Internship dates for 2011

January – ~~18~~, 20, 25, 27, 28
February – 3, 4, 8, 10, 15, 17, 18, 22, 24
March – 1, 3, 4, 8, 10, 15, 17, 22, 24, 29, 31
April – ~~5~~, 7, 8, 12, 14, 19, 21
May 3, 5, 10, 12, 13, 17, 19, 20

Engineering Internship Agreement – Spring 2011

Student's Name Brandon Amos Program Engineering

School Burton Center for Arts & Technology School Division Roanoke County Schools

Internship Site Sunapsys Address 1760 Boulevard, Salem, VA

Job Title Student Intern On-job Supervisor Mack McGhee

*PURPOSE: The purpose of this agreement is to provide a way of recording the terms of the student's internship and to outline the responsibilities of all parties involved with that internship to comply with local, federal and state requirements.

STUDENT INTERNS agree to:

1. Attend school and work regularly. The student intern will notify the school and employer by a designated time on any day absent. When a student is absent, he/she is **not** permitted to work that day unless advance permission has been given by the teacher-coordinator.
2. Perform internship responsibilities efficiently.
3. Show honesty, punctuality, courtesy, a cooperative attitude, proper health and grooming habits, appropriate dress, and a willingness to learn.
4. Conform to the rules and regulations, including all safety requirements, of the internship site.
5. Furnish the teacher-coordinator with necessary information about their internship and complete promptly all necessary reports.
6. Consult the teacher-coordinator about any difficulties arising at the internship site or related to the internship program.
7. Check and respond to all messages (email and text) from teacher and mentor in a timely fashion. Check Blackboard for announcement every day. Keep teacher and mentor informed on a regular basis.

MENTORS agree to:

1. Provide students the opportunity to receive on-the-job experiences. Students will attend the internship site on Tuesdays, Thursdays and every other Friday from 8:00 to 10:30 at a minimum to complete a minimum of 70 hours. Tentative dates for 2011 are attached.
2. Provide varied occupational experiences which expose students to as many aspects of the operation as possible.
3. Assist students in completing job-related projects and provide available instructional materials and occupational guidance.
4. Adhere to federal and state regulations regarding labor laws, safety regulations, and other applicable legislation.
5. Consult the coordinator as soon as possible regarding work-related problems.
6. Continue with interns throughout the semester, provided their job and school performances remain satisfactory.
7. Provide time for consultation with the teacher-coordinator to evaluate students' on-the-job performance.

*Meets requirements of the *Work-Training Student Learner Agreement, Virginia Department of Labor and Industry*

PARENTS/GUARDIANS agree to:

1. Support the internship method of education and encourage competent participation of student interns.

*2. Assume responsibility for the safety of students from the time they leave home or school until they report to the job and from the time they leave the job until they arrive at home or at school.

3. Be responsible for transportation of students to and from the internship site.

4. Cooperate with all rules and policies of the school and internship site.

5. Be aware that students are **not** allowed to report to the training station on days they are absent from school unless they receive permission from the teacher-coordinator.
6. Be aware that students will be evaluated by mentors as well as teachers.

TEACHER-COORDINATORS agree to:

*1. Provide related classroom instruction, including safety procedures.

*2. Assume responsibility for initiating and developing individual internship experiences.

*3. Cooperate with internship sites in developing appropriate training activities related to student interns' career interests.

*4. Make periodic visits to internship sites to observe student interns, consult with internship mentors, and assist student interns with any problems.

5. Assist in evaluation of student interns.

6. Provide mentors with current information concerning students' progress in school.

Meets requirements of the *Work-Training Student Learner Agreement, Virginia Department of Labor and Industry

Signatures:

Student Brandon Amos 1/13/11 (Sign) (Date) **Parent/Guardian** Sandy Amos 1/13/11 (Sign) (Date)

School Administrator A McClung 1/12/11 (Sign) (Date) **Employer/Mentor** [signature] 1/20/2011 (Sign) (Date)

Teacher/ Coordinator [signature] 1/13/11 (Sign) (Date)

Internship dates for 2011

January – ~~19~~, 20, 25, 27, 28
February -- 3, 4, 8, 10, 15, 17, 18, 22, 24
March – 1, 3, 4, 8, 10, 15, 17, 22, 24, 29, 31
April – ~~5~~, 7, 8, 12, 14, 19, 21
May 3, 5, 10, 12, 13, 17, 19, 20

Engineering Internship Agreement – Spring 2011

Student's Name Ryan King .Program Engineering

School Burton Center for Arts & Technology School Division Roanoke County Schools

Internship Site OCC Address 1760 Boulevard, Salem, VA

Job Title Student Intern On-job Supervisor Dan

*PURPOSE: The purpose of this agreement is to provide a way of recording the terms of the student's internship and to outline the responsibilities of all parties involved with that internship to comply with local, federal and state requirements.

STUDENT INTERNS agree to:

1. Attend school and work regularly. The student intern will notify the school and employer by a designated time on any day absent. When a student is absent, he/she is **not** permitted to work that day unless advance permission has been given by the teacher-coordinator.
2. Perform internship responsibilities efficiently.
3. Show honesty, punctuality, courtesy, a cooperative attitude, proper health and grooming habits, appropriate dress, and a willingness to learn.
*4. Conform to the rules and regulations, including all safety requirements, of the internship site.
5. Furnish the teacher-coordinator with necessary information about their internship and complete promptly all necessary reports.
6. Consult the teacher-coordinator about any difficulties arising at the internship site or related to the internship program.
7. Check and respond to all messages (email and text) from teacher and mentor in a timely fashion. Check Blackboard for announcement every day. Keep teacher and mentor informed on a regular basis.

MENTORS agree to:

1. Provide students the opportunity to receive on-the-job experiences. Students will attend the internship site on Tuesdays, Thursdays and every other Friday from 8:00 to 10:30 at a minimum to complete a minimum of 70 hours. Tentative dates for 2011 are attached.
2. Provide varied occupational experiences which expose students to as many aspects of the operation as possible.
*3. Assist students in completing job-related projects and provide available instructional materials and occupational guidance.
*4. Adhere to federal and state regulations regarding labor laws, safety regulations, and other applicable legislation.
5. Consult the coordinator as soon as possible regarding work-related problems.
6. Continue with interns throughout the semester, provided their job and school performances remain satisfactory.
7. Provide time for consultation with the teacher-coordinator to evaluate students' on-the-job performance.

*Meets requirements of the *Work-Training Student Learner Agreement, Virginia Department of Labor and Industry*

PARENTS/GUARDIANS agree to:

1. Support the internship method of education and encourage competent participation of student interns.

*2. Assume responsibility for the safety of students from the time they leave home or school until they report to the job and from the time they leave the job until they arrive at home or at school.

3. Be responsible for transportation of students to and from the internship site.

4. Cooperate with all rules and policies of the school and internship site.

5. Be aware that students are **not** allowed to report to the training station on days they are absent from school unless they receive permission from the teacher-coordinator.
6. Be aware that students will be evaluated by mentors as well as teachers.

TEACHER-COORDINATORS agree to:

*1. Provide related classroom instruction, including safety procedures.

*2. Assume responsibility for initiating and developing individual internship experiences.

*3. Cooperate with internship sites in developing appropriate training activities related to student interns' career interests.

*4. Make periodic visits to internship sites to observe student interns, consult with internship mentors, and assist student interns with any problems.

5. Assist in evaluation of student interns.

6. Provide mentors with current information concerning students' progress in school.

*Meets requirements of the *Work-Training Student Learner Agreement, Virginia Department of Labor and Industry*

Signatures:

Student _____ (Sign) 1/13/11 (Date) **Parent/Guardian** Freda M. King (Sign) 1/13/11 (Date)

School Administrator _____ (Sign) 1/10/11 (Date) **Employer/Mentor** _____ (Sign) 1/20/11 (Date)

Teacher/ Coordinator _____ (Sign) 1/13/11 (Date)

Internship dates for 2011

January – ~~19~~, 20, 25, 27, 28
February -- 3, 4, 8, 10, 15, 17, 18, 22, 24
March – 1, 3, 4, 8, 10, 15, 17, 22, 24, 29, 31
April – 5, 7, 8, 12, 14, 19, 21
May 3, 5, 10, 12, 13, 17, 19, 20

Engineering Internship Agreement – Spring 2011

Student's Name Alex Petzen | Program Engineering

School Burton Center for Arts & Technology | School Division Roanoke County Schools

Internship Site OCC | Address 1760 Boulevard, Salem, VA

Job Title Student Intern | On-job Supervisor Anthony Rice

*PURPOSE: The purpose of this agreement is to provide a way of recording the terms of the student's internship and to outline the responsibilities of all parties involved with that internship to comply with local, federal and state requirements.

STUDENT INTERNS agree to:

1. Attend school and work regularly. The student intern will notify the school and employer by a designated time on any day absent. When a student is absent, he/she is **not** permitted to work that day unless advance permission has been given by the teacher-coordinator.
2. Perform internship responsibilities efficiently.
3. Show honesty, punctuality, courtesy, a cooperative attitude, proper health and grooming habits, appropriate dress, and a willingness to learn.
4. Conform to the rules and regulations, including all safety requirements, of the internship site.
5. Furnish the teacher-coordinator with necessary information about their internship and complete promptly all necessary reports.
6. Consult the teacher-coordinator about any difficulties arising at the internship site or related to the internship program.
7. Check and respond to all messages (email and text) from teacher and mentor in a timely fashion. Check Blackboard for announcement every day. Keep teacher and mentor informed on a regular basis.

MENTORS agree to:

1. Provide students the opportunity to receive on-the-job experiences. Students will attend the internship site on Tuesdays, Thursdays and every other Friday from 8:00 to 10:30 at a minimum to complete a minimum of 70 hours. Tentative dates for 2011 are attached.
2. Provide varied occupational experiences which expose students to as many aspects of the operation as possible.
3. Assist students in completing job-related projects and provide available instructional materials and occupational guidance.
4. Adhere to federal and state regulations regarding labor laws, safety regulations, and other applicable legislation.
5. Consult the coordinator as soon as possible regarding work-related problems.
6. Continue with interns throughout the semester, provided their job and school performances remain satisfactory.
7. Provide time for consultation with the teacher-coordinator to evaluate students' on-the-job performance.

*Meets requirements of the *Work-Training Student Learner Agreement, Virginia Department of Labor and Industry*

PARENTS/GUARDIANS agree to:

1. Support the internship method of education and encourage competent participation of student interns.

*2. Assume responsibility for the safety of students from the time they leave home or school until they report to the job and from the time they leave the job until they arrive at home or at school.

3. Be responsible for transportation of students to and from the internship site.

4. Cooperate with all rules and policies of the school and internship site.

5. Be aware that students are **not** allowed to report to the training station on days they are absent from school unless they receive permission from the teacher-coordinator.
6. Be aware that students will be evaluated by mentors as well as teachers.

TEACHER-COORDINATORS agree to:

*1. Provide related classroom instruction, including safety procedures.

*2. Assume responsibility for initiating and developing individual internship experiences.

*3. Cooperate with internship sites in developing appropriate training activities related to student interns' career interests.

*4. Make periodic visits to internship sites to observe student interns, consult with internship mentors, and assist student interns with any problems.

5. Assist in evaluation of student interns.

6. Provide mentors with current information concerning students' progress in school.

*Meets requirements of the *Work-Training Student Learner Agreement, Virginia Department of Labor and Industry*

Signatures:

Student _____ (Sign) 1/20/11 (Date) **Parent/Guardian** _____ (Sign) 1/13/11 (Date)

School Administrator _____ (Sign) 1/10/11 (Date) **Employer/Mentor** _____ (Sign) 01-20-11 (Date)

Teacher/ Coordinator _____ (Sign) 1/13/11 (Date)

Internship dates for 2011

January – 19, 20, 25, 27, 28
February – 3, 4, 8, 10, 15, 17, 18, 22, 24
March – 1, 3, 4, 8, 10, 15, 17, 22, 24, 29, 31
April – 5, 7, 8, 12, 14, 19, 21
May 3, 5, 10, 12, 13, 17, 19, 20

Engineering Internship Agreement – Spring 2011

Student's Name Devon Wells | Program Engineering

School Burton Center for Arts & Technology | School Division Roanoke County Schools

Internship Site Carilion TSG | Address 1760 Boulevard, Salem, VA

Job Title Student Intern | On-job Supervisor Chris Riha

***PURPOSE:** The purpose of this agreement is to provide a way of recording the terms of the student's internship and to outline the responsibilities of all parties involved with that internship to comply with local, federal and state requirements.

STUDENT INTERNS agree to:

1. Attend school and work regularly. The student intern will notify the school and employer by a designated time on any day absent. When a student is absent, he/she is **not** permitted to work that day unless advance permission has been given by the teacher-coordinator.
2. Perform internship responsibilities efficiently.
3. Show honesty, punctuality, courtesy, a cooperative attitude, proper health and grooming habits, appropriate dress, and a willingness to learn.
4. Conform to the rules and regulations, including all safety requirements, of the internship site.
5. Furnish the teacher-coordinator with necessary information about their internship and complete promptly all necessary reports.
6. Consult the teacher-coordinator about any difficulties arising at the internship site or related to the internship program.
7. Check and respond to all messages (email and text) from teacher and mentor in a timely fashion. Check Blackboard for announcements every day. Keep teacher and mentor informed on a regular basis.

MENTORS agree to:

1. Provide students the opportunity to receive on-the-job experiences. Students will attend the internship site on Tuesdays, Thursdays and every other Friday from 8:00 to 10:30 at a minimum to complete a minimum of 70 hours. Tentative dates for 2011 are attached.
2. Provide varied occupational experiences which expose students to as many aspects of the operation as possible.
3. Assist students in completing job-related projects and provide available instructional materials and occupational guidance.
4. Adhere to federal and state regulations regarding labor laws, safety regulations, and other applicable legislation.
5. Consult the coordinator as soon as possible regarding work-related problems.
6. Continue with interns throughout the semester, provided their job and school performances remain satisfactory.
7. Provide time for consultation with the teacher-coordinator to evaluate students' on-the-job performance.

Meets requirements of the *Work-Training Student Learner Agreement, Virginia Department of Labor and Industry

PARENTS/GUARDIANS agree to:

1. Support the internship method of education and encourage competent participation of student interns.

*2. Assume responsibility for the safety of students from the time they leave home or school until they report to the job and from the time they leave the job until they arrive at home or at school.

3. Be responsible for transportation of students to and from the internship site.

4. Cooperate with all rules and policies of the school and internship site.

5. Be aware that students are **not** allowed to report to the training station on days they are absent from school unless they receive permission from the teacher-coordinator.
6. Be aware that students will be evaluated by mentors as well as teachers.

TEACHER-COORDINATORS agree to:

*1. Provide related classroom instruction, including safety procedures.

*2. Assume responsibility for initiating and developing individual internship experiences.

*3. Cooperate with internship sites in developing appropriate training activities related to student interns' career interests.

*4. Make periodic visits to internship sites to observe student interns, consult with internship mentors, and assist student interns with any problems.

5. Assist in evaluation of student interns.

6. Provide mentors with current information concerning students' progress in school.

Meets requirements of the *Work-Training Student Learner Agreement, Virginia Department of Labor and Industry

Signatures:

Student _____ 1/18/11 (Sign) (Date)

Parent/Guardian _____ 1/18/11 (Sign) (Date)

School Administrator _____ 1/10/11 (Sign) (Date)

Employer/Mentor _____ 1/20/11 (Sign) (Date)

Teacher/ Coordinator _____ 1/13/11 (Sign) (Date)

Internship dates for 2011

January – ~~3~~, 20, 25, 27, 28
February -- 3, 4, 8, 10, 15, 17, 18, 22, 24
March – 1, 3, 4, 8, 10, 15, 17, 22, 24, 29, 31
April – ~~5~~, 7, 8, 12, 14, 19, 21
May 3, 5, 10, 12, 13, 17, 19, 20

Engineering Internship Agreement – Spring 2011

Student's Name Rhys Dodd | Program Engineering

School Burton Center for Arts & Technology | School Division Roanoke County Schools

Internship Site Novozymes | Address 1760 Boulevard, Salem, VA

Job Title Student Intern | On-job Supervisor Seth D'Imperio

*PURPOSE: The purpose of this agreement is to provide a way of recording the terms of the student's internship and to outline the responsibilities of all parties involved with that internship to comply with local, federal and state requirements.

STUDENT INTERNS agree to:

1. Attend school and work regularly. The student intern will notify the school and employer by a designated time on any day absent. When a student is absent, he/she is **not** permitted to work that day unless advance permission has been given by the teacher-coordinator.
2. Perform internship responsibilities efficiently.
3. Show honesty, punctuality, courtesy, a cooperative attitude, proper health and grooming habits, appropriate dress, and a willingness to learn.
4. Conform to the rules and regulations, including all safety requirements, of the internship site.
5. Furnish the teacher-coordinator with necessary information about their internship and complete promptly all necessary reports.
6. Consult the teacher-coordinator about any difficulties arising at the internship site or related to the internship program.
7. Check and respond to all messages (email and text) from teacher and mentor in a timely fashion. Check Blackboard for announcements every day. Keep teacher and mentor informed on a regular basis.

MENTORS agree to:

1. Provide students the opportunity to receive on-the-job experiences. Students will attend the internship site on Tuesdays, Thursdays and every other Friday from 8:00 to 10:30 at a minimum to complete a minimum of 70 hours. Tentative dates for 2011 are attached.
2. Provide varied occupational experiences which expose students to as many aspects of the operation as possible.
3. Assist students in completing job-related projects and provide available instructional materials and occupational guidance.
4. Adhere to federal and state regulations regarding labor laws, safety regulations, and other applicable legislation.
5. Consult the coordinator as soon as possible regarding work-related problems.
6. Continue with interns throughout the semester, provided their job and school performances remain satisfactory.
7. Provide time for consultation with the teacher-coordinator to evaluate students' on-the-job performance.

*Meets requirements of the *Work-Training Student Learner Agreement, Virginia Department of Labor and Industry*

PARENTS/GUARDIANS agree to:

1. Support the internship method of education and encourage competent participation of student interns.

*2. Assume responsibility for the safety of students from the time they leave home or school until they report to the job and from the time they leave the job until they arrive at home or at school.

3. Be responsible for transportation of students to and from the internship site.

4. Cooperate with all rules and policies of the school and internship site.

5. Be aware that students are **not** allowed to report to the training station on days they are absent from school unless they receive permission from the teacher-coordinator.
6. Be aware that students will be evaluated by mentors as well as teachers.

TEACHER-COORDINATORS agree to:

*1. Provide related classroom instruction, including safety procedures.

*2. Assume responsibility for initiating and developing individual internship experiences.

*3. Cooperate with internship sites in developing appropriate training activities related to student interns' career interests.

*4. Make periodic visits to internship sites to observe student interns, consult with internship mentors, and assist student interns with any problems.

5. Assist in evaluation of student interns.

6. Provide mentors with current information concerning students' progress in school.

Meets requirements of the *Work-Training Student Learner Agreement, Virginia Department of Labor and Industry

Signatures:

Student _____ 1/17/11 (Sign) (Date) **Parent/Guardian** _____ 1/17/11 (Sign) (Date)

School Administrator _____ 1/10/11 (Sign) (Date) **Employer/Mentor** _____ 1-20-11 (Sign) (Date)

Teacher/ Coordinator _____ 1/13/11 (Sign) (Date)

Internship dates for 2011

January – 20, 25, 27, 28
February – 3, 4, 8, 10, 15, 17, 18, 22, 24
March – 1, 3, 4, 8, 10, 15, 17, 22, 24, 29, 31
April – 5, 7, 8, 12, 14, 19, 21
May 3, 5, 10, 12, 13, 17, 19, 20

Engineering Internship Agreement – Spring 2011

Student's Name Shakaysha Bumpas Program Engineering

School Burton Center for Arts & Technology School Division Roanoke County Schools

Internship Site Novozymes Address 1760 Boulevard, Salem, VA

Job Title Student Intern On-job Supervisor Seth D'Imperio

*PURPOSE: The purpose of this agreement is to provide a way of recording the terms of the student's internship and to outline the responsibilities of all parties involved with that internship to comply with local, federal and state requirements.

STUDENT INTERNS agree to:

1. Attend school and work regularly. The student intern will notify the school and employer by a designated time on any day absent. When a student is absent, he/she is **not** permitted to work that day unless advance permission has been given by the teacher-coordinator.
2. Perform internship responsibilities efficiently.
3. Show honesty, punctuality, courtesy, a cooperative attitude, proper health and grooming habits, appropriate dress, and a willingness to learn.
4. Conform to the rules and regulations, including all safety requirements, of the internship site.
5. Furnish the teacher-coordinator with necessary information about their internship and complete promptly all necessary reports.
6. Consult the teacher-coordinator about any difficulties arising at the internship site or related to the internship program.
7. Check and respond to all messages (email and text) from teacher and mentor in a timely fashion. Check Blackboard for announcements every day. Keep teacher and mentor informed on a regular basis.

MENTORS agree to:

1. Provide students the opportunity to receive on-the-job experiences. Students will attend the internship site on Tuesdays, Thursdays and every other Friday from 8:00 to 10:30 at a minimum to complete a minimum of 70 hours. Tentative dates for 2011 are attached.
2. Provide varied occupational experiences which expose students to as many aspects of the operation as possible.
3. Assist students in completing job-related projects and provide available instructional materials and occupational guidance.
4. Adhere to federal and state regulations regarding labor laws, safety regulations, and other applicable legislation.
5. Consult the coordinator as soon as possible regarding work-related problems.
6. Continue with interns throughout the semester, provided their job and school performances remain satisfactory.
7. Provide time for consultation with the teacher-coordinator to evaluate students' on-the-job performance.

*Meets requirements of the ***Work-Training Student Learner Agreement, Virginia Department of Labor and Industry***

PARENTS/GUARDIANS agree to:

1. Support the internship method of education and encourage competent participation of student interns.

*2. Assume responsibility for the safety of students from the time they leave home or school until they report to the job and from the time they leave the job until they arrive at home or at school.

3. Be responsible for transportation of students to and from the internship site.

4. Cooperate with all rules and policies of the school and internship site.

5. Be aware that students are **not** allowed to report to the training station on days they are absent from school unless they receive permission from the teacher-coordinator.
6. Be aware that students will be evaluated by mentors as well as teachers.

TEACHER-COORDINATORS agree to:

*1. Provide related classroom instruction, including safety procedures.

*2. Assume responsibility for initiating and developing individual internship experiences.

*3. Cooperate with internship sites in developing appropriate training activities related to student interns' career interests.

*4. Make periodic visits to internship sites to observe student interns, consult with internship mentors, and assist student interns with any problems.

5. Assist in evaluation of student interns.

6. Provide mentors with current information concerning students' progress in school.

*Meets requirements of the ***Work-Training Student Learner Agreement, Virginia Department of Labor and Industry***

Signatures:

Student S Bumpass 1/18/11 (Sign) (Date) **Parent/Guardian** 18 JAN 11 (Sign) (Date)

School Administrator A McClung 1/10/11 (Sign) (Date) **Employer/Mentor** 1/20/11 (Sign) (Date)

Teacher/ Coordinator S Shantz 1/13/11 (Sign) (Date)

Internship dates for 2011

January – ~~13~~, 20, 25, 27, 28
February -- 3, 4, 8, 10, 15, 17, 18, 22, 24
March – 1, 3, 4, 8, 10, 15, 17, 22, 24, 29, 31
April – ~~5~~, 7, 8, 12, 14, 19, 21
May 3, 5, 10, 12, 13, 17, 19, 20

Engineering Internship Agreement – Spring 2011

Student's Name Maya Shende | Program Engineering

School Burton Center for Arts & Technology | School Division Roanoke County Schools

Internship Site Dr. Muelenaer's office | Address 1760 Boulevard, Salem, VA

Job Title Student Intern | On-job Supervisor Dr. Muelenaer

*PURPOSE: The purpose of this agreement is to provide a way of recording the terms of the student's internship and to outline the responsibilities of all parties involved with that internship to comply with local, federal and state requirements.

STUDENT INTERNS agree to:

1. Attend school and work regularly. The student intern will notify the school and employer by a designated time on any day absent. When a student is absent, he/she is **not** permitted to work that day unless advance permission has been given by the teacher-coordinator.
2. Perform internship responsibilities efficiently.
3. Show honesty, punctuality, courtesy, a cooperative attitude, proper health and grooming habits, appropriate dress, and a willingness to learn.
*4. Conform to the rules and regulations, including all safety requirements, of the internship site.
5. Furnish the teacher-coordinator with necessary information about their internship and complete promptly all necessary reports.
6. Consult the teacher-coordinator about any difficulties arising at the internship site or related to the internship program.
7. Check and respond to all messages (email and text) from teacher and mentor in a timely fashion. Check Blackboard for announcement every day. Keep teacher and mentor informed on a regular basis.

MENTORS agree to:

1. Provide students the opportunity to receive on-the-job experiences. Students will attend the internship site on Tuesdays, Thursdays and every other Friday from 8:00 to 10:30 at a minimum to complete a minimum of 70 hours. Tentative dates for 2011 are attached.
2. Provide varied occupational experiences which expose students to as many aspects of the operation as possible.
*3. Assist students in completing job-related projects and provide available instructional materials and occupational guidance.
*4. Adhere to federal and state regulations regarding labor laws, safety regulations, and other applicable legislation.
5. Consult the coordinator as soon as possible regarding work-related problems.
6. Continue with interns throughout the semester, provided their job and school performances remain satisfactory.
7. Provide time for consultation with the teacher-coordinator to evaluate students' on-the-job performance.

*Meets requirements of the *Work-Training Student Learner Agreement, Virginia Department of Labor and Industry*

PARENTS/GUARDIANS agree to:

1. Support the internship method of education and encourage competent participation of student interns.

*2. Assume responsibility for the safety of students from the time they leave home or school until they report to the job and from the time they leave the job until they arrive at home or at school.

3. Be responsible for transportation of students to and from the internship site.

4. Cooperate with all rules and policies of the school and internship site.

5. Be aware that students are not allowed to report to the training station on days they are absent from school unless they receive permission from the teacher-coordinator.
6. Be aware that students will be evaluated by mentors as well as teachers.

TEACHER-COORDINATORS agree to:

*1. Provide related classroom instruction, including safety procedures.

*2. Assume responsibility for initiating and developing individual internship experiences.

*3. Cooperate with internship sites in developing appropriate training activities related to student interns' career interests.

*4. Make periodic visits to internship sites to observe student interns, consult with internship mentors, and assist student interns with any problems.

5. Assist in evaluation of student interns.

6. Provide mentors with current information concerning students' progress in school.

Meets requirements of the *Work-Training Student Learner Agreement, Virginia Department of Labor and Industry

Signatures:

Student Maya Shende 1/18/11 (Sign) (Date) **Parent/Guardian** [signature] 1/18/11 (Sign) (Date)

School Administrator A McClung 1/18/11 (Sign) (Date) **Employer/Mentor** [signature] 1/20/2011 (Sign) (Date)

Teacher/ Coordinator Sushila Shante 1/13/11 (Sign) (Date)

Internship dates for 2011

January – ~~18~~, 20, 25, 27, 28
February -- 3, 4, 8, 10, 15, 17, 18, 22, 24
March – 1, 3, 4, 8, 10, 15, 17, 22, 24, 29, 31
April – ~~5~~, 7, 8, 12, 14, 19, 21
May 3, 5, 10, 12, 13, 17, 19, 20

Engineering Internship Agreement – Spring 2011

Student's Name Cooper Tyree | Program Engineering

School Burton Center for Arts & Technology | School Division Roanoke County Schools

Internship Site GE | Address 1760 Boulevard, Salem, VA

Job Title Student Intern | On-job Supervisor Mr. Lester Childs - ANDREW GROTH

***PURPOSE:** The purpose of this agreement is to provide a way of recording the terms of the student's internship and to outline the responsibilities of all parties involved with that internship to comply with local, federal and state requirements.

STUDENT INTERNS agree to:

1. Attend school and work regularly. The student intern will notify the school and employer by a designated time on any day absent. When a student is absent, he/she is **not** permitted to work that day unless advance permission has been given by the teacher-coordinator.
2. Perform internship responsibilities efficiently.
3. Show honesty, punctuality, courtesy, a cooperative attitude, proper health and grooming habits, appropriate dress, and a willingness to learn.
*4. Conform to the rules and regulations, including all safety requirements, of the internship site.
5. Furnish the teacher-coordinator with necessary information about their internship and complete promptly all necessary reports.
6. Consult the teacher-coordinator about any difficulties arising at the internship site or related to the internship program.
7. Check and respond to all messages (email and text) from teacher and mentor in a timely fashion. Check Blackboard for announcements every day. Keep teacher and mentor informed on a regular basis.

MENTORS agree to:

1. Provide students the opportunity to receive on-the-job experiences. Students will attend the internship site on Tuesdays, Thursdays and every other Friday from 8:00 to 10:30 at a minimum to complete a minimum of 70 hours. Tentative dates for 2011 are attached.
2. Provide varied occupational experiences which expose students to as many aspects of the operation as possible.
*3. Assist students in completing job-related projects and provide available instructional materials and occupational guidance.
*4. Adhere to federal and state regulations regarding labor laws, safety regulations, and other applicable legislation.
5. Consult the coordinator as soon as possible regarding work-related problems.
6. Continue with interns throughout the semester, provided their job and school performances remain satisfactory.
7. Provide time for consultation with the teacher-coordinator to evaluate students' on-the-job performance.

Meets requirements of the *Work-Training Student Learner Agreement, Virginia Department of Labor and Industry

PARENTS/GUARDIANS agree to:

1. Support the internship method of education and encourage competent participation of student interns.

*2. Assume responsibility for the safety of students from the time they leave home or school until they report to the job and from the time they leave the job until they arrive at home or at school.

3. Be responsible for transportation of students to and from the internship site.

4. Cooperate with all rules and policies of the school and internship site.

5. Be aware that students are **not** allowed to report to the training station on days they are absent from school unless they receive permission from the teacher-coordinator.
6. Be aware that students will be evaluated by mentors as well as teachers.

TEACHER-COORDINATORS agree to:

*1. Provide related classroom instruction, including safety procedures.

*2. Assume responsibility for initiating and developing individual internship experiences.

*3. Cooperate with internship sites in developing appropriate training activities related to student interns' career interests.

*4. Make periodic visits to internship sites to observe student interns, consult with internship mentors, and assist student interns with any problems.

5. Assist in evaluation of student interns.

6. Provide mentors with current information concerning students' progress in school.

Meets requirements of the *Work-Training Student Learner Agreement, Virginia Department of Labor and Industry

Signatures:

Student _____ (Sign) _____ (Date) **Parent/Guardian** _____ (Sign) 1/12/11 (Date)

School Administrator _____ (Sign) 1/10/11 (Date) **Employer/Mentor** _____ (Sign) 1/20/11 (Date)

Teacher/ Coordinator _____ (Sign) 1/13/11 (Date)

Internship dates for 2011

January – ~~16~~, 20, 25, 27, 28
February -- 3, 4, 8, 10, 15, 17, 18, 22, 24
March – 1, 3, 4, 8, 10, 15, 17, 22, 24, 29, 31
April – 5, 7, 8, 12, 14, 19, 21
May 3, 5, 10, 12, 13, 17, 19, 20

Engineering Internship Agreement – Spring 2011

Student's Name Karcy Grove Program Engineering

School Burton Center for Arts & Technology School Division Roanoke County Schools

Internship Site Novozymes Address 1760 Boulevard, Salem, VA

Job Title Student Intern On-job Supervisor Seth D'Imperio

*PURPOSE: The purpose of this agreement is to provide a way of recording the terms of the student's internship and to outline the responsibilities of all parties involved with that internship to comply with local, federal and state requirements.

STUDENT INTERNS agree to:

1. Attend school and work regularly. The student intern will notify the school and employer by a designated time on any day absent. When a student is absent, he/she is **not** permitted to work that day unless advance permission has been given by the teacher-coordinator.
2. Perform internship responsibilities efficiently.
3. Show honesty, punctuality, courtesy, a cooperative attitude, proper health and grooming habits, appropriate dress, and a willingness to learn.
4. Conform to the rules and regulations, including all safety requirements, of the internship site.
5. Furnish the teacher-coordinator with necessary information about their internship and complete promptly all necessary reports.
6. Consult the teacher-coordinator about any difficulties arising at the internship site or related to the internship program.
7. Check and respond to all messages (email and text) from teacher and mentor in a timely fashion. Check Blackboard for announcements every day. Keep teacher and mentor informed on a regular basis.

MENTORS agree to:

1. Provide students the opportunity to receive on-the-job experiences. Students will attend the internship site on Tuesdays, Thursdays and every other Friday from 8:00 to 10:30 at a minimum to complete a minimum of 70 hours. Tentative dates for 2011 are attached.
2. Provide varied occupational experiences which expose students to as many aspects of the operation as possible.
3. Assist students in completing job-related projects and provide available instructional materials and occupational guidance.
4. Adhere to federal and state regulations regarding labor laws, safety regulations, and other applicable legislation.
5. Consult the coordinator as soon as possible regarding work-related problems.
6. Continue with interns throughout the semester, provided their job and school performances remain satisfactory.
7. Provide time for consultation with the teacher-coordinator to evaluate students' on-the-job performance.

Meets requirements of the *Work-Training Student Learner Agreement, Virginia Department of Labor and Industry

PARENTS/GUARDIANS agree to:

1. Support the internship method of education and encourage competent participation of student interns.

*2. Assume responsibility for the safety of students from the time they leave home or school until they report to the job and from the time they leave the job until they arrive at home or at school.

3. Be responsible for transportation of students to and from the internship site.

4. Cooperate with all rules and policies of the school and internship site.

5. Be aware that students are not allowed to report to the training station on days they are absent from school unless they receive permission from the teacher-coordinator.
6. Be aware that students will be evaluated by mentors as well as teachers.

TEACHER-COORDINATORS agree to:

*1. Provide related classroom instruction, including safety procedures.

*2. Assume responsibility for initiating and developing individual internship experiences.

*3. Cooperate with internship sites in developing appropriate training activities related to student interns' career interests.

*4. Make periodic visits to internship sites to observe student interns, consult with internship mentors, and assist student interns with any problems.

5. Assist in evaluation of student interns.

6. Provide mentors with current information concerning students' progress in school.

*Meets requirements of the *Work-Training Student Learner Agreement, Virginia Department of Labor and Industry*

Signatures:

Student Tharcy Moore 1/19/11 (Sign) (Date) **Parent/Guardian** Kathleen Moore 1-18-11 (Sign) (Date)

School Administrator A McClung 1/18/11 (Sign) (Date) **Employer/Mentor** 1-20-11 (Sign) (Date)

Teacher/ Coordinator [signature] 1/13/11 (Sign) (Date)

Internship dates for 2011

January – ~~4~~, 20, 25, 27, 28
February -- 3, 4, 8, 10, 15, 17, 18, 22, 24
March – 1, 3, 4, 8, 10, 15, 17, 22, 24, 29, 31
April – ~~5~~, 7, 8, 12, 14, 19, 21
May 3, 5, 10, 12, 13, 17, 19, 20

Engineering Internship Agreement – October 2011 – May 2012

Student's Name Troy Philpott Program Engineering

School Burton Center for Arts & Technology School Division Roanoke County Schools

Internship Site Balzer & Associates Address 1760 Boulevard, Salem, VA

Job Title Student Intern On-job Supervisor Craig Balzer

*PURPOSE: The purpose of this agreement is to provide a way of recording the terms of the student's internship and to outline the responsibilities of all parties involved with that internship to comply with local, federal and state requirements.

STUDENT INTERNS agree to:

1. Attend school and work regularly. The student intern will notify the school and employer by a designated time on any day absent. When a student is absent, he/she is not permitted to work that day unless advance permission has been given by the teacher-coordinator.
2. Perform internship responsibilities efficiently.
3. Show honesty, punctuality, courtesy, a cooperative attitude, proper health and grooming habits, appropriate dress, and a willingness to learn.
*4. Conform to the rules and regulations, including all safety requirements, of the internship site.
5. Furnish the teacher-coordinator with necessary information about their internship and complete promptly all necessary reports.
6. Consult the teacher-coordinator about any difficulties arising at the internship site or related to the internship program.
7. Check and respond to all messages (email and text) from teacher and mentor in a timely fashion. Check Blackboard for announcements every day. Keep teacher and mentor informed on a regular basis.
8. Complete diligently & submit time sheets and journals to the teacher as per instructions provided on Blackboard.
9. Students will attend class at Burton on B days when they are not scheduled to be at internship.

MENTORS agree to:

1. Provide students the opportunity to receive on-the-job experiences. Students will attend the internship site on B-days (projected dates provided at the end of this document) which are alternating days between 8:00AM and 11:00AM at a minimum to complete a minimum of 70 hours.
2. Provide varied occupational experiences which expose students to as many aspects of the operation as possible.
*3. Assist students in completing job-related projects and provide available instructional materials and occupational guidance.
*4. Adhere to federal and state regulations regarding labor laws, safety regulations, and other applicable legislation.
5. Consult the coordinator as soon as possible regarding work-related problems.
6. Continue with interns throughout the academic year, provided their job and school performances remain satisfactory.
7. Provide time for consultation with the teacher-coordinator to evaluate students' on-the-job performance.

*Meets requirements of the *Work-Training Student Learner Agreement, Virginia Department of Labor and Industry*

PARENTS/GUARDIANS agree to:

1. Support the internship method of education and encourage competent participation of student interns.

*2. Assume responsibility for the safety of students from the time they leave home or school until they report to the job and from the time they leave the job until they arrive at home or at school.

3. Be responsible for transportation of students to and from the internship site.

4. Cooperate with all rules and policies of the school and internship site.

5. Be aware that students are not allowed to report to the training station on days they are absent from school unless they receive permission from the teacher-coordinator.
6. Be aware that students will be evaluated by mentors as well as teachers.

TEACHER-COORDINATORS agree to:

*1. Provide related classroom instruction, including safety procedures.

*2. Assume responsibility for initiating and developing individual internship experiences.

*3. Cooperate with internship sites in developing appropriate training activities related to student interns' career interests.

*4. Make periodic visits to internship sites to observe student interns, consult with internship mentors, and assist student interns with any problems.

5. Assist in evaluation of student interns.

6. Provide mentors with current information concerning students' progress in school.

*Meets requirements of the *Work-Training Student Learner Agreement, Virginia Department of Labor and Industry*

Signatures:

Student _____ (Sign) 11/7/11 (Date)

Parent/Guardian Patsy Philpott (Sign) 11/7/11 (Date)

School Administrator _____ (Sign) 11/17/11 (Date)

Employer/Mentor _____ (Sign) Vice President (Date) 11/7/11

Teacher/ Coordinator _____ (Sign) 11/17/11 (Date)

Internship dates for 2011-2012
November 7, 10, 14, 18, 22, 28, 30
December 2, 8,12,14,16
January 3, 5, 9, 11,17, 23, 25, 27, 31
February 2,7,9, 13, 17, 21, 23, 27 29
March 2, 6, 8, 12, 20, 22, 26, 28, 30
April 3, 5, 17, 19, 23, 27
May 1, 3, 7, 11, 15, 17

NOTE: If there are any school closings, then our schedule will change beyond that date and I will update the schedule at that time.

Appendix F:

Associate Degree

ASSOCIATES DEGREE AVAILABLE THROUGH
VIRGINIA WESTERN COMMUNITY COLLEGE
AND
ROANOKE COUNTY PUBLIC SCHOOLS

A Roanoke County student may earn an associate's degree through Virginia Western Community College by taking dual enrollment courses and AP courses (a 3 or better must be achieved on the AP College Board exam before VWCC credit is awarded). Most courses may be taken through the student's normal high school schedule with few exceptions where VWCC requires that some classes be taken on the VWCC campus during weekend courses, online courses, or a hybrid of both weekend and online courses. A detailed separate brochure is available in your school's guidance office if a student is interested. Please contact your child's guidance counselor for the brochure and more specific information.

Appendix G:

Plans of Study

Roanoke County Governor's STEM Academy

CTE Course Descriptions (9th – 12th grade)
CTESO Affiliations and Sample Leadership Events
Dual Enrollment Linkage (Virginia Community College System)

Pathway 1

Cluster: Science, Technology, Engineering & Mathematics
Pathway: Engineering and Technology
Goal: Advance Diploma

STATE COURSE ID	STATE COURSE NAME	Course Description	CTESO Sample Leadership co-curricular activities	VA Community College Course ID for Dual Enrollment
8450	Engineering Explorations I	This is the first course of a possible four-course pathway that will enable students to examine technology and engineering fundamentals related to solving real-world problems. Students will be exposed to a variety of engineering specialty fields and related careers to determine whether they are good candidates for postsecondary educational opportunities in engineering. Students will gain a basic understanding of engineering history and design, using mathematical and scientific concepts. Students will participate in hands-on projects in a laboratory setting as they communicate information through team-based presentations, proposals, and technical reports.	TSA	
8435	Technical Drawing and Design	This laboratory-oriented course provides a basic background of skills and an understanding of the broad scope of technical drawing (drafting). Students will use both traditional and computerized equipment. The latest CAD software will be used. This course is recommended for students planning careers in engineering, architecture, drafting, or technology. Students will participate in TSA activities.	TSA & Sample co-curricular activities CAD Engineering Design Technology Bowl	DRF 201
6612	Computer	Microsoft Office Students apply problem-solving skills to real-life situations through MS Office basic and advanced word processing, spreadsheet, database,	FBLA & Sample co-curricular activities	AST 101 & AST 140

	Information Systems	and multimedia presentation software, and through integrated software activities. This course covers the competencies needed to take MOS certification exams. By passing an exam a student will obtain a verified credit. Students may participate in Cooperative Office Education and earn an additional unit of credit. Students will participate in FBLA activities.	Computer Applications Job Interview Word Processing	
8452	Engineering Concepts and Processes III	This is the third of a possible four-course pathway that will enable students to examine technology and engineering fundamentals related to solving real-world problems. This course focuses on building an engineering team, working with case studies, managing projects, applying logic and problem-solving skills, delivering formal proposals and presentations, and examining product and process trends. In addition, students continue to investigate a variety of engineering specialty fields and related careers to determine whether they are good candidates for postsecondary educational opportunities in engineering. (*Engineering Methods*)	TSA & Sample co-curricular activities CAD Engineering Design Technology Bowl	Eng 120 & 124
6120	Economics and Personal Finance	Students learn how to navigate the financial decisions they must face and to make informed decisions related to career exploration, budgeting, banking, credit insurance, spending taxes, saving, investing, buying/leasing a vehicle, living independently, and inheritance. This finance course is required for graduation beginning with the class of 2014.	FBLA & Sample co-curricular activities Banking & Financial Systems Business Ethics Economics	FIN 107
8453	Engineering Practicum IV	This is the fourth course of a possible four-course pathway that will enable students to examine technology and engineering fundamentals related to solving real-world problems. To do so, students examine ethics and intellectual property and design a practicum project, a culmination of knowledge and skill they gained in the previous engineering courses. In addition, students continue to investigate a variety of engineering specialty fields and related careers to determine whether they are good candidates for postsecondary educational opportunities in engineering. (*Engineering Research)*	TSA & Sample co-curricular activities CAD Engineering Design Technology Bowl	
8491	Advanced Engineering II	To learn the applications and design process of engineering, students form engineering teams and select a group design problem. Each team uses communications, graphics, mathematics, and community resources to solve problems. Each team learns appropriate information in order to complete a project. Projects may be models, systems, or products that creatively solve an engineering problem.	TSA & Sample co-curricular activities Cyberspace Pursuit Career Comparisions	

8465	Technology Studies I	Engineering Economy presents economic analysis of engineering alternatives. Studies include economic and cost concepts, calculating economic equivalence, comparing alternatives, replacement economy, economic optimization in design and operation, depreciation, and after-tax analysis. Dual enrollment with Virginia Western will be offered. *(Engineering Economy)*	FBLA & Sample co-curricular activities Banking & Financial Systems Business Ethics Economics	ENG 206
8498	Technology Education Dual Enrollment	This course introduces mechanics of vector forces and space, scalar mass and time, including S.I. and U.S. customary units. Statics teaches equilibrium, free-body diagrams, moments, couples, distributed forces, centroids, moments of inertia analysis of two-force and multi-force members and friction and internal forces. Dual enrollment with Virginia Western will be offered. *(Engineering Mechanics Statics)*	TSA & Sample co-curricular activities Cyberspace Pursuit Career Comparisons	ENG 140

Possible Industry Certifications:

- AutoCad Certification (Certiport)
- Workplace Readiness Skills for the Commonwealth Examination
- Microsoft Office Specialist (MOS)
- W!SE Financial Literacy
- The National Career Readiness Certificate

Completer Sequences

8452 Engineering Concepts and Processes III *and* 8453 Engineering Practicum IV

CTE-Student Organization Affiliations:
TSA
FBLA

Pathway 2

Cluster: Science, Technology, Engineering & Mathematics
Pathway: Engineering and Technology
Goal: Standard Diploma

STATE COURSE ID	STATE COURSE NAME	Course Description	CTESO Sample Leadership co-curricular activities	VA Community College Course ID for Dual Enrollment
6612	Computer Information Systems	Students are introduced to a broad range of computer technology including Web page design, programming, graphics, computer applications, networking, internet fundamentals and computer maintenance/ upgrading/troubleshooting. Teamwork and communication skills are emphasized. This course covers the competencies needed to take the associated certification exam. By passing the exam a student will obtain a verified credit. Students will participate in FBLA activities.	FBLA & Sample co-curricular activities Business Skills and Knowledge Entrepreneurship Management Decision Making	
8435	Technical Drawing and Design	This laboratory-oriented course provides a basic background of skills and an understanding of the broad scope of technical drawing (drafting). Students will use both traditional and computerized equipment. The latest CAD software will be used. This course is recommended for students planning careers in engineering, architecture, drafting, or technology. Students will participate in TSA activities.	TSA & Sample co-curricular activities CAD Engineering Design Technology Bowl	DRF 201
8539	Precision Machining Technology I	Students will obtain the core skills needed to become Engineering Technicians that include: • Automation Operations and Programmable Controllers • Basic Component Adjustments • Gauging, Indexing, Sorting, Queuing and Torque • Servicing Robotic Assembly units • Multiple Station Control • Mechanical Fabrication • Pneumatics and Hydraulics • Program will include a Dual Enrollment option with VWCC • Program will include cooperative education or internship options (Mechatronics I)	SkillsUSA	

8436	Engineering Drawing and Design	Engineering Drawing provides students with the opportunity to experience the graphic language of industry for engineers, manufacturers, and technicians. It provides experiences with greater depth in drawing problems, skills, and techniques. Emphasis is placed on interpretation of industrial prints, ability to use handbooks and other resource materials, and adherence to established standards for drafting. An important aspect of this course is the application of drafting principles to typical engineering drawing and design problems. Students will participate in TSA activities.	TSA & Sample co-curricular activities CAD Engineering Design Manufacturing Prototype Technology Bowl	DRF 202 & DRF 203
8540	Precision Machining Technology II	Students will build upon the core skills developed in Precision Machining Technology I (Mechatronics) that are needed to become Engineering Technicians including: • D.C. and A.C. Circuits • Technical Computer Applications including basic exposure to the use of AutoCad and Inventor • Introduction to Engineering Design and applications using VEX Robots • Mechanisms • Applied Hydraulics and Pneumatics • Introduction to Electronics • Applied Technology • Principles and Applications of Robotics • Intro to Basic Computer Integrated Manufacturing • Materials and Processes of Manufacturing • Automated Manufacturing Systems • Introduction to Problem Solving in Technology • Orientation to Engineering *(Mechatronics II)*	Skills USA	
6120	Economics and Personal Finance	Students learn how to navigate the financial decisions they must face and to make informed decisions related to career exploration, budgeting, banking, credit insurance, spending, taxes, saving, investing, buying/leasing a vehicle, living independently, and inheritance. This finance course is required for graduation beginning with the class of 2014.	FBLA & Sample co-curricular activities Banking & Financial Systems Business Ethics Economics	FIN 107
8437	Architectural Drawing & Design	Architectural Drawing is offered as a personal use class to students who wish to further their knowledge in the field of architecture. This laboratory-oriented course provides students with the opportunity to learn more about financing, designing, drawing plans, dimensioning, and making prints for a home of the	TSA & Sample co-curricular activities Architectural Model CAD	DRF 202

		student's choice. It provides information helpful for the homeowner and is especially beneficial to the future architect, interior designer, or home builder. Students will participate in TSA activities.	Technology Bowl	
8541	Precision Machining Technology III	Students apply industrial safety and environmental protection; planning, management, and performance of machining jobs; quality control; process improvement; general maintenance; engineering drawings and sketches; and application of measurements; metalworking theory; properties of materials; and principles of CNC. Precision Machining Technology programs may be certified by NTMA (National Tooling and Machining Association), the certifying agency for the National Institute for Metalworking Skills (NIMS). The cooperative education method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. *(Mechatronics III)*	Skills USA	

Possible Industry Certifications:

AutoCad Certification (Certiport)
Workplace Readiness Skills for the Commonwealth Examination
Microsoft Office Specialist (MOS)
W!SE Financial Literacy

Completer Sequences

6612 Computer Information Systems ***and*** 6120 Economics and Personal Finance
8435 Technical Drawing and Design ***and*** 8436 Engineering Drawing and Design
8539 Precision Machining Technology I ***and*** 8540 Precision Machining Technology II

CTE-Student Organization Affiliations:
TSA
FBLA
Skills USA

Pathway 3

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

STATE COURSE ID	STATE COURSE NAME	Course Description	CTESO Sample Leadership co-curricular activities	VA Community College Course ID for Dual Enrollment
8506	Automotive Technology I	Auto Service Technology I is designed to develop mental and manipulative skills relating to basic auto repair operations and the safety procedures for this field of work. Included in this course of study are auto servicing, brake systems, and electrical systems. Training in Auto Service Technology I includes studying theory from text as well as the study and disassembly of nonfunctional and functional automotive assemblies. Text and activities are designed to prepare the student for the ASE certification test. A certification test registration cost is required. By passing the test, a student can obtain up to 2 verified credits. Participation in SkillsUSA student organization activities is required.	T & I - SkillsUSA	AUT 265
8435	Technical Drawing and Design	This laboratory-oriented course provides a basic background of skills and an understanding of the broad scope of technical drawing (drafting). Students will use both traditional and computerized equipment. The latest CAD software will be used. This course is recommended for students planning careers in engineering, architecture, drafting, or technology. Students will participate in TSA activities	TSA & Sample co-curricular activities CAD Engineering Design Technology Bowl	DRF 201
8175	Sports, Entertainment, and Recreation Marketing	This introductory course helps students develop a thorough understanding of fundamental marketing concepts and theories as they relate to the sports, entertainment, and recreation industries. Students will investigate the components of branding, sponsorships and endorsements, as well as promotion plans needed for sports, entertainment and recreation events. The course also supports career development skills and explores career options. Academic skills (mathematics, science, English, and history/social science) related to the content are a part of this course. The cooperative education method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year.	DECA & Sample co-curricular activities Sports and Entertainment Marketing Business Services Creative Marketing	

8509	Motorsports Technology I	Instruction will be provided in the principles of race car fabrication and all facets of the racing industry. The course will also include chassis preparation, racing protocol, and regulatory compliance. Business aspects of the motorsports industry will also be taught. The class will build some type of drag car. Students will also get to work on the school drag car which is a 1928 Roadster Super Comp Car. Students will learn to use metal shaping equipment such as the English wheel, bead roller tubing bender, and sheet metal brake. Some types of welding such as GMAW & GTAW are taught. Chassis fabrication is the most useful part of building a car. Participation in SkillsUSA student organization activities is required. Students are required to purchase 24-hour accident insurance and to purchase proper clothing and safety attire. Students will need to buy a class work shirt, welding helmet, and welding gloves at a cost of $70. Students must also have work gloves, steel-toed boots, blue jeans (no frayed edges), cotton t-shirt, long sleeve cotton work shirt, and other materials. Participation in SkillsUSA student organization activities is required.	Trade & Industry SkillsUSA	MTS 130 & 125
8672	Welding I	Emphasis is placed on SMAW and GMAW – Oxy Fuel cutting and safety in the shop. This is the first 360 hours of the 1,000 hours that must be completed to take the American Welding Society Entry Level I Certification. This course covers the competencies needed to take the associated certification test. Students must take and pass the AWS certification test in order to receive program completer certification. A certification test registration cost may be required. By passing the test, a student can obtain up to 2 verified credits. Participation in SkillsUSA student organization activities is required. Students must purchase the following: welding helmet and lens, welding gloves, work gloves, steel-toed boots, blue jeans—no frayed edges, cotton t-shirt, long sleeve cotton work shirt, and other materials.		WEL 121
6120	Economics and Personal Finance	Students learn how to navigate the financial decisions they must face and to make informed decisions related to career exploration, budgeting, banking, credit insurance, spending, taxes, saving, investing, buying/leasing a vehicle, living independently, and inheritance. This finance course is required for graduation beginning with the class of 2014.	FBLA & Sample co-curricular activities Banking & Financial Systems Business Ethics Economics	FIN 107
8510	Motorsports Technology II	Instruction will be provided in the principles of race car fabrication and all facets of the racing industry. The course will also include chassis	Trade & Industry SkillsUSA	MTS 126, 131

		preparation, racing protocol, and regulatory compliance. Business aspects of the motorsports industry will also be taught. The class will build some type of drag car. Students will also get to work on the school drag car which is a 1928 Roadster Super Comp Car. Students will learn to use metal shaping equipment such as the English wheel, bead roller tubing bender, and sheet metal brake. Some types of welding such as GMAW & GTAW are taught. Chassis fabrication is the most useful part of building a car. Participation in SkillsUSA student organization activities is required. Students are required to purchase 24-hour accident insurance and to purchase proper clothing and safety attire. Students will need to buy a class work shirt, welding helmet, and welding gloves at a cost of $70. Students must also have work gloves, steel-toed boots, blue jeans (no frayed edges), cotton t-shirt, long sleeve cotton work shirt, and other materials. Participation in SkillsUSA student organization activities is required.		
8539	Precision Machining Technology I	Students will obtain the core skills needed to become Engineering Technicians that include: • Automation Operations and Programmable Controllers • Basic Component Adjustments • Gauging, Indexing, Sorting, Queuing and Torque • Servicing Robotic Assembly units • Multiple Station Control • Mechanical Fabrication • Pneumatics and Hydraulics • Program will include a Dual Enrollment option with VWCC • Program will include cooperative education or internship options (Mechatronics I)	Trade & Industry Skills USA	
8511	Motorsports III	Instruction will be provided in the principles of race car fabrication and all facets of the racing industry. The course will also include chassis preparation, racing protocol, and regulatory compliance. Business aspects of the motorsports industry will also be taught. The class will build some type of drag car. Students will also get to work on the school drag car which is a 1928 Roadster Super Comp Car. Students will learn to use metal shaping equipment such as the English wheel, bead roller tubing bender, and sheet metal brake. Some types of welding such as GMAW & GTAW are taught. Chassis fabrication is the most useful part of building a car. Participation in SkillsUSA student organization activities is required. Students are required to purchase 24-hour accident insurance and to purchase proper clothing and safety attire. Students will need to buy a class work shirt, welding helmet, and welding gloves at a cost of $70. Students must also have work gloves,	Trade & Industry Skills USA	MTS 132, 135

		steel-toed boots, blue jeans (no frayed edges), cotton t-shirt, long sleeve cotton work shirt, and other materials. Participation in SkillsUSA student organization activities is required.		
8130	Advanced Marketing (Cooperative Education Option available)	Advanced Marketing enables students to develop competencies needed to advance in full-time employment in marketing. Students develop advanced competencies in several of the same areas studied in Marketing and, in addition, develop competencies in the areas of supervision, merchandising, market research, and management. Students combine classroom instruction with continuous, on-the-job training during the school year supervised by the marketing coordinator. On-the-job training during summer months also may be counted if supervised by the marketing coordinator with a training agreement and plan. Students will participate in DECA activities.	DECA & Sample co-curricular activities Business Services Business Law and Ethics Professional Selling	

Possible Industry Certifications:

Workplace Readiness Skills for the Commonwealth Examination
W!SE Financial Literacy

Completer Sequences

8175 Sports, Entertainment, and Recreation Marketing ***and*** 8130 Advanced Marketing
8509 Motorsports Technology I ***and*** 8510 Motorsports Technology II

CTE-Student Organization Affiliations:

TSA
FBLA
Skills USA
DECA

Pathway 4

Cluster: Arts, Audio/Video Technology & Communications
Pathway: Journalism & Broadcasting

STATE COURSE ID	STATE COURSE NAME	Course Description	CTESO Sample Leadership co-curricular activities	VA Community College Course ID for Dual Enrollment
8688	Television and Media Production I	Students will study the history and development of television, radio, and print media. Areas of study will include ethics, responsibilities, marketing, public speaking, and career opportunities associated with the media profession. Students will be given hands-on experience with video, audio, multimedia/Web, and print production. Media related field trips and guest speakers will be used to provide students an understanding of the industry. Students will complete a mass media project during the year. Project plans will be reviewed and approved by a committee of media professionals. (History of Mass Communications)	Trade & Industry Skills USA	BCS 140
6612	Computer Information Systems	Microsoft Office Students apply problem-solving skills to real-life situations through MS Office basic and advanced word processing, spreadsheet, database, and multimedia presentation software, and through integrated software activities. This course covers the competencies needed to take MOS certification exams. By passing an exam a student will obtain a verified credit. Students may participate in Cooperative Office Education and earn an additional unit of credit. Students will participate in FBLA activities.	FBLA & Sample co-curricular activities Computer Applications Job Interview Word Processing	AST 101 & AST 140
8689	Television and Media Production II	This is the second course in the 4-year sequence of mass communications study. Students will delve further into the role media plays in both shaping and reflecting culture. Students will develop skills in copywriting, reporting, script writing, public speaking, and editing by producing video, radio, newspaper, and magazine reports. Projects will include development of keyboarding, desktop publishing, digital and film photography, graphic design, and audio/video production skills. Topics in the legal, ethical, and	Trade & Industry Skills USA	BCS 110

		economic fundamentals of communication/media will be explored. Field trips will continue to be a critical part of the instructional process. Students will complete a variety of mass media projects throughout the year. (Media Production I)		
6120	Economics and Personal Finance	Students learn how to navigate the financial decisions they must face and to make informed decisions related to career exploration, budgeting, banking, credit insurance, spending, taxes, saving, investing, buying/leasing a vehicle, living independently, and inheritance. This finance course is required for graduation beginning with the class of 2014.	FBLA & Sample co-curricular activities Banking & Financial Systems Business Ethics Economics	FIN 107
8690	Television and Media Production III	This is the third course in the 4-year sequence of mass communications study. Students will delve further into the roll media plays in both shaping and reflecting culture. Students will develop skills in copywriting, reporting, script writing, public speaking, and editing by producing video, radio, newspaper, and magazine reports. Projects will include development of keyboarding, desktop publishing, digital and film photography, graphic design, and audio/video production skills. Topics in the legal, ethical, and economic fundamentals of communication/media will be expanded. Field trips based on the various areas of the industry will continue to be a critical part of the instructional process. Students will create a personal portfolio of work in an area of choice within the field of mass media.	Trade & Industry Skills USA	BCS 117
6630	Design, Multimedia, and Web Technologies	Students develop proficiency in designing and creating desktop-published projects, multimedia presentations/projects, and Web sites, using industry-standard application software. Students apply principles of layout and design in completing projects. Students create portfolios that include a résumé and a variety of desktop-published, multimedia, and Web-site projects produced in the course. The cooperative education method is available for this course. In this method, classroom instruction is combined with on-the-job training in an approved position, supervised continuously throughout the school year, to broaden the students' educational experiences.	FBLA & Sample co-curricular activities Computer Applications Job Interview Word Processing	AST 253
8801	Trade and Industrial Education Dual Enrollment	This is the fourth course in the 4-year sequence of mass communications study. Students will continue their study of the role media plays in both shaping and reflecting culture. Using the foundational skills learned in Media Production I & II, students will hone skills in copywriting, reporting, script writing, public speaking, and editing by producing video, radio, newspaper, and magazine reports. Students will select one area of the industry, and with the guidance of the instructor, develop a related project.	Technology Education	BCS 198

		Further exploration of topics in the legal, ethical, and economic fundamentals of communication/media will occur. Field trips will continue to be a critical part of the instructional process. Students will complete a variety of mass media projects throughout the year. (Applied Media Production)		
WBL3	Work-Based Learning Internship	This course must be taken along with Applied Media Production. Students will work with the instructor to identify the student's primary area of interest and skill within the industry. Students will be placed in a community business for an internship experience to take place throughout the school year. The student must complete 140 hours. The course instructor will supervise all student placements and work closely with industry mentors to assess student progress and further develop student skills. In addition, students will spend 40 hours in classroom seminars focused on job and employment related skills. Seminar includes study of postgraduate opportunities. (Media Production Internship)		BCS 190

Possible Industry Certifications:

Workplace Readiness Skills for the Commonwealth Examination
W!SE Financial Literacy
Adobe Certified Associate
Microsoft Office Specialist

Completer Sequences

8688 Television and Media Production I ***and*** 8689 Television and Media Production II
6612 Computer Information Systems ***and*** 6630 Design, Multimedia, and Web Technologies

CTE-Student Organization Affiliations:

FBLA
Skills USA

Roanoke STEM Academy
Plan of Study

Student Name: _____
School: _____
Date: _____
Career Goal: _____

Cluster: Arts, Audio/Video Technology & Communications

Pathway: Journalism & Broadcasting

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.

	Diploma Type					Diploma Recognition							
Secondary Education Goal		Standard	■	Advanced		Modified		*Early College Scholars*	■	*Governor's Seal*	■	*CTE Diploma Seal*	■	*Adv Math & Tech Seal*
Post Secondary Goal:	■	4 – Year College/University	■	2-Year Community College				2- Year Technical/Trade School		Military/Branch _____		Other _____		
Career Prep Planning Resources	■	PSAT	■	SAT	■	ACT		ASVAB		**Career Assessment Instrument** ■ **VA Wizard**		Other:_____		
	EARNED INDUSTRY CERTIFICATIONS													
	WRS _____ DATE									Adobe Certified Associate _____ DATE				

EDUCATION LEVELS	GRADE	English/ Language Arts	Mathematics	Science	Social Studies/ Science	Other Required Courses Recommended Electives Learner Activities *Recommended not required	Recommended Career and Technical Courses Source: Administrative Planning Guide http://www.cteresource.org/apg/ *Recommended not required	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/
Graduation Requirements: http://www.doe.virginia.gov/instruction/graduation/index.shtml								Art Director - Audio-Video Operator - Broadcast News Analyst - Broadcast Technician - Design Director - Editor - Journalist - Layout/page Designer - Photojournalist - Producer - Public Relations Director - Publisher - Radio and Television Announcer - Reporter - Researcher - Station Manager - Technical Writer - Webmaster - Writer
MIDDLE	7	1110 - Pre AP English 7	3111 – Math 7	4115 – Life Science	2354 – Pre AP US History: 1865 to Present			
	8	1120 - Pre AP English 8	3112 - Math 8 or 3130 - Algebra I	4125 – Physical Science	2357 - Pre AP Civics and Economics	Foreign Language*		
SECONDARY	9	1130 - Pre AP English 9	3130 - Algebra I or 3143 - Geometry	4210 - Earth Sciences	2210 - Pre-AP World Geography or 2215 - Pre AP World History to 1500	7300 - Health and PE 9 Foreign Language*	8688 - Television and Media Production I *(DE BCS 140)* 6612 - Computer Information Systems *(DE AST 101 & AST 140 and CLEP – ITE 115)*	
	10	1140 - Pre AP English 10	3143 - Geometry or 3135 - Algebra II	4310 – Pre AP Biology *(CLEP - BIO 101-102)*	2380 - AP World History or 2216 - Pre AP World History from 1500	7400 - Health and PE 10 Foreign Language*	8689 – Television and Media Production II *(DE BCS 110)* 6120 - Economics & Personal Finance *(DE FIN 107)*	
	11	1196 - AP English 11 *(Eng 111 – 112)*	3135 - Algebra II or 3162 - Pre-Calculus	4410 - Chemistry *(CLEP - CHM 111-112)*	2319 - AP US History *(DE HIS 121-122)*	Foreign Language*	8690 - Television and Media Production III *(DE BCS 117)* 6630 - Design, Multimedia, and Web Technologies *(DE – AST 253)*	
	12	1195 - AP English 12 *(Eng 243-244)*	3192 - AP Statistics or 3162 - Pre-Calculus or 3177 - AP Calculus AB or 3160 - College Math	4570 - AP Physics or 4470 - AP Chemistry or 4370 - AP Biology	2245 - AP Government and Politics		8801 – Trade and Industrial Education Dual Enrollment *(DE BCS 198)* WBL3 - Work-based Learning Internship *(DE BCS 190)*	

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)	College Credit or College Readiness for this pathway may be determined through:	Additional Learning Opportunities:
• Workplace Readiness Skills for the Commonwealth • WISE Financial Literacy • Adobe Certified Associate • Microsoft Office Specialist	• Dual Enrollment HS Courses • Placement Assessments such as COMPASS & SAT II • College Entrance Exams such as ACT & SAT	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 - COMMUNITY COLLEGE or APPRENTICESHIP - Determined Locally

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
Journalism & Broadcasting	Liberal Arts (AS) 60 cr	(Determined locally)	(Determined locally – optional)

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	ENG 111 (AP) SDV 100	MTH 151 (CLEP)	BIO 101 (CLEP)	HIS 121 (DE)	BCS 140 (DE) CST 100	BCS 110 (DE)	BCS 117 (DE)	BSC 198 (DE)
Year 1 2nd Semester	ENG 112 (AP)	MTH 152	BIO 102 (CLEP)	HIS 122 (DE)	BCS 190 (DE)	AST 140 (DE)	AST 253 (DE)	AST 101 (DE)
Year 2 1st Semester	ENG 243 (AP)	MTH 157 (AP)	PHY 201 (AP)	PLS 211 (DE)	HLT/PED	ITE 115 (CLEP)	SPA 101 (CLEP)	FIN 107 (DE)
Year 2 2nd Semester	ENG 244 (AP)		PHY 202 (AP)	PLS 212 (DE)	HLT/PED		SPA 102 (CLEP)	

College courses offered locally in the high school for college credit should be coded: DE (Dual Enrollment) and/or VC (Validated Credit)

Related Industry Certifications Available:	Additional Suggested Learning Opportunities:
	Work-Based Learning: ☐ Cooperative Education ☐ Internship ☐ Mentorship ☐ Job Shadowing ☐ Service Learning Project ☐ Registered Apprenticeship

UNIVERSITY

University/College:
Degree or Major:
Number of Articulated CC Credits:

Notes:

Roanoke STEM Academy Plan of Study

Transportation, Distribution & Logistics

Student Name: _____
School: _____
Date: _____
Career Goal: _____

Cluster: Transportation, Distribution, and Logistics

Pathway: Facility and Mobile Equipment Maintenance

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.

	Diploma Type						Diploma Recognition									
Secondary Education Goal	■	Standard		Advanced		Modified		*Early College Scholars*		*Commonwealth Scholars*	■	*CTE Diploma Seal*		*Adv Math & Tech Seal*		
Post Secondary Goal:		4 – Year College/University	■	2-Year Community College	■	2- Year Technical/Trade School		Military/Branch _____		Other _____						
Career Prep Planning Resources	■	PSAT	■	SAT		ACT		ASVAB		**Career Assessment Instrument**	■	**VA Wizard**		Other:_____		
	EARNED INDUSTRY CERTIFICATIONS															
	WRS		DATE		W!SE Financial Literacy			DATE								

EDUCATION LEVELS	GRADE	English/ Language Arts	Mathematics	Science	Social Studies/ Science	Other Required Courses Recommended Electives Learner Activities	Recommended Career and Technical Courses Administrative Planning Guide http://www.cteresource.org/apg/ *Recommended not required	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/
Graduation Requirements: http://www.doe.virginia.gov/instruction/graduation/index.shtml								
MIDDLE	7	1110 – English 7	3111 – Math 7	4115 – Life Science	2354 – US History: 1865 to Present			
	8	1120 – English 8	3112 - Math 8	4125 – Physical Science	2357 – Civics and Economics		8463 - Technological Systems* 6451 - Keyboarding*	
SECONDARY	9	1130 - English 9	3130- Algebra I	4210 - Earth Sciences	2210 - World Geography or 2215 - Pre AP World History/Geography to 1500	7300 - Health and PE 9	8435 - Technical Drawing and Design *(DE – DRF 201)* 8506 – Automotive Technology I *(DE –AUT 265)** 8175 -Sports, Entertainment, and Recreation Marketing	- Aerospace Engineering/Operations Technician - Aircraft Body/Bonded Structure Repairer - Aircraft Mechanic/Service Technician - Automotive Body/Related Repairer - Automotive Glass Installer/Repairer - Automotive Service Technician/ Mechanic - Avionics Technician - Bus/Truck Mechanic - Collision Repair Technician - Diesel Engine Specialist - Diesel Service Technician - Electrical/Electronic Installer/Repairer - Electrical/Electronic Technician - Facility Maintenance Manager/ Engineer - Industrial Electrician - Industrial Equipment Mechanic - Motorboat Mechanic - Off-Road Equipment Technician - Rail Locomotive/Car Mechanic/ Repairer - Service Manager - Service Writer - Ship Mechanic/Repairer - Small Engine Mechanic - Stationary Engineer
	10	1140 - English 10	3143 - Geometry	4310 - Biology	2380 - AP World History or 2216 - Pre AP World History/Geography 1500 to Present	7400 - Health and PE 10	8509 - Motorsports Technology I *(DE MTS 130, 125)* 8672 - Welding I *(DE – WEL 121)*	
	11	1150 - English 11	3184 - Computer Math or 3134 - Algebra, Functions and Data Analysis or 3135 - Algebra II	4410 – Chemistry or 4340 – Ecology	2360 - US & Virginia History		8510 - Motorsports Technology II *(DE MTS 126, 131)* 8539 - Precision Machining Technology I 6120 - Economics & Personal Finance *(DE FIN 107)*	
	12	1160 - English 12 *(DE – ENG 243-244)*	3134 - Algebra, Functions and Data Analysis or 3135 - Algebra II	4410 – Chemistry or 4340 – Ecology or 4510 – Physics	2440 - US/VA Government		8511 - Motorsports Technology III *(DE MTS 132, 135)* 8130 - Advanced Marketing*	

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)	College Credit or College Readiness for this pathway may be determined through:	Additional Learning Opportunities:
• Workplace Readiness Skills for the Commonwealth • WISE Financial Literacy	• Dual Enrollment HS Courses • CLEP Examinations • Placement Assessments such as COMPASS & SAT II • College Entrance Exams such as ACT & SAT	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 - COMMUNITY COLLEGE or APPRENTICESHIP - Determined Locally

SAMPLE POSTSECONDARY PROGRAMS RELATED TO THIS CAREER PATHWAY

Individual plans must include locally agreed upon courses at the postsecondary level (See page 2)

Pathway	Associate Degree, College Certificate, or Apprenticeship	Bachelors Degree	Postgraduate Degree
Facility and Mobile Equipment Maintenance	Motorsports Fabrication and Set Up Technology – Career Studies Certificate (29 credit hours) *Courses recommended but not required for certificate	(Determined locally)	(Determined locally – optional)

POSTSECONDARY PLAN OF STUDIES MUST INCLUDE POSTSECONDARY ACADEMIC, CTE, AND OTHER ELECTIVE COURSES APPROPRIATE FOR AN ASSOCIATE DEGREE.

Semester	English	Mathematics	Science	Social Studies	Required Courses or Recommended Electives			
Year 1 1st Semester	ENG 111 (AP)*	MTH 115*	HLT/PED*	HIS 121 (DE)*	MTS 130 (DE)	MTS 135 (DE)	MTS 210	SDV 108
Year 1 2nd Semester	ENG 112 (AP)*	MTH 116*	PHY 201 (AP)*	HIS 122 (DE)*	MTS 131 (DE)	MTS 295	MTS 211	
Year 2 1st Semester	ENG 243 (AP)*	MTH 157 (AP)*	PHY 202 (AP)*	PLS 211 (DE)*	MTS 132 (DE)	MTS 290	MTS 298	
Year 2 2nd Semester	ENG 244 (AP)*	MTH 151 (CLEP)*	AST 101 (DE)*	PLS 212 (DE)*				

College courses offered locally in the high school for college credit should be coded: DE (Dual Enrollment) and/or VC (Validated Credit)

Related Industry Certifications Available:	Additional Suggested Learning Opportunities:
	Work-Based Learning: ☐ Cooperative Education ☐ Internship ☐ Mentorship ☐ Job Shadowing ☐ Service Learning Project ☐ Registered Apprenticeship

UNIVERSITY

University/College:
Degree or Major:
Number of Articulated CC Credits:

Notes:

Appendix H:

Student Admission Forms

COMPLETE IN BLACK OR BLUE INK ONLY.

BURTON
CENTER for ARTS & TECHNOLOGY

Application and Registration
Burton Center for Arts & Technology
1760 Boulevard, Salem, VA 24153
(540) 562-3900 ext. 29010 Fax 857-5061
Website: www.rcs.k12.va.us/arbtc
E-mail: msteele@rcs.k12.va.us

Name _____ Base School _____
Last First Middle

Birth Date _____ Age _____ Male/Female _____

Grade Next Year _____ E-mail _____

Address _____ Home # _____ Cell # _____
Street City Zip

Rank your top 3 choices for BCAT

1st _____

2nd _____

3rd _____

Due to the number of students applying, students are not guaranteed their first choice of class.

_____
Student's Signature Date

_____
Parent's/Guardian's Signature Date

Career Objective _____

Next Year's Classes at Base School

_____

_____

_____

_____

_____

NOTE: You must have passed five credit producing courses and be enrolled in five credit courses or their equivalent to participate in all Virginia High School League activities.

Educational Goal _____

I live with: (Circle one) Dad and Mom / Dad / Mom / Dad & Stepmother / Mother & Stepfather / Guardian / Other _____

Father's Name _____

Work Place _____

Work Phone _____

Cell Phone # _____

Mother's Name _____

Work Place _____

Work Phone _____

Cell Phone # _____

NOTE: FILLING OUT THIS APPLICATION DOES NOT GUARANTEE YOUR 1ST CHOICE AT BURTON.

Roanoke County Public Schools does not discriminate with regard to race, color, national origin, sex, or handicapping condition in an educational and/or employment policy or practice. Questions and/or complaints should be addressed to the Assistant Superintendent of Administration/Title IX Coordinator at (540) 562-3900 ext. 10121 or the Associate Director of Pupil Personnel Services/ 504 Coordinator at (540) 562-3900 ext. 10182.

Date _____

Roanoke County Public Schools

CENTER FOR MASS COMMUNICATIONS

APPLICATION PACKET

The Center for Mass Communications provides a four-year course of study for students interested in participating in extensive experiences in television, radio, and print media. From classroom studies of the history and development of mass communications, to hands-on experience with video and television, audio and radio, as well as multimedia and web applications, students will gain a rich understanding of many professions possible in the communications field.

If you are interested in being a part of this unique and exciting initiative, please complete the following application packet.

NAME: _____

The completion and submission of this application by the due date noted below is the sole responsibility of the student applicant.

All student completed applications and materials are to be submitted to the school's ***guidance coordinator*** *by*

Monday, December 5, 2011.

ROANOKE COUNTY PUBLIC SCHOOLS
Center for Mass Communications
Student Application Checklist

This checklist is included in the application packet to guide students in the completion of the Center for Mass Communications application. The completion of the application is the responsibility of the applicant.

_____ **Step 1: Complete the following application packet items:**

- _____ APPLICATION COVER SHEET
- _____ STUDENT APPLICATION - GENERAL INFORMATION
- _____ WRITING SAMPLE
- _____ COUNSELOR RECORD FORM (Only complete top of form)

Deliver all items listed above to your guidance coordinator.

_____ **Step 2: Complete the top of and distribute RATING SCALES**

- _____ 7th or 8th grade Social Studies Teacher
- _____ 7th or 8th grade English Teacher
- _____ Technology or Arts Teacher

_____ **Step 3: Follow up with teachers** to ensure **RATING SCALES** have been completed and sent to your school counselor.

Give all completed application materials to your Guidance Coordinator by Monday, December 5, 2011.

If you have questions, see the **Guidance Coordinator** at the school where you attend.

Cave Spring Middle	Joan Farley
Glenvar Middle	Dr. Kristi Snow
Hidden Valley Middle	Lisa Childress
Northside Middle	Terrie Bigler
William Byrd Middle	Lubeth Jones

STUDENT APPLICATION - GENERAL INFORMATION

Center for Mass Communications

(To be completed by student)

Student ID #:_____ School: _____ Grade: _____

Name: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Home Phone: _____ Date of Birth: _____ Gender: _____

Name of Parent/Guardian: _____

Daytime phone number:_____

The decision to apply to the Center for Mass Communications is my own. I would like to participate fully in the program and I verify that the responses contained in this application are my own.

_____ _____

Student Signature Date

I give permission for the guidance counselor to release my child's transcript to the Center for Mass Communications Selection Committee for use solely in the selection process.

_____ _____

Parent/Guardian Signature Date

Roanoke County Public Schools does not discriminate with regard to race, color, national origin, sex, or handicapping condition in an educational and/or employment policy or practice. Questions and/or complaints should be addressed to the Deputy Superintendent/Title IX Coordinator at (540) 362-3900 ext. 10121 or the Director of Pupil Personnel Services/504 Coordinator at (540) 562-3900 ext. 10182.

WRITING SAMPLE

Center for Mass Communications

(To be completed by student)

The Selection Committee would like to get to know you better through a writing sample. Please answer the following on your own paper and submit your writing sample as a part of your application packet. All writing samples must be typed or word-processed using a 12-point font and double spacing.

Prompt:

Imagine yourself as a television reporter. You have discovered through a secret informant that the hospital where he or she is employed is overbilling the patients. Would you reveal the identity of the informant if it meant bringing the hospital to justice? This course of action would most certainly mean that the informant would lose his or her job.

Limit your response to 500 words or less.

The Selection Committee will evaluate your essay based on the following criteria:

Ideas & Content (50%)	Does the essay respond to the prompt? Is the essay creative in the response? Does the essay include relevant, detailed elaboration? Does the writer exhibit an understanding of the ethical issues involved in investigative journalism?
Organization (25%)	Does the essay have a strong introduction? Is the essay clearly organized, with well-transitioned paragraphs?
Conventions (25%)	Does the writer use proper writing conventions (spelling, punctuation, capitalization, grammar, etc.)?

GUIDANCE COUNSELOR RECORD FORM
Center for Mass Communications

Student Name: _____

Current School: _____

Current Grade: _____

School Counselor's Name: _____

School Counselor,

Please collect all student application packets for the Center for Mass Communications that are turned in to you and check to make sure all required items are included. Please include a copy of the student's seventh- and eighth-grade transcripts in the student's application packet. Send all documents, along with this cover sheet to Joe LeGault, Coordinator of English and ESL.

Thank you!

Guidance Coordinators: Please submit all completed application packets to Joe LeGault, English / ESL Coordinator, by Wednesday, December 14, 2011.

For Guidance Coordinator use only:

_____ Application cover sheet
_____ Student Application - General Information
_____ Writing Sample
_____ Guidance Counselor Record Form
_____ Rating Forms
_____ Transcripts

RATING SCALE
Center for Mass Communications

Teacher -- This is a time sensitive document. Please complete this rating scale immediately and return directly to the Guidance Coordinator at the school where the applicant attends school. Thank you.

Applicant's Name: _____ Teacher's Name: _____

Students interested in mass communications typically display some if not all of the following characteristics. Please help us understand this student by checking the column that best characterizes this student's behaviors and/or aptitudes.

This student demonstrates	Never	Rarely	Occasionally	Frequently	Always
1. a strong interest in English and Social Sciences.	☐	☐	☐	☐	☐
2. the ability to grasp new concepts easily.	☐	☐	☐	☐	☐
3. motivation and desire to be challenged academically.	☐	☐	☐	☐	☐
4. technological talents (i.e. computers).	☐	☐	☐	☐	☐
5. persistence in understanding a challenging topic.	☐	☐	☐	☐	☐
6. clear, logical thinking and questioning skills.	☐	☐	☐	☐	☐
7. good planning and organizational skills.	☐	☐	☐	☐	☐
8. the ability to recognize relationships and patterns between ideas or experiences.	☐	☐	☐	☐	☐
9. keen and insightful observations.	☐	☐	☐	☐	☐
10. follow-through behavior when not necessarily interested in a topic or problem.	☐	☐	☐	☐	☐
11. behavior that requires little direction from teachers.	☐	☐	☐	☐	☐
12. an inquisitive spirit or a willingness to take risks. Curiosity.	☐	☐	☐	☐	☐
13. the ability to adapt, improve, or modify objects or ideas.	☐	☐	☐	☐	☐
14. an ability to clearly articulate ideas.	☐	☐	☐	☐	☐
15. an openness in accepting constructive criticism.	☐	☐	☐	☐	☐
16. an ability to work well in a team.	☐	☐	☐	☐	☐
17. people skills, adaptability, social skills.	☐	☐	☐	☐	☐
18. a willingness to be open minded.	☐	☐	☐	☐	☐

_____ _____ _____

Teacher Signature Date Subject Taught

Roanoke County Public Schools

CENTER FOR ENGINEERING

APPLICATION PACKET

The Center for Engineering offers a four-year advanced curriculum integrating math, science and technology as a study of the profession of engineering. The Center's curriculum focuses on the development of the theoretical understandings of the engineering discipline and on the practical skills and understandings necessary for any engineer.

If you are interested in being a part of this unique and exciting initiative, please complete the following application packet.

NAME: _____

The completion and submission of this application by the due date noted below is the sole responsibility of the student applicant.

All student completed applications and materials are to be submitted to the school's ***guidance coordinator*** *by*

Monday, December 5, 2011

ROANOKE COUNTY PUBLIC SCHOOLS
Center for Engineering
Student Application Checklist

This checklist is included in the application packet to guide students in the completion of the Center for Engineering application. The completion of the application is the responsibility of the applicant.

_____ **Step 1: Complete the following application packet items:**
- _____ APPLICATION COVER SHEET.
- _____ STUDENT APPLICATION - GENERAL INFORMATION.
- _____ WRITING SAMPLE.
- _____ RECORD FORM (Only complete top of form)

Deliver all items listed above to your guidance coordinator.

_____ **Step 2: Complete the top of and distribute RATING SCALES**
- _____ Current Math Teacher
- _____ Current Science Teacher

_____ **Step 3: Follow up** with teachers to ensure **RATING SCALES** have been completed and sent to your school counselor.

_____ **Step 4:** Your school counselor will give ALL application packet items and RATING SCALES to the **Guidance Coordinator** BY **Monday, December 5, 2011.**

If you have any questions, see the **Guidance Coordinator** at your school:

Cave Spring Middle School	Joan Farley
Glenvar Middle School	Dr. Kristine Snow
Hidden Valley Middle School	Lisa Childress
Northside Middle School	Terrie Bigler
William Bryd Middle School	Lubeth Jones

Roanoke County Public Schools does not discriminate with regard to race, color, national origin, sex, or handicapping condition in an educational and/or employment policy or practice. Questions and/or complaints should be addressed to the Deputy Superintendent/Title IX Coordinator at (540) 562-3900 ext. 10121or the Director of Pupil Personnel Services/504 Coordinator at (540) 562-3900 ext. 10181.

STUDENT APPLICATION
GENERAL INFORMATION
Center for Engineering

Student Name:_____ Grade:_____

School:_____ Student ID Number:_____

School Counselor Name:_____

Student Address:_____

City:_____ State: _____ Zip Code:_____

Home Phone:_____ Date of Birth:_____ Gender:_____

Name of Parent/Guardian: _____

Daytime phone number:_____

The decision to apply to the Center for Engineering is my own. I would like to participate fully in the program and I verify that the responses contained in this application are my own.

I understand that completion of or current enrollment in Algebra I is a pre-requisite for the program. I further understand that if I am not enrolled in Geometry as an 8th grader, I **MUST** take Geometry in summer school before admission **OR** take it as a 9th grader at my home school in addition to Algebra II at the Engineering Center.

_____ _____

Student Signature Date

I give permission for the school counselor to release my child's transcript to the Center for Engineering Selection Committee for use solely in the selection process. I also give permission for the Roanoke County Public Schools to administer the School and College Ability Test to my child as part of the application process.

_____ _____

Parent/Guardian Signature Date

WRITING SAMPLE
Center for Engineering

(To be completed by student)

The Selection Committee would like to get to know you better through a writing sample. Please answer the following on your own paper and submit your writing sample as a part of your application packet. All writing samples must be typed or word-processed using a 12-point font and double spacing.

Prompt:

Consider your future career as a professional engineer. Describe one creative technical invention that you may patent and explain who this invention would benefit. Please include as much detail as possible (for example, materials used, the design, how it works, estimated cost, etc.) needed in the production of your invention. Limit your response to 600 words or less.

The Selection Committee will evaluate your essay based on the following criteria: (Graphics are acceptable but not included in the evaluation of your essay.)

Ideas & Content (50%)	Does the essay respond to the prompt? Is the essay creative in the response? Does the essay include relevant, detailed elaboration? Does the writer exhibit an understanding of today's technology?
Organization (25%)	Does the essay have a strong introduction? Is the essay clearly organized, with well-transitioned paragraphs?
Conventions (25%)	Does the writer use proper writing conventions (spelling, punctuation, capitalization, grammar, etc.)?

SCHOOL COUNSELOR RECORD FORM
Center for Engineering

Student Name: _____

School: _____

Grade: _____

Counselor's Name: _____

School Counselor,

Please collect all student application packets for the Center for Engineering that are submitted to you and check that all required items are included. Please include a copy of the student's seventh- and eighth-grade transcripts in the student's application packet. Give the completed application packets to your Guidance Coordinator.

Thank you!

Guidance Coordinators must submit all completed application packets to Linda Bowden, Math Coordinator, by Friday, December 14, 2011.

FOR GUIDANCE COORDINATOR USE: APPLICATION CONTENTS

_____ Application Cover Sheet

_____ Student Application – General Information

_____ Writing Sample

_____ Rating Forms

_____ Transcripts

RATING SCALE
Center for Engineering

Teacher -- This is a time sensitive document. Please complete this rating scale immediately and return it to the student's school counselor: _____.

Applicant's Name: _____ Teacher's Name: _____

Students interested in engineering typically display some if not all of the following characteristics. Please help us understand this student by checking the column that best characterizes this student's behaviors and/or aptitudes.

This student demonstrates:		Never	Very Rarely	Occasionally	Frequently	Always
1.	a strong interest in math and science.	☐	☐	☐	☐	☐
2.	the ability to grasp new concepts easily.	☐	☐	☐	☐	☐
3.	motivation and desire to be challenged academically.	☐	☐	☐	☐	☐
4.	technological talents (i.e. computers, calculators, etc.).	☐	☐	☐	☐	☐
5.	persistence in understanding a challenging topic.	☐	☐	☐	☐	☐
6.	clear, logical thinking and questioning skills.	☐	☐	☐	☐	☐
7.	good planning and organizational skills.	☐	☐	☐	☐	☐
8.	the ability to recognize relationships and patterns between ideas or experiences.	☐	☐	☐	☐	☐
9.	keen and insightful observations.	☐	☐	☐	☐	☐
10.	follow-through behavior when interested in a topic or problem.	☐	☐	☐	☐	☐
11.	behavior that requires little direction from teachers.	☐	☐	☐	☐	☐
12.	an inquisitive spirit or a willingness to take risks.	☐	☐	☐	☐	☐
13.	the ability to adapt, improve, or modify objects or ideas.	☐	☐	☐	☐	☐
14.	an ability to clearly articulate ideas.	☐	☐	☐	☐	☐
15.	an openness in accepting constructive criticism.	☐	☐	☐	☐	☐
16.	an ability to work well in a team.	☐	☐	☐	☐	☐

_____ _____ _____

Teacher Signature Date Subject Taught

Appendix I:

Assurance Statement

Roanoke County STEM Academy at The Burton Center for The Arts and Technology

Statement of Assurances

The signature on this page certifies the following to the Virginia Department of Education:

1. The planning committee has reviewed the provisions of *Administrative Procedures Guide for the Establishment of Governor's Career and Technical Academies* outlined in the Guidance Manual, and understands that the implementation proposal addresses these criteria and 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 Career and Technical Academies.*
3. If the Roanoke County STEM Academy at The Burton Center for The Arts and Technology will be a jointly operated program, an ongoing governing board will be established and maintained to reflect current Board of Education regulations relative to jointly operated schools and programs.
4. Roanoke County Schools will serve as the grant fiscal agent.

Certification by Authorized Institutional Official:

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

Dr. Lorraine Lange, Superintendent, Roanoke County Schools

Lorraine Lange
Signature

11/22/11
Date

The Roanoke County Governor's STEM Academy
Roanoke County Public Schools

STATEMENT OF OPERATING FUNDS AND FACILITIES ASSURANCE

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

1. Operating funds and facilities are available to support the Governor's STEM Academy.
2. Operating funds and facilities are available to adequately support the needs of the programs at The Roanoke County Governor's STEM Academy.

Certification by Authorized or Institutional Official:

The applicant certifies that to the best of 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 above statement of assurances.

Lorraine S. Lange — Printed Name of Authorized Official

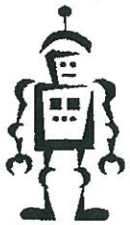
Superintendent — Title

Lorraine S. Lange — Signature of Authorized Official

11/23/11 — Date

Appendix J:

Summer Camp Information

June 13-16 Robotics	June 13-16 Triple Threat	June 13-16 TV Production	July 18- 21 Sculpture
 Center for Engineering Instructor: Suzanne Nicewonder	 Center for Performing Arts Instructor: Carol Webster	 Center for Mass Communication Instructor: Eric Salo	 Center for Visual Arts and Museum Studies
Projects using Lego Mindstorm Robots, CAD and Inventor programs will give students a chance to explore technology as it is used in the Center for Engineering.	Students will work in acting, dancing, and singing. The camp will culminate in a talent showcase similar to presentations done by students in the Performing Arts Specialty Center.	Students will explore the steps of television production and work together to film, edit, and produce a program similar to projects done by students in the Mass Communication Specialty Center.	Students will work with professional art materials to create sculptures similar to projects done by students in the Visual Arts and Museum Studies Specialty Center.

For rising 6th, 7th, and 8th graders

Camps run 8:00 A.M. - 12:00 P.M. Monday through Thursday

(Robotics second session 12:30 pm to 4:30 pm)

Burton Center for Arts & Technology campus, 1760 Boulevard, Salem, VA 24153

Fee for each program is $75 (check or money order)

Each program is limited to twenty students accepted on a first-come, first-served basis.
Transportation is not provided for the program.
For more information, contact Kim Simmons at (540) 562-3900 x 10259.

---------- Detach Here to return completed registration form – Retain information portion for reference ----------

Summer Camp Registration Form

Name:
Grade for 2011-12 school year:
Home Address:

Select camp(s) to register for:

____ Robotics - Session I	June 13-16	M-TH 8-11:45	Select ONE Robotics Session Only
____ Robotics - Session II	June 13-16	M-TH 12:45-4:30	
____ Triple Threat	June 13-16	M-TH 8-12	
____ Television Production	June 13-16	M-TH 8-12	
____ Sculpture	July 18-21	M-TH 8-12	

Parent/Guardian names	Home #
	Cell #s
Name of emergency contact if parent cannot be reached:	Home #
	Cell #s
Medical conditions, allergies, dietary restrictions, and other conditions or circumstances that program staff should be aware of:	

I, _____ (print parent/guardian name), give permission and accept financial responsibility for my child to participate in this program and to receive medications, health procedures, and medical care as needed in an emergency.

_____
Parent Signature and Date

Mail this registration form with a check or money order for $75 per program payable to Roanoke County Public Schools (No cash or credit cards will be accepted) to:

Kim Simmons
Roanoke County Public Schools
5937 Cove Rd.
Roanoke, VA 24019

Deadline for registration is May 13th, 2011.
Confirmation of enrollment will be sent out by May 20th, 2011.

For rising 6th, 7th, and 8th graders

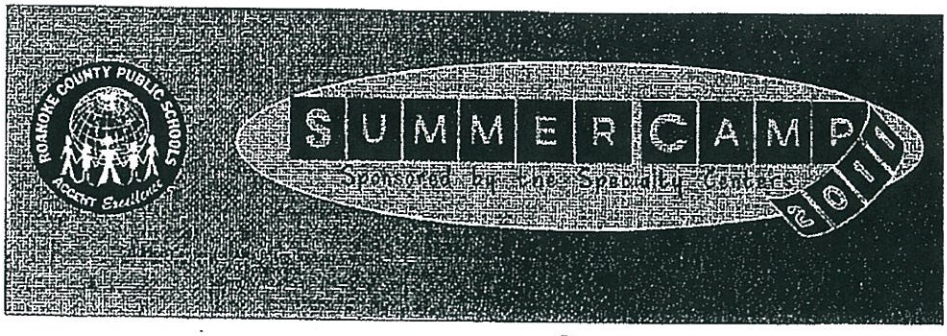
Camps run 8:00 A.M. - 12:00 P.M. Monday through Thursday
(Robotics second session 12:45 pm to 4:30 pm)

Burton Center for Arts & Technology campus
Fee for each program is $75

Each program is limited to twenty students accepted on a first-come, first-served basis.
Transportation is not provided for the program.

Department of Instruction
5937 Cove Road, NW
Roanoke, Virginia 24019

Non-Profit Org
U.S. POSTAGE
PAID
Permit #78
Roanoke, VA



Appendix K:

Budget

ROANOKE COUNTY PUBLIC SCHOOLS
GOVERNOR'S STEM ACADEMY AT THE BURTON CENTER FOR ART AND TECHNOLOGY

BUDGET

A – Director Costs	TOTAL			
	State Funds	Perkins Funds	Other Funds (Local or grant funds to be described in Budget Narrative)	In-Kind
1. Personnel --- 1000	$0.00	$240.00	$150,945.82	$28,462.90
2. Employment Benefits --- 2000	$0.00	$20.00	$16,020.00	$0.00
3. Purchased/Contractual Services ---- 3000	$0.00	$8,300.00	$20,681.00	$0.00
4. Internal Services ---- 4000	$0.00	$0.00	$0.00	$0.00
5. Staff Development ---- 5000	$0.00	$1,500.00	$0.00	$0.00
6. Summer Component Activities ---- 5000	$0.00	$0.00	$1,000.00	$0.00
7. Travel ---- 5000	$0.00	$500.00	$1,000.00	$0.00
8. Contractual Services ---- 5000	$0.00	$0.00	$0.00	$0.00
9. Materials and Supplies ---- 6000	$0.00	$0.00	$6,000.00	$0.00
10. Equipment ---- 8000	$0.00	$59,000.00	$84,000.00	$120,000.00
11. Facilities ---- 8000	$0.00	$0.00	$0.00	BCAT - Market Value
B – Indirect Costs *	$0.00	$0.00	$0.00	$0.00
TOTAL	$0.00	$69,560.00	$279,646.82	$148,462.90

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

Appendix L:

Certificate of Insurance

CERTIFICATE OF INSURANCE

ISSUE DATE: 11/28/2011

PRODUCER

Vaco Risk Management Programs
308 Market St., SE
Suite 1 & 2
Roanoke, VA 24011-

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURED

Roanoke County Public Schools
5937 Cove Road
Roanoke, VA 24019

COMPANIES AFFORDING COVERAGE

COMPANY LETTER A: Virginia Association of Counties Group Self-Insurance Risk Pool
COMPANY LETTER B:
COMPANY LETTER C:
COMPANY LETTER D:
COMPANY LETTER E:

COVERAGES

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
A	GENERAL LIABILITY	VA-RO-077C-12	07/01/2011	07/01/2012		
	X COMMERCIAL GENERAL LIABILITY				GENERAL	$ 10,000,000
	CLAIMS MADE X OCCUR				PRODUCTS-COMP/OP	$ 10,000,000
	OWNER'S & CONTRACTOR'S PROT.				PERSONAL & ADV. INJURY	$ 10,000,000
	X 0 RETENTION				EACH OCCURRENCE	$ 10,000,000
					FIRE DAMAGE (Any one fire)	$ 500,000
					MED. EXPENSE (Any one person)	$ 5,000
A	AUTOMOBILE LIABILITY	VA-RO-077C-12	07/01/2011	07/01/2012		
	X ANY AUTO				COMBINED SINGLE LIMIT	$ 10,000,000
	ALL OWNED AUTOS				BODILY INJURY (Per person)	$
	SCHEDULED AUTOS				BODILY INJURY (Per accident)	$
	HIRED AUTOS					
	NON-OWNED AUTOS				PROPERTY DAMAGE	$
	GARAGE LIABILITY					
	X 0 RETENTION					
	EXCESS LIABILITY					
	UMBRELLA FORM				EACH OCCURRENCE	$
	OTHER THAN UMBRELLA FORM				AGGREGATE	$
A	OTHER					
	Property	VA-RO-077C-12	07/01/2011	07/01/2012	$10,000 Ded/Blanket per schedule on file	
	Auto Physical Damage	VA-RO-077C-12	07/01/2011	07/01/2012	$250 Comprehensive $ 500 Collision	
	Crime	VA-RO-077C-12	07/01/2011	07/01/2012	$1,000,000 Blanket, $250 Deductible	
	School Leaders	VA-RO-077C-12	07/01/2011	07/01/2012	$2,500 Ded $ 1,000,000 Limit	

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS

CERTIFICATE HOLDER

Roanoke County Public Schools
5937 Cove Road
Roanoke, VA 24019

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 90 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE