GEORGIA RACE TO THE TOP
INNOVATION FUND
APPLICATION FACE SHEET

SECTION 1: APPLICANT AGENCY

Applicant Agency (Legal Name): Tift County Board of Education

Legal Mailing Address: 207 North Ridge Avenue

City: Tifton County: Tift State: GA Zip: 31793

Federal Employer I.D. #: 58-6000329 DUNS #: 082181108

Congressional District #: GA 8

Executive Officer Name: Patrick Atwater Title:Superintendent

Street Address: 207 North Ridge Avenue City: Tifton State: GA Zip: 31794

Telephone: 229-387-2400 FAX: 229-386-1020 Email: patwater@tiftschools.com

SECTION 2: PARTNERSHIP LEAD CONTACT

Contact Name: Craig Matthews Title: CTAE Director, Tift County School System

Street Address: 207 North Ridge Avenue

City: Tifton State: GA Zip: 31794

Telephone: 229-387-2400 FAX: 229-386-1020 Email: cmatthews@tiftschools.com

SECTION 3: FISCAL CONTACT

Contact Name: Lynn McCrary Title: Comptroller

Street Address: 207 North Ridge Avenue

City: Tifton State: GA Zip: 31794

Telephone: 229-387-2400 FAX: 229-386-1020 Email: lmccrary@tiftschools.com

SECTION 4: GRANT AMOUNT REQUESTED: $1,004,762

SECTION 5: APPLICANT AGENCY FISCAL INFORMATION

1. Month of Fiscal Year End: June
2. Attach to the application, the applicant agency's financial audit.
3. Is applicant agency delinquent on any federal debt? **NO** x☐ YES☐ If yes, attach a detailed explanation.
4. Did applicant agency receive 80 percent or more of its annual gross revenue in federal awards in its preceding fiscal year; and $25,000,000 or more in annual gross revenue from federal awards and in so doing is required to comply with "Federal Funding Accountability and Transparency Act"? NO☐

YES☐ If yes, attach names and total compensation of the five most highly compensated officers of the grantee.

SECTION 6: PARTICIPANT DATA:

Approximate number of students served: 60
Population of focus (i.e. age, gender, race): grades 10-12

SECTION 7: SERVICE DELIVERY AREA

Primary county or counties to be served: Tift County

List other counties to be served (if any): _____

Congressional District(s) to be served: GA 8

SECTION 8: PROGRAM ACTIVITIES

SECTION 9: AUTHORIZING SIGNATURES

I, the undersigned, an authorized representative of the applicant, have read, understand, and agree to all relative conditions specified in the Race to the Top Innovation Fund Request for Proposals and having read all attachments thereto do submit this application on behalf of the applicant agency. If awarded a grant to implement the provision herein, I do certify that all applicable federal and state laws, rules, and regulations thereto will be followed.

APPLICANT AGENCY:

Patti Atwater Superintendent 10-27-11

Signature and Title Date

TIFT COUNTY BOARD OF EDUCATION
TABLE OF CONTENTS

EXECUTIVE SUMMARY

Project Name: Tift County Mechatronics Partnership

Partnership Entities: The Tift County Board of Education will serve as the lead partner and fiscal agent. Other partners are Moultrie Technical College (institution of higher learning); Tift Regional Medical Center (business partner); ConAgra Foods (business partners); Heatcraft Manufacturing (business partner); and the Tift County Chamber of Commerce (business partner).

Statement of Need: Tift County has chronic poverty (twice the national rate); persistently high unemployment rates (12.2%); and consistently low levels of educational achievement (one in four county residents who are 18 or older have less than a high school education). Tift County students -- especially minority and economically disadvantaged students – have lower than state averages on standardized test scores and high school graduation rates. The National Research Council recommends the need for high-quality STEM learning opportunities to eliminate the disparities between advantaged students and minority and low-income students.

Geographic Location: Tift County is in rural South Central Georgia.

Target Population: Rising 10th-grade students at Tift County High School who took Engineering in 9th-grade – with a special emphasis on those students who would be the first person in their family to attend college. The target group is anticipated to be at least 80% economically disadvantaged.

Project Goals: Goal 1: Provide an innovative STEM applied learning program for high school students to increase student academic success and graduation rates. Goal 2: Provide STEM educational activities for students and their families to increase student academic success and increase awareness and engagement in STEM careers and educational opportunities. Goal 3: Promote Mechatronics as an integral component of Georgia workforce development.

Proposal Implementation: A Moultrie Technical College Mechatronics curriculum would be taught at Tift County High School, as part of the Peach State Pathways program for Georgia high school students. The partnership proposes to serve a minimum of 60 students (20 new students each year) in grades 10-12 at Tift County High School, where a Moultrie Technical College instructor will conduct classes. Mechatronics is an interdisciplinary field of study involving control systems, electronic systems, computers and mechanical systems, leaving graduates qualified to work in a variety of industrial, manufacturing and health sciences settings essential to Georgia's educational and economic success. The curriculum would be the first of its kind to be taught in a Georgia high school. In addition, the partnership proposes to serve at least 50 students grades 9-12 annually in a weeklong STEM Summer Camp to introduce and/or reinforce STEM skills. Paid apprenticeships will be offered to students after completing two years of the program. At the conclusion of the program, students will have two technical certificates of credit from Moultrie Technical College, career work ready certificates, and a high school diploma.

SECTION 1: PARTNERSHIP OVERVIEW. The entities that make up the Tift County Mechatronics Partnership are the Tift County Board of Education (LEA), Moultrie Technical College (institution of higher learning), Tift Regional Medical Center (business partner), Heatcraft (business partner), ConAgra Foods (business partner), and the Tift County Chamber of Commerce (business partner).

Respective missions, expertise and experience. Tift County School Board of Education (TCBOE) will serve as the lead partner and fiscal agent. TCBOE's mission is to provide learning opportunities for all students, accommodate the needs of all students, challenge all students to use their innate abilities, and assist all students to live responsible, productive, and meaningful lives. TCBOE serves 7,678 students in grades preK-12. Moultrie Technical College (MTC) is a multiple-campus institution of higher learning whose mission as part of the Technical College System of Georgia (TCSG) is to provide a culture of learning through occupational education, academic education, business, and industry training. MTC served 4,237 students in 2010-2011 at four campuses in four counties (Colquitt, Tift, Turner, Worth). Of those students, 1, 976 were Tifton campus students. MTC serves 60 TCBOE students at the Tift County Center for Technical Careers (TCCTC), located on the MTC's Tifton campus. Tift Regional Medical Center (TRMC) is a not-for-profit 191-bed regional hospital serving 12 counties in South Central Georgia. The philosophy of TRMC is based on the belief that the primary and fundamental purpose of the hospital's existence is to serve the health needs of the patient as well as those of the community. TRMC is known as an innovative provider, was an early adapter of surgical technology, and trains physicians from other states and nations in surgical technology techniques. TRMC and MTC have worked together to develop an award-winning surgical technology program at the Tifton campus of MTC with equipment donated by TRMC. Heatcraft employs 500 people, manufactures refrigeration products, and was awarded the Manufacturer of the Year by the State of Georgia in 2004. Heatcraft has worked closely with MTC to train and upgrade skills of incumbent workers. Its state-of-the-art facility uses the latest manufacturing techniques, including extensive use of robotics. Heatcraft regularly provides tours and field trips for TCBOE and MTC students. The mission of the Tift County Chamber of Commerce (TCCC) is to enhance the quality of life of local citizens by promoting community and economic development. The TCCC has provided support to the TCBOE for years through the Adopt-A-School program, and is a conduit for communication between businesses. **ConAgra** Foods is one of the nation's largest food companies. The local plant produces Peter Pan peanut butter using state-of-the art industrial packaging and a robotics system. ConAgra uses MTC for mechatronics training and employs many of the graduates of the MTC mechatronics program.

Partnership's Collective Mission and Vision. The Tift County Mechatronics Partnership was formed with the collective mission to improve workforce readiness skills, expand STEM educational opportunities, provide opportunities for workplace learning and skill enhancement, encourage

Mechatronics as a career pathway, and expand the number of local businesses using advanced manufacturing. The partnership's vision is for Tift County to be a leader in STEM innovation, implementation, and career opportunities throughout Georgia and the Southeast United States. The partners will provide input on program implementation, review evaluation findings, serve as field trip and apprenticeship locations, help obtain investments to sustain the program, and help promote the Mechatronics program throughout the state.

Past Performance of Lead Partner Implementing Complex Projects that Led to Positive Project Implementation. Two large complex, and rapidly growing projects have recently been undertaken by TCBOE. Both of these endeavors required systemic instructional changes, increased and enhanced professional learning, and a high level of coordination between administrators and classroom teachers. TCBOE participated in a 2010 efficacy study conducted of the Leveled Literacy Intervention System (LLI) implemented in Tift County and in a New York state school system. The report was conducted by the University of Memphis Center for Research in Educational Policy (www.memphis.edu/crep) and found positive impacts on students. The randomized control trial study findings include that the LLI program was implemented with a high degree of fidelity and program implementation was consistent across the year. Students at all three grade levels made significant progress in their literacy achievement. Findings from the study were quickly incorporated into the classroom; the evaluation noted that teachers implemented the program with high fidelity. In another project, TCBOE quickly revised professional learning using ARRA funds and has moved to a site-based *Learning-Focused* model. School-based instructional coaches, study groups, and mentoring have been implemented to reinforce the system's commitment to performance-based teaching. Both of these projects necessitated changes throughout the system, rapidly and consistently, from the classroom to the central office to the boardroom. In addition to these examples, TCBOE was the lead partner in a 21st CCLC afterschool program conducted in eight TCBOE schools from 2003-2008. The 21st CCLC Partner Advisory Council was chaired by TCBOE and composed of more than 10 local agencies and organizations. Longitudinal evaluation findings submitted to the GADOE 21st CCLC administration found statistically significant improvements in academic achievement, as measured by CRCT scores, with Hispanic and black students, particularly males. These results demonstrate the system's efforts to reduce the achievement gap.

Evidence of Partner Success in Developing/Implementing Education Programs with Positive Student Outcomes. MTC is implementing and evaluating two multi-million, nationally competitive STEM-related projects that are highly complex and involve multiple educational and business partners. These projects demonstrate the expertise and skills that MTC will bring to the proposed project with TCBOE. MTC, funded by a US DOL grant, developed the innovative Remote Automated Management Project (RAMP) program in 2009, which allows interactive communication between MTC, instructors and students.

Equipment at remote sites are programmed and controlled at the RAMP Command Center at MTC's Tifton campus. RAMP provided industrial systems technology courses, such as robotics, to more than 120 students at 12 high school sites in Georgia during the 2010-2011 school year (see Appendix for letters of support). MTC also developed, through another US DOL grant in 2010, the GREEN Tift program, where disadvantaged youth, probationers and unemployed workers can earn degree, diploma and certificate programs in alternative energy (solar, green construction and biofuels.) As part of the program, GREEN Tift students have nearly completed constructing a net-zero energy house in downtown Tifton. Some of the other experiences MTC has had in developing or implementing education programs that led to positive students outcomes are: 1) Creating a surgical technology program in a collaborative effort with Tift Regional Medical Center and Colquitt Regional Medical Center. MTC's Surgical Technology program is a member of the PAE Elite 20 program, placing it among the best of all Surgical Technology programs in the nation, according to the Accreditation Review Committee on Education in Surgical Technology. Graduates of the program have a 100% job placement rate and are highly sought after. 2) Establishing the TCCTC to help address issues in high school graduation rates. Students at-risk for dropping out of school can attend high school and technical college classes on the MTC Tifton campus. Students graduate from TCCTC with a high school diploma and Technical Certificates of Credit. In 2010-2011, 60 students were enrolled in the program. The program helps students with credit recovery and provides a different type of structure and environment than the TCHS campus. Progress in system graduation rates for black and Hispanic students has been attributed to the program. The graduation rate for TCHS in 2009-2010 was 83.9% with 479 graduates; without the graduates that completed through the TCCTC, the graduation rate would have been 79.5%. For 2010-2011, TCCTC graduates contributed to a 5% increase in the TCHS graduation rate (75.7% without TCCTC, 80.8% with TCCTC students). The program is clearly making an impact on the TCHS graduation rate and most importantly, improving outcomes for students. 3) MTC has worked with four local BOEs to develop dual enrollment programs for high-school students. MTC has the highest number of dual enrolled students in the TCSG, with almost 500 students gaining both secondary and technical college credits simultaneously, and has won TCSG awards for its efforts in dual enrollment.

SECTION 2: NEED FOR PROJECT.

The partnership is targeting students who live in Tift County, a rural South Central Georgia county that faces chronic poverty, high unemployment levels and persistently low levels of educational achievement. According to the U.S. Census (2005-2009 ACS), the poverty rate in Tift County (25%) is nearly twice the national rate of 13.5% and significantly higher than the state of Georgia (15%). In addition, more than one in three children (36%) in Tift County live in poverty, compared to 20% in Georgia and 19% across the country. Nearly two-thirds, 65.3%, of Tift County students qualify for free or

reduced price school meals compared to 57.4% for Georgia. The most recent (July 2011) unemployment rate reported by the Georgia Department of Labor is 12.2%, compared to 10.4% in Georgia and 9.1% nationwide. One in four Tift County residents who are 18 or older have less than a high school education.

Table 1. Demographics	Population	Living in poverty	Children Living in Poverty	Unemployment Rate	18 or older with less than high school education
Tift County	44,633	25%	36%	12.2	25%
Georgia	9,228,265	15%	20%	10.4	17%
U.S.	311,078,148	13.5%	19%	9.1	16%

Table 2. Tift County School System, 2010-2011 Demographics	Students	White	Black	Hispanic	Economically disadvantaged
	7,678	45%	34%	17%	65%

TCHS did not meet AYP in 2010-2011 and its Improvement Status is "Needs Improvement." The school did not meet AYP in math and in graduation rate. The overall high school graduation rate for the last three years has hovered around 80%. The percentage of minority/economically disadvantaged students who graduate on time are consistently lower than white students and students who are not economically disadvantaged.

Table 3.	2010-2011	2009-2010	2008-2009
High School Graduation Rate			
All students	80.3%	83.9%	79.9%
Black students	76%	79.4%	70.4%
Hispanic students	74.5%	73.7%	76.5%
White students	85.6%	86.9%	87.4%
Economically disadvantaged	70.8%	74.2%	70.0%
Not economically disadvantaged	Not Available	92.5%	89.4%

The percentage of Tift County High School students who failed math on the GHSGT has increased for three consecutive school years. The percentage of blacks and Hispanics (24%) who failed was three times higher than the number of whites (8%). The percentage of black students who failed science on the GHSGT has also increased for three consecutive years.

Table 4.	2010-2011		2009-2010		2008-2009	
Georgia High School Graduation Test (first-time test takers)						
	%Fail Math	**% Fail Science**	**% Fail Math**	**%Fail Science**	**% Fail Math**	**%Fail Science**
All students	15%	11%	11%	13%	5%	11%
Black students	24%	20%	19%	19%	9%	17%
Hispanic students	24%	16%	16%	24%	11%	24%
White students	8%	3%	4%	5%	2%	6%
Economically disadvantaged	NA	NA	17%	21%	8%	20%
Not economically disadvantaged	NA	NA	5%	3%	2%	3%

Nearly half (49%) of all students failed end-of-course math tests in 2010-2011 and more than half of blacks (64%) and Hispanics (57%) failed. More than twice as many blacks (33%) failed science in 2010-2011 than did whites (12%).

Table 5.	2010-2011		2009-2010		2008-2009	
End-of-Course Tests						
	% Fail Math	**% Fail Science**	**% Fail Math I**	**% Fail Physical Science**	**% Fail Math I**	**% Fail Physical Science**
All students	49%	21%	54%	32%	n/a	38%
Black students	64%	33%	60%	37%	n/a	45%
Hispanic students	57%	14%	59%	25%	n/a	36%
White students	35%	12%	41%	31%	n/a	30%
Economically disadvantaged	NA	NA	59%	34%	n/a	38%
Not economically disadvantaged	NA	NA	38%	29%	n/a	38%

SAT test scores follow the same pattern. Tift County white students score above black students, but all Tift County student scores lag behind state and national averages.

Table 6.	2009-2010	2008-2009	2007-2008
Average Math SAT Scores for Seniors			
Nation	511	510	510
Georgia	487	489	490
Tift County High School	464	470	475
White	481	498	512
Black	403	385	397

SECTION 3: QUALITY OF PROJECT DESIGN. The Tift County Mechatronics Partnership proposes to serve a *minimum of 60 students in grades 10-12 at Tift County High School and to serve at least 50 students grades 9-12 annually in a weeklong STEM Summer Camp*. The project will enroll a minimum of 20 students each year in the Mechatronics program, targeting rising 9th-grade students who have completed Engineering I. A cohort of 20 new students per year will added each year. A particular effort will be made to identify and recruit students who do not have a family history of post-secondary education. *The target group is anticipated to be at least 80% economically disadvantaged.* A cohort of students will be followed as part of the program design and program evaluation. Results from this program will be immediately incorporated in the current robotics and industrial systems classes taught by MTC to 12 high schools; thus this program will indirectly impact an additional 120 students annually.

Exceptional Approach. The Tift County Mechatronics Partnership seeks to provide an exceptional approach to address the unmet needs for high school students in general, and in minorities and economically disadvantaged students in particular, by increasing student achievement in mathematics and science and expanding STEM education and career opportunities. Mechatronics is a relatively new field

with a host of integrated skills that can be applied in a variety of job contexts (see Mechatronics Pathway in Appendix). Mechatronics combines various disciplines to teach students a holistic approach to developing solutions for engineering applications. Graduates of mechatronics programs (from a high school CTAE concentration to a Ph.D.) are highly sought after and are essential for Georgia's advanced manufacturing industry. MTC, a lead partner in the proposal, has developed a Mechatronics curriculum for high school students that articulates with the Peach State Engineering and Manufacturing Pathways. MTC currently teaches robotics and industrial systems technology to 12 high schools daily via remote technology (see letters in Appendix). Mechatronics has not been widely adopted in secondary education, and the Mechatronics curriculum at TCHS would be the first taught in a Georgia high school. The Tift County target student population is well-suited for evaluation of the program. With a high percentage of minority students, the evaluation findings will have meaningful information for other Georgia LEAs that target minority students for STEM education. Graduates of the program will have a high school degree and TCSG credits. They will be well-positioned to continue in technical college, attend other post-secondary colleges, or enter the workforce. The proposed project is positioned to address national recommendations for the need for additional STEM education. The project will provide an innovative, replicable career pathway in Mechatronics, a discipline that is growing in demand in industry and business. Thus the proposed project is an innovative approach that meets the needs of students, educators, and industry in having a well-educated workforce that positions Georgia in the global economy.

Evidenced-Based Findings. An ACTE factsheet collates reports and studies on the importance of career and technical education (CTE) in achieving academic success, improved earnings, and improved employment outcomes (www.acteonline.org). The Southern Regional Education Board reported that students at schools with highly integrated rigorous academic and CTE programs have significantly higher student achievement in math, reading and science than do students at schools with less integrated programs. The 2004 National Assessment of Vocational Assessment found that occupational concentrators increased their 12th grade test scores on the NAEP by about 8 points in reading and 11 points in math. Students who took little or no CTE increased their NAEP reading scores by only 4 points and showed no improvement in math achievement. Education researcher Robert Elmore noted that no single model is likely to serve all students well. In "School Reform from the Inside Out," Elmore said that change must occur in the classroom specifically by increasing the knowledge and skill of teachers, changing the content of what is taught to students, and changing the relationship of the student to teachers and the content. In a June 2011 report, the National Research Council identified key elements of high-quality STEM education including: teachers with high capacity to teach STEM content and how to use it; supportive system of assessment and accountability; and equal access to high-quality STEM learning

opportunities for minority and low-income students. The proposed Mechatronics Partnership is designed to address these findings and recommendations.

Advancing the RT3 Strategy. The Tift County Mechatronics Partnership is aligned with the GADOE theory of change for RT3. The public private partnership proposes to teach Mechatronics as part of the Peach State Pathways program for Georgia high school students, creating an innovative educational field of study that supports and advances K-12 public education and leads to positive improvements in applied learning. The Mechatronics program is the next step in the innovative industrial systems technology programming currently being conducted by MTC with 12 Georgia high schools. This application for Enterprise funds will provide evaluative data to position GADOE and LEAs to replicate and expand the Mechatronics program. Students who graduate from the secondary level Mechatronics program can pursue additional TCSG credits and obtain a diploma or degree, attend a four-year college in engineering or similar fields, or enter the workforce.

The applicant will work with GADOE to establish a Mechatronics Career Pathway by the end of the project period. MTC has met with the GADOE CTAE staff about creating a Mechatronics Career Pathway. MTC has also been working with Southern Polytechnic State University to articulate technical college credits to the four-year post-secondary level (see the Appendix for a Mechatronics Career Lattice and Career Pathways chart).

Mechatronics is an interdisciplinary field of study involving control systems, electronic systems, computers, and mechanical systems. Students trained in mechatronics are qualified to work in a variety of industrial, manufacturing, and health sciences settings. Mechatronics is used extensively in the manufacturing sectors of aerospace, food processing, medical devices, heavy equipment, and automotive. Mechatronics training prepares students to work on electrical and electro-mechanical systems in a variety of industries. The Mechatronics program is aligned with the Peach State Pathways CTAE Foundation Skills and can be taught as part of the current Engineering or Manufacturing Pathways. The CTAE Foundation skills have 11 competencies that are aligned to the U.S. DOE 16 career clusters. Advanced manufacturing is a priority industrial sector for Georgia and is one of the 16 national career clusters.

An array of academic and career student support services will be used to support student progress and ensure positive outcomes. An application process with a selection rubric will be used to maximize student buy-in and retention. A 0.25 FTE 9th-grade career counselor will identify and recruit potential students, assist them with course selection and the program application, and help increase awareness of career opportunities in mechatronics and allied fields. A 0.5 FTE grade 10-12 career counselor/transition coach will work with students once they are accepted to the program. The transition coach will help ensure academic progress, coordinate apprenticeship placement, organize Family STEM events, organize

industry field trips, and aid students with the application process for post-secondary education or entry into the workforce.

Mechatronics will be taught by a MTC instructor (leveraged funds) who will come to the TCHS campus daily for instruction. The MTC Director of Technical Services (leveraged funds) will set up the Mechatronics equipment, serve as a substitute instructor (as needed), and help coordinate the summer STEM camp. The MTC High School Coordinator (leveraged funds) will be the TCSG level academic advisor for students and will coordinate COMPASS and WorkKeys assessments. Students will take the COMPASS test for skills assessment in reading and math (necessary for dual enrollment credit). Students who do not pass COMPASS in their first attempt can check out a project laptop that will have GAPS software (test preparation software, provided by MTC). The transition coach will tutor students and monitor their progress. Students will also take the WorkKeys assessment and will earn work ready certificates, positioning them for career opportunities or strengthening their post-secondary applications.

A weeklong summer STEM camp will be held at MTC annually in June to expose students to a college campus environment, introduce and/or reinforce STEM skills, and provide students with a hands-on STEM learning experience. The summer STEM camp will serve at least 50 students per annual session; female and minority students will be especially encouraged to participate (RT3 funds requested for project students, additional students will pay small registration fee). MTC instructors and staff will coordinate daily field trips to local industry and hands-on lab experiences (e.g. robotics, surgical technology, solar power, energy efficiency).

Apprenticeships will be offered to students once they have completed two years of the mechatronics program. Apprenticeships will be coordinated through the South Georgia RESA with assistance provided by MTC in establishing appropriate work locations; students will receive compensation for their work experience. Heatcraft, ConAgra and American Textile have agreed to serve as apprenticeship locations. Students will participate in Skills USA local, state and national competitions, affording them opportunities to strengthen their presentation and problem-solving skills. Family STEM events will be held twice a year to promote interest in STEM with students, their parents, and family members. STEM events will include student demonstrations of robotics, information about STEM careers and post-secondary options.

Table 7. Flowchart of Student Progress Through Project Period and Expected Student Outcomes

	Time Period	Student Cohort 1 N=20	Student Cohort 2 N=20	Student Cohort 3 N=20		Support Services and Programs for Students Throughout Period
PROJECT TIMELINE	**January 2012-May 2012**	Recruitment of 9th grade students				-Student recruitment and assessment -Dual enrollment opportunities with MTC -Career counseling -Academic counseling -Field trips to local industry -Family STEM learning events -SKILLS USA state and national participation and competitions -Assistance with post-secondary applications and job searches
	Summer 2012 STEM Camp	1 week				
	August 2012 – December 2012	IDSY 1000				
	January 2013 – May 2013	ELCR 2110 ELCR 2140				
	Summer 2013 STEM camp	1 week				
	August 2013 – December 2013	IDSY 1120	IDSY 1000			
	January 2014 – May 2014	AUMF 1150 ECR 2150	ELCR 2110 ELCR 2140			
	Summer 2014 STEM camp	1 week	1 week	1 week		
	August 2014 – December 2014*	Apprenticeship	IDSY 1120	IDSY 1000		
	January 2015 – May 2015*	Apprenticeship	AUMF 1150 ECR 2150	ELCR 2110 ELCR 2140		
STUDENT OUTCOMES		Students in cohort 1 in May 2014 will have ↓	Students in cohort 2 in May 2014 will be ↓	Students in cohort 2 in May 2014 will be ↓		Support services lead to ↓
		2 Technical Certificates of Credit (TCC) from MTC, career ready work certificates, and on track to earn HS Diploma from TCBOE ***Can continue with post-secondary education or enter workforce.***	**On track to complete High School and earn TCC**	**On track to complete High School and earn TCC**		**--On-time academic progress** **--Improvement in social/emotional attitudes and skills** **--Improvement in academic achievement** **--Increased knowledge of STEM careers** **--Increased likelihood of post-secondary education**
Number students served each year		***20***	***40***	***60***		***60 students plus 60 family members***

* TCBOE will request RT3 funding in May 2014 for third full year and will ensure students complete program after RT3 funds have expired.

Table 8. Mechatronics Sequence of Courses

Course Number	Title	TCSG Certificate Earned with Completion of Coursework	TCSG Credit Hours	Student Contact Hours
IDSY 1000	Basic Circuit Analysis	Basic Mechatronics Specialist Certificate	5	135
ELCR 2110	Process Control		3	120
ELCR 2140	Mechanical Devices		2	
IDSY 1120	Basic Industrial PLC's	Intermediate Mechatronics Specialist Certificate	6	165
AUMF 1150	Introduction to Robotics		3	120
ELCR 2150	Fluid Power		2	

Alignment to Priority 1. The proposed initiative addresses Priority 1, "opportunities for students to benefit from applied learning," and addresses the three essential components by exposing students to heightened academic rigor, enhanced self-management skills, and increased opportunities to apply new knowledge and skills in a real-world setting. *Heightened academic rigor. A) Classroom curriculum.* The Mechatronics curriculum provides challenging content for students that integrate applied mathematics, robotics, and physics; the program increases and improves higher-order thinking skills. The curriculum is college level coursework and thus provides students with TCSG credits upon graduation. The Mechatronics program is not a typical CTAE course; it is a rigorous, highly technical series of college-level classes. *B) Accelerated coursework based on individual need.* Students will have training assignments to solve that will have to be addressed outside of class hours. On-line self-pacing training assignments will also be part of the curriculum. Students will have to satisfactorily complete on-line assessments to progress to the next level. *Enhanced self-management skills. A) Problem solving skills.* Students will have hands-on learning for the majority of class time and will be performing technical tasks. They will have to problem-solve on state-of-the-art equipment (mechanical, electrical, hydraulics, fluid power). Students will work in a team to run diagnostics on problems presented by the instructor, plan a solution, identify the tools needed, and execute a solution. The problems presented to students will be "real world" situations encountered every day in manufacturing, power generation, packaging, and processing. Students will learn how to troubleshoot problems, present solutions, and communicate the solution to a client/supervisor. Soft skills will be incorporated into lesson plans and will be used by students when working in teams and small groups. Working in teams (required due to equipment configuration) will require practice and reinforcement of self-management skills. *Communication skills.* Students will work individually and in teams to write reports, present findings, and present solutions to complex mechatronics issues. Students will participate in Skills USA and will travel to state and national Skills USA meetings for competition. At Skills USA, a written test, interview, and hands-on project

competitions all require communication skills. Students will use a variety of media to present reports including Word, Power Point, and video. *Increased opportunities to apply knowledge and skills.* Paid apprenticeships will offer students a real-world chance to apply their skills as part of the local workforce. Students will work at Heatcraft, ConAgra, or American Textile and will be assessed on skill level and worker performance. Summer camps will also provide opportunities for students to practice skills on equipment used and donated by local industry and by the hospital. Students in the Mechatronics program are trained using highly technical, industry-specific, cutting-edge equipment.

TABLE 9: SCOPE OF WORK				
NAME OF PARTNERSHIP: TIFT COUNTY MECHATRONICS PARTNERSHIP				
GOAL 1: PROVIDE AN INNOVATIVE STEM APPLIED LEARNING PROGRAM FOR HIGH SCHOOL STUDENTS TO INCREASE STUDENT ACADEMIC SUCCESS AND GRADUATION RATES.				
ACTIVITY	**IMPLEMENTATION STEPS**	**TIMELINE**	**RESPONSIBILITY**	**FUNDING SOURCE**
YEAR ONE: JANUARY 2012 – DECEMBER 2012				
Recruit a minimum of 20 10th grade students	Review student records to find students who have completed Engineering I	By January 31, 2012	9th grade counselor/recruiter	RT3 funds
Enroll a minimum of 20 10th grade students in Mechatronics for 8/12	Prepare student application, prepare rubric, contact students to fill out application, review applications using rubric, contact students and parents	By May 1, 2012	CTAE Director with assistance from HS counselor and 9th gr counselor	Local funds and RT3 funds
Provide instructional materials and equipment	Order portable classroom building, arrange for installation; order new equipment (bidding process, purchase orders); order student laptops	Begin January 2012	CTAE Director with assistance from MTC Director of Technical Services	RT3 funds and leveraged state funds
Program evaluation	Prepare evaluation plan, hold staff training, set up project database	January – Feb 2012	Project Evaluator	RT3 funds
Student support services	High school career counselor will meet with students individually and will maintain contact on a regular basis	Once recruited and thereafter	High School Career Counselor	RT3 funds
Teach Mechatronics classes to students	Prepare temporary classroom space and move donated equipment from MTC to TCHS	Classes start August 10, 2012	MTC Instructor	Leveraged state funds
Conduct baseline student mechatronics assessments	Develop student assessment process in spring, assess students when classes start. Two assessments: self-assessment and instructor assessment of skills.	August 10-17, 2012	Project Evaluator in consultation with MTC staff	RT3 funds and leveraged state funds
Conduct COMPASS assessments	Administer COMPASS to students	August 10 – 17, 2012	MTC High School Coordinator	Leveraged state funds
Conduct end of semester assessments	Administer end of semester student skill assessment, instructor completes student assessment	December 2012	MTC Instructor and Project Evaluator	Leveraged state funds and RT3 funds
Prepare interim evaluation report	Summative reports to be produced at end of school year, formative reports mid-year; incorporate findings from midyear report into instruction and practice for spring semester, January- May 2013	December 2012	Project Evaluator	RT3 funds

ACTIVITY	IMPLEMENTATION STEPS	TIMELINE	RESPONSIBILITY	FUNDING SOURCE
GOAL 1 YEAR TWO – JANUARY 2013 – DECEMBER 2013				
Recruit 9th grade students	Meet with 9th grade students to talk about Mechatronics program and explain educational and career options	ongoing	9th grade Counselor	RT3 funds
Review midyear evaluation findings	Incorporate recommendations for program improvement from midyear evaluation	January 2013	Partnership	RT3 funds and leveraged funds
Teach Mechatronics classes to students	Instruction for Spring Semester	January 2013-May 2013	MTC Instructor	Leveraged state funds
Conduct baseline student mechatronics assessments	Administer assessments	January 2013	MTC Instructor	Leveraged state funds
Compete in regional Skills USA	Instructor works with students to help them prepare projects for competition	February – March 2013	MTC Instructor	Leveraged state funds
Conduct end of semester assessments	Administer end of semester student skill assessment, instructor completes student assessment	May 2013	MTC Instructor and Project Evaluator	Leveraged state funds and RT3 funds
Summative evaluation report	Summative evaluation report for 2012-2013 school year. Conduct focus groups, conduct stakeholder interviews, compile student data, review administrative records	May - July 2013	Project Evaluator	RT3 funds
Teach Mechatronics classes to students	Instruction for Fall Semester	August – December 2013	MTC Instructor	Leveraged state funds
Conduct baseline student mechatronics assessments	Administer assessments	August 2013	MTC Instructor	Leveraged state funds
Conduct end of semester assessments	Administer end of semester student skill assessment, instructor completes student assessment	December 2013	MTC Instructor and Project Evaluator	Leveraged state funds and RT3 funds
Prepare formative evaluation report	Summative reports to be produced at end of school year, formative reports mid-year; incorporate findings from midyear report into instruction and practice for spring semester, January- May 2014	December 2013	Project Evaluator	RT3 funds

ACTIVITY	IMPLEMENTATION STEPS	TIMELINE	RESPONSIBILITY	FUNDING SOURCE
GOAL 1 YEAR THREE – JANUARY 2014 – SEPTEMBER 2014				
Recruit 9th grade students	Meet with 9th grade students to talk about Mechatronics program and explain educational and career options	ongoing	9th grade Counselor	RT3 funds
Review midyear evaluation findings	Incorporate recommendations for program improvement from midyear evaluation	January 2014	Partnership	RT3 funds and leveraged funds
Teach Mechatronics classes to students	Instruction for Spring Semester	January 2014-May 2014	MTC Instructor	Leveraged state funds
Conduct baseline student mechatronics assessments	Administer assessments	January 2014	MTC Instructor	Leveraged state funds
Establish apprenticeship program	Develop worksite places, supervision process, assessment process	Begin January 2014	CTAE Director, MTC Director of Technical Services, Project Evaluator	RT3 funds and leveraged funds
Compete in regional Skills USA	Instructor works with students to help them prepare projects for competition	February – March 2014	MTC Instructor	Leveraged state funds
Conduct end of semester assessments	Administer end of semester student skill assessment, instructor completes student assessment	May 2014	MTC Instructor and Project Evaluator	Leveraged state funds and RT3 funds
Summative evaluation report	Summative evaluation report for 2013-2014 school year. Conduct focus groups, conduct stakeholder interviews, compile student data, review administrative records	May - July 2014	Project Evaluator	RT3 funds
Teach Mechatronics classes to students	Instruction for Fall Semester	August – December 2014	MTC Instructor	Leveraged state funds
Conduct baseline student mechatronics assessments	Administer assessments	August 2014	MTC Instructor	Leveraged state funds
Conduct end of semester assessments	Administer end of semester student skill assessment, instructor completes student assessment	December 2014	MTC Instructor and Project Evaluator	Leveraged state funds and RT3 funds
Prepare formative evaluation report	Summative reports to be produced at end of school year, formative reports mid-year; incorporate findings from midyear report into instruction and practice for spring semester, January- May 2014	December 2014	Project Evaluator	RT3 funds

GOAL 2: PROVIDE STEM EDUCATIONAL ACTIVITIES FOR STUDENTS AND THEIR FAMILIES TO INCREASE STUDENT ACADEMIC SUCCESS AND INCREASE AWARENESS AND ENGAGEMENT IN STEM CAREERS AND EDUCATIONAL OPPORTUNITIES				
ACTIVITY	**IMPLEMENTATION STEPS**	**TIMELINE**	**RESPONSIBILITY**	**FUNDING SOURCE**
Family STEM event	Plan and hold two events annually with guest speakers, door prizes, family activities, student demonstrations. Evaluate participant satisfaction.	One event Fall Semester each year; one event Spring semester each year	HS Career Counselor Project Evaluator	RT3 funds and local donations
Summer STEM Camp for 50 students annually	Plan camp. Recruit students. Hold camp for five days every June. Evaluate participate satisfaction.	June of each year	MTC Director of Technical Services and MTC staff Project Evaluator	Leveraged state funds and RT3 funds
Student field trips	Plan and hold at least two field trips per semester (local industry, regional industry, science museums).	Four field trips per year	HS Career Counselor and MTC instructor with assistance of Heatcraft, ConAgra and American Textiles staff	RT3 funds, leveraged state funds and private funds
GOAL 3: PROMOTE MECHATRONICS AS AN INTEGRAL COMPONENT OF GEORGIA WORKFORCE DEVELOPMENT				
ACTIVITY	**IMPLEMENTATION STEPS**	**TIMELINE**	**RESPONSIBILITY**	**FUNDING SOURCE**
Seek approval of a Mechatronics Career Pathway	Meet with GA DOE CTAE staff to discuss Mechatronics curriculum and determine steps needed for pathway approval.	By March 2012	MTC VP and MTC Director of Technical Services; Project Director	Leveraged state funds
Promote Mechatronics	Develop promotional materials, Web site information about TCBOE and MTC Mechatronics programs as a tool for recruiting more industry and recruiting more students into STEM education.	Start February 1, 2012	Tift County Mechatronics Partnership	Local leveraged funds
Seek local, regional, and national funds to continue to expand Mechatronics programs	Use evaluation findings and publicity materials to seek funds for program continuation and expansion. Apply for at least one grant to support Mechatronics program.	Begin October 2012	Tift County Mechatronics Partnerhip	Local leveraged funds

SECTION 4: QUALITY OF PROJECT EVALUATION. ***Evaluation Approach.*** The evaluation is designed as a participatory evaluation process and will continuously assess progress toward meeting the stated goals and objectives. All data collection activities will be conducted in accordance with FERPA. The appropriate parental permissions and consents will be obtained, student data will be presented in the aggregate only, and American Evaluation Association professional standards will be followed. The external evaluator, Sharpe Solutions LLC, will be responsible for the formative and summative evaluation including guiding data collection, constructing surveys and assessments, supervising data entry, conducting analyses of data, training TCBOE staff on data collection and evaluation protocols, conducting on-site observations of program activities, conducting focus groups, and writing formative and summative reports. Sharpe Solutions LLC has more than 25 years of experience of program design and evaluation experience including evaluation of US ED, US HHS, US DOL, and GA DOE funded grants. Julie Sharpe of Sharpe Solutions LLC holds a M.S. from Arizona State University, conducted science research for 10 years, and provides a science perspective and background to STEM evaluation.

Evaluation Plan and Design. The evaluation plan and design are guided by formative and summative evaluation questions. A logic model will be developed with program staff at the beginning of the grant period to help build ownership of the program evaluation with all staff. The evaluation training with staff will include reviewing and adopting formative and summative evaluation questions, discussing short-term and long-term outcomes, and reviewing data collection methods and protocols. Proposed *formative evaluation questions* include: How many students were served and what is their demographic profile? How many hours of STEM activities were provided and what kinds of activities were provided? What kind and how many hours of student and family educational events were provided? What were the program's objectives and how were they translated into practice? What was the program's organizational structure and how did it affect implementation? What partnership structures were in place and how did they affect implementation? What kind and how many hours of training and staff development were provided? What were the key challenges to implementing, operating, and sustaining the STEM program? *Summative Evaluation Questions*: To what extent has the Mechatronics partnership achieved its stated objectives? What percentage of participants gained new STEM knowledge? What percentage of participants increased awareness and understanding of STEM careers? What percentage of participants gained new problem-solving skills? What percentage of participants report interest in furthering STEM knowledge or activities? What percentage of participants improved their EOCT math scores? What percentage of participants graduated on time? What percentage of participants pursued post-secondary education in a STEM field? What percentage of educators gained new knowledge to help them be better prepared to teach STEM content?

Methods. *Formative Evaluation.* The formative evaluation will allow for ongoing assessment to identify problems that may need immediate attention and to generate recommendations that may be useful in making changes for program improvement. Formative evaluation data will be derived from such sources as midyear assessments, document review, activity observations, focus groups and interviews. The evaluator will provide technical assistance to assure reliable, timely data. Such support will include design of report forms, database development, staff development, training associated with assessment instruments and report forms, recordkeeping, and other activities. A midyear formative evaluation report will be provided by the end of January of each year. The formative report will include attendance, program operation, assessment of objectives and recommendations for program improvement.
Summative Evaluation. Summative evaluation activities will assess the extent to which the TCBOE partnership is meeting stated objectives. The evaluation will be a mixed methods design (post assessments of student skills; pre/post curriculum assessments; post-assessments for event satisfaction; key informant interviews; records review; and focus groups). A summative report will be provided at the end of each fiscal year and will include overview, process data (attendance, hours of activities), program operation, staffing, objective assessment, progress toward sustainability, and overall recommendations for improvement. The summative evaluation will also include recommendations for replication and expansion of the STEM activities.

A Program Evaluation Reporting Form will be used to track quantitative and qualitative data. These forms will be completed by program staff and submitted to the evaluator to assure timeliness of data collection. A data tracking system will ensure that all students, teachers, families, and staff receive appropriate assessments. The tracking process monitors all steps in data collection: administration of surveys/assessments; transfer of information (mail, email, or by hand); entry and checking of data; analysis of data; and reporting of data. Assessments will be developed by the evaluator, in coordination with MTC instructors, to assess STEM knowledge and skills gained. Course grades and math EOCT will also be reported.

Data Analysis. Data will be maintained in a project data base and exported into SAS for analyses. Descriptive statistics of quantitative data will be reported midyear to monitor implementation of program activities and will be used to make mid-course corrections. The summative report will include findings of impact for the STEM programming.

Reporting, Use and Dissemination of Findings. *Internal Dissemination* – The external evaluator will meet with program staff at least monthly in the start-up phase and then will meet at least quarterly to review data and data collection. On a monthly basis the Project Director will give data to the external evaluator. Sharpe Solutions LLC will compile all results, make recommendations, and disseminate findings to the Project Director quarterly. The Project Director will incorporate recommendations from

Sharpe Solutions LLC for continuous program improvement, and share findings and recommendations with partners and staff. *External Dissemination* – The midyear formative and annual summative report will be distributed to partners, GDOE, and TCBOE staff. The annual summative evaluation report in June will guide future development of the program (e.g., garner additional resources, make any program adjustments, help in replication to other LEAs). Evaluation findings will be customized for stakeholder groups including students, parents, LEA staff, GDOE, MTC, the media, the general public, and partners. The project staff, partners and evaluator will review findings, make program suggestions, review performance indicators, and make recommendations for strengthening the program in subsequent years. Evaluation results will be available on the TCBOE website at www.tiftschools.com . TCBOE staff and MTC staff will also incorporate evaluation findings during presentations at conferences such as Georgia Association for Career and Technical Education.

Table 10: APPROACH TO PROJECT EVALUATION FOR ENTERPRISE GRANT APPLICANTS

GEORGIA BENEFITS FROM A MEASURABLY STRONGER COMMITMENT FROM PUBLIC AND PRIVATE SECTORS TO SUPPORT AND ADVANCE POSITIVE ACADEMIC OUTCOMES FOR STUDENTS		
INDICATOR(S)	DATA COLLECTION METHODS(S)	FREQUENCY OF DATA COLLECTION/REVIEW
Dollar amount raised or leveraged to support ongoing implementation of proposed initiative --At least 50 percent of the requested year 3 funds will be leveraged from public and private sources.	Content analysis of TCBOE and MTC budgets; Excel spreadsheet kept of leveraged funds throughout project (source and amount)	Updated quarterly in program database Reported annually in midyear formative report Reported annually in summative report
GEORGIA BENEFITS FROM AN INCREASED NUMBER AND PERCENTAGE OF STUDENTS AND TEACHERS WHO WILL HAVE ACCESS TO INNOVATIVE PROGRAMS, STRATEGIES, AND PRACTICES RELATED TO APPLIED LEARNING AND TEACHER/LEADER RECRUITMENT AND DEVELOPMENT		
INDICATOR(S)	DATA COLLECTION METHODS(S)	FREQUENCY OF DATA COLLECTION/REVIEW
Number of people served each year by the proposed initiative --100% of the proposed 20 annual students will be served (total of 60 students) --At least 75% of the proposed 50 students will participate in the summer STEM camp --At least 75% of the proposed 60 students will participate in field trips --At least 60% of the proposed 60 parents will participate in at least one Family STEM event	Daily attendance recorded Sign-in sheets for each educational event, parent event, and field trips will be collected and recorded in the program database. Contact hours for each educational event, parent event, and field trip will be recorded in program database.	Episodic (at each programming event). Reported monthly to project director Updated quarterly in program database Reported annually in midyear formative report Reported annually in summative report.

GEORGIA BENEFITS FROM A STRONGER UNDERSTANDING OF THE TYPES OF INNOVATIVE PROGRAMS, STRATEGIES, AND PRACTICES THAT WILL LEAD TO POSITIVE IMPROVEMENTS IN APPLIED LEARNING, TEACHER INDUCTION, AND HOMEGROWN TEACHER PIPELINE EFFORTS		
INDICATOR(S)	DATA COLLECTION METHODS(S)	FREQUENCY OF DATA COLLECTION/REVIEW
Number and percentage of students that experienced a specified gain in problem-solving, communication and self-management skills 1) At least 85% of the 60 students will demonstrate improvements in skills assessment in each area of problem-solving, communication, and self-management skills (20 students annually added to cohort) 2) At least 85% of the 60 students will receive ratings of highly skilled in the areas of problem-solving, communication, and self-management on end of semester assessments (20 students annually added to cohort) 3) At least 75% of the 60 students will express interest in STEM careers following high school graduation 4) At least 35% of participants will compete at state or national SKILLS USA	1) Assessment of knowledge and skills (pre- and post-test matched) completed by student 2) Assessment of student skills and knowledge completed by MTC instructor 3) Participant satisfaction surveys (developed by evaluator) 4) Participant and program records	Skills self-assessment administered at beginning of semester and end of semester Student assessment completed by instructors at end of semester Participant satisfaction surveys completed by student at end of semester Reported 2x annually to project director Updated 2x annually in program database Reported annually in midyear formative report Reported annually in summative report.
Family STEM Events 1) At least 70% of parents will report new knowledge about STEM. 2) At least 50% of the students will express interest in STEM careers and courses	1) Post-survey (parent assessment and assessment of their child) 2) Post-survey (student assessment of family event)	Survey administered at end of event Reported 2x annually to project director Updated 2x annually in program database Reported annually in midyear formative report Reported annually in summative report.
STEM Summer Camp 1) At least 75% of students will report new knowledge about STEM. 2) At least 75% of the students will express satisfaction with the camp 3) At least 50% of the students will express interest in STEM careers and courses	1, 2, 3) Post-survey (student assessment of summer camp)	Survey administered at end of event Reported annually to project director Updated annually in program database Reported annually in summative report.

GEORGIA BENEFITS FROM IMPROVED STUDENT OUTCOMES		
INDICATOR(S)	DATA COLLECTION METHODS(S)	FREQUENCY OF DATA COLLECTION/REVIEW
Select at least one student outcome (increased student achievement, increased student growth, decreased achievement gap among subgroups, decreased dropout rate, increased graduation rate) and determine the number and percentage of students that improved by a specific amount.		
INCREASED STUDENT ACHIEVEMENT At least 85% (51) of the 60 students will graduate high school on-time At least 80% (48) of the 60 students will pass math EOCT	School system records for high school graduation and EOCT testing	Collected annually Reported annually in summative report

SECTION 5: QUALITY OF PROJECT MANAGEMENT PLAN. ***Capacity***. The lead partners, TCBOE and MTC, have extensive experience in managing complex projects and work cooperatively on a number of innovative initiatives to improve student achievement. MTC has the highest number of dual-enrolled students in Georgia, works with 12 LEAs across the state for its RAMP high school education program, and is currently managing two highly competitive US DOL grants designed to improve post-secondary student outcomes. TCBOE has worked in partnership to manage a number of competitively funded projects (e.g. 21st CCLC afterschool program, truancy prevention, school health clinics). Their existing close working relationships with TRMC, ConAgra Foods, Heatcraft, the TCCC, and local businesses are fundamental to the project's success.

Project Management. The proposed project requests partial salaries for three TCBOE staff, contractual support for MTC instruction/coordination, and contractual support for evaluation. The Project Director, Lead Partner, and Project Evaluator have over 25 years of experience each in managing complex projects and/or systems. The TCBOE CTAE Director Craig Matthews will serve as the Project Director. The Project Director was Principal of TCHS NE Campus until June 2011, and is now the CTAE Director. His experience and contacts as the former principal will aid in quickly getting the program in operation. Mr. Matthews is an outstanding educator, his student teams have won state competitions, he has been selected STAR teacher twice, has grant experience (EMC and GA DOE 21st CCLC grants), and is a proven building-level (elementary and high school principal) and system-level administrator. Dr. Shawn Utley, MTC vice president of economic development, is currently managing two US DOL multimillion dollar grants with multiple partners and components in addition to his technical college responsibilities in economic development. Both of the grants are highly complex, in STEM-related areas (mechatronics and alternative energy) with-fast paced timelines, and require a high level of accountability for measureable outcomes. The Project Evaluator, Julie Sharpe, has an extensive background in grants management and evaluation with a variety of state, foundation and federal grants including US ED, US DOL, US HUD, US HHS, USDA, GA DOE, GA DHS, Blank Foundation, Kaiser Permanente, and Alcoa Foundation. She works closely with programs to assure timely start-up, adherence to state and federal regulations, collection of baseline and ongoing assessments. A program database, tracking process and outcome data (including individual level participant outcomes), will be used to help monitor progress. Table 11 outlines staff, partner and contractual responsibilities and time commitment for key components of the proposed project.

Table 11. Staff, Partner and Contractor Responsibilities

Work Responsibilities	Person Responsible	Time Commitment
Management		
Oversight of program including instruction, fiscal procedures, and staff; coordination of partnership	Project Director	0.25 FTE
Coordination of MTC programs and staff	MTC VP	0.10 FTE
DOE Program Reporting	Project Director	0.25 FTE
Monthly meeting of key personnel (Project Director, MTC VP, Project Evaluator)	Project Director to organize	0.25 FTE
Program Operation		
Recruitment, screening/assessment, counseling of 9th grade students	9th Grade Career Counselor/Recruiter	0.25 FTE
Instruction of students	MTC Mechatronics Instructor	0.25 FTE leveraged
Academic coaching, apprenticeship placement and monitoring, post-secondary application assistance, Family STEM events	High school Career counselor/Transition Coach	0.5 FTE
Academic advisement, coordination with TCSG programs	MTC High School Coordinator	1 FTE leveraged
Enrollment, COMPASS testing	MTC Director of Student Affairs	0.10 FTE leveraged
Classroom substitute, equipment set up and monitoring; coordination of STEM summer camp	MTC Director of Technical Services	0.15 FTE leveraged
Tracking of participant data; entry into project database	Project Director and Instructor	0.25 FTE; 0.25 FTE leveraged
Development of evaluation plan, data collection forms, data collection, analysis, evaluation reports	Project Evaluator	Contracted 770 hrs over 3 yrs
Administration and Finance		
Budget development, contracting, and monthly monitoring of expenditures	Project Director in consultation with Comptroller	0.25 FTE; 0.10 FTE leveraged
Processing of purchase orders, invoices, record keeping	Project Director	0.25 FTE
Fiscal oversight include management of contracts and financial reporting to DOE	Comptroller	0.10 FTE leveraged

SECTION 6: QUALITY OF SUSTAINABILITY PLAN. The sustainability plan is a balanced approach: 1) maintain local funding through FTE counts; 2) raise funds through competitive grant funds for STEM; 3) approach a local foundation for support; 4) solicit industry for donations and support and 5) build support among stakeholders to increase local engagement and support. The TCBOE and MTC commit to sustaining the Mechatronics program **beyond the project completion**. The 9th-grade counselor/recruiter and high school career counselor/transition coach positions will be retained by TCBOE. The existing CTAE wing of the high school will be reconfigured so a portable classroom will no longer be needed; TCBOE will use ELOST funds to renovate the area for a state-of-the-art classroom for Mechatronics. Student enrollment in the program is expected to help make the program self-

sustaining. MTC commits to continuing the Mechatronics instruction to TCBOE students **beyond the grant period** and commits to taking high school students to Skills USA after the grant completion period. The MTC Foundation will work to raise funds for the summer STEM camp so the program can continue beyond grant completion. A proposal to continue Family STEM nights and the summer camp will be submitted to The Tift County Educational Foundation (which provides over $10,000 annually in competitive local grants). In addition, TCBOE and MTC will identify local, state, and national corporate and foundation opportunities and will prepare solicitation requests to fund non-classroom aspects of the project (Family STEM nights, apprenticeships, summer camp). Equipment manufacturers will be contacted for in-kind and cash donations to help sustain the program. Heatcraft has already committed to providing equipment for TCHS so students have real world training and educational opportunities. MTC has national and international contacts with manufacturers of mechatronics equipment: the Director of Technical Services conducts in-house, on-site training for a variety of multinational companies in the use of mechatronics equipment. Those contacts will be used to help garner support for the program.

Stakeholders critical to the project's long-term success include students and families themselves. Current students and graduates of the MTC RAMP (industrial systems technology) dual enrolled students have expressed how important the program was to their college career (see Appendix). Students and their families need to understand the opportunities that STEM education, training, and careers can provide for them. The Family STEM events and summer camp are designed to build local stakeholder support, beyond the project participants, for STEM education. The National Research Council recommendations call for local, state, and national policymakers to support and expand STEM programming. The proposed project is one step on the path to building a sustained system of support for STEM education, training, and careers. Project evaluation findings will be used to build support, promote STEM, and expand the program beyond Tift County.

GOVERNOR'S OFFICE OF PLANNING AND BUDGET RACE TO THE TOP INNOVATION FUND BUDGET FORM				
Name of Partnership: Tift County Mechatronics Partnership		Applicants requesting Venture grants should complete the column under "Project Year 1." Applicants requesting funding for Enterprise grants should complete all applicable columns. Please read all instructions before completing form.		
SECTION A - BUDGET SUMMARY INNOVATION FUND COSTS				
Budget Categories	Project Year 1 (a)	Project Year 2 (b)	Project Year 3 (c)	Total (d)
1. Personnel	$76,440	$76,440	$57,330	$210,210
2. Fringe Benefits	$27,900	$27,900	$20,925	$76,725
3. Travel	$11,600	$14,700	$17,700	$44,000
4. Equipment	$157,479	$146,174	$61,685	$365,338
5. Supplies	$15,000	$21,500	$26,600	$63,000
6. Contractual	$40,878	$45,378	$45,378	$131,634
7. Construction				
8. Other	$20,620	$16,620	$76,615	$113,855
9. Total Direct Costs (lines 1-8)	$349,917	$347,212	$303,420	$1,004,762
10. Indirect Costs*				
11. Training Stipends				
12. Total Costs (lines 9-11)	$349,917	$347,212	$303,420	$1,004,762
SECTION B - BUDGET SUMMARY NON-INNOVATION FUND COSTS				
Budget Categories	Project Year 1 (a)	Project Year 2 (b)	Project Year 3 (c)	Total (d)
1. Personnel	$118,403	$118,403	$88,802	$355,208
2. Fringe Benefits	$40,913	$40,913	$30,685	$122,739
3. Travel				
4. Equipment				
5. Supplies				
6. Contractual				
7. Construction				
8. Other				
9. Total Direct Costs (lines 1-8)	$159,316	$159,316	$119,487	$438,118
10. Indirect Costs*				
11. Training Stipends				
12. Total Costs (lines 9-11)	$159,316	$159,316	$119,487	$438,118
SECTION C – BUDGET NARRATIVE (see instructions)				

BUDGET NARRATIVE:

TIFT COUNTY MECHATRONICS PARTNERSHIP

BUDGET REQUEST INNOVATION FUND: $1,004,762
NON-INNOVATION LEVERAGED FUNDS: $438,118

A. PERSONNEL: $210,210 REQUESTED INNOVATION FUND; $325,608 NON-INNOVATION

Requested Innovation Fund Staff: $210,210:
Project Director, 0.25 FTE of $91,143 annual salary for Tift County High CTAE Director = $22,785 x 2.75 years = $62,659
Career Counselor/Transition Coach, 0.50 FTE of $75,579 annual salary = $37,789 x 2.75 years = $103,920
Counselor/Recruiter for 9th Grade, 0.25 FTE of $63,469 annual salary = $15,866 x 2.75 years = $43,632

Non-Innovation: $325,608
Tift County High School Principal, 0.10 FTE at $93,883 annual salary = $9,388 x 2.75 years = $25,818
Tift County 9th Grade Principal, 0.10 FTE at $81,574 annual salary = $8,157 x 2.75 years = $22,432
Board of Education Grades 6-12 Curriculum Director, 0.15 FTE at $71,638 annual salary = $10,746 x 2.75 years = $29,552
Board of Education Comptroller, 0.10 FTE at $71,505 annual salary = $7,151 x 2.75 years = $19,664
Board of Education Deputy Superintendent, 0.15 FTE of $109,067 annual salary = $16,360 x 2.75 years = $44,990
MTC Director of Technical Services, 0.15 FTE at $62,500 annual salary = $9,375 x 2.75 years = $25,781
MTC Mechatronics Instructor, 0.25 FTE at $46,008 annual salary = $11,502 x 2.75 years = $31,631
MTC Vice President-Student Affairs, 0.10 FTE at $78,924 annual salary = $7,892 x 2.75 years = $21,703
MTC Director of Student Affairs, 0.10 FTE at $36,624 annual salary = $3,662 x 2.75 years = $10,071
MTC High School Coordinator, 1 FTE at $34,170 annual salary x 2.75 years = $93,968

B. FRINGE BENEFITS: $76,725 REQUESTED INNOVATION FUND; $112,511 NON-INNOVATION

Requested Innovation Staff Benefits: $76,725
Project Director, 0.25 FTE of $33,268 annual benefits = $8,316 x 2.75 years = $22,869
Career Counselor/Transition Coach, 0.50 FTE of $27,542 annual benefits = $13,793 x 2.75 years = $37,931
Counselor/Recruiter for 9th Grade, 0.25 FTE of $23,164 annual benefits = $5,791 x 2.75 years = $15,925

Non-Innovation Staff Benefits: $112,511
Tift County High School Principal, 0.10 FTE at $31,584 ($8,204 FICA; $9,651 Teachers Retirement; $13,231 health insurance; $498 worker's comp) in annual benefits = $3,158 x 2.75 years = $8,685
Tift County 9th Grade Principal, 0.10 FTE at $25,300 ($6,240 FICA; $8,386 Teachers Retirement; $1,024 health insurance; $432 worker's comp) in annual benefits = $2,530 x 2.75 years = $6,958
Board of Education Grades 6-12 Curriculum Director, 0.15 FTE at $22,877 ($5,480 FICA; $7,364 Teachers Retirement; $9,652 health insurance; $380 workers comp) in annual benefits = $3,432 x 2.75 years = $9,438
Board of Education Comptroller, 0.10 FTE at $16,154 ($5,470 FICA; $7,351 Teachers Retirement; $2,954 health insurance; $379 worker's comp) in annual benefits= $1,615 x 2.75 years = $4,441

Board of Education Deputy Superintendent, 0.15 FTE of $31,913 ($8,203 FICA; $11,212 Teachers Retirement; $11,919 health insurance; $578 worker's comp) in annual benefits = $4,787 x 2.75 years = $13,164
MTC Director of Technical Services, 0.15 FTE at $20,281 (32.45% of annual salary) in annual benefits = $3,042 x 2.75 years = $8,366
MTC Mechatronics Instructor, 0.25 FTE at $17,145 (32.45% of annual salary) in annual benefits = $4,286 x 2.75 years = $11,787
MTC Vice President-Student Affairs, 0.10 FTE at $27,702 annual benefits = $2,770 x 2.75 years = $7,618
MTC Director of Student Affairs, 0.10 FTE at $12,528 annual benefits = $1,253 x 2.75 years = $3,446
MTC High School Coordinator, 1 FTE at $14,040 annual benefits x 2.75 years = $38,610

C. TRAVEL: $44,000 REQUESTED INNOVATION FUND

YEAR ONE: Total = $11,600
TSA Competition in Perry, Georgia – Registration = $90 x 23 = $2,070. Per diem (meals, incidentals) = $51.31/day x 23 x 2 = $2,360. Lodging for 20 Students and 3 Instructors = 13 rooms at approximately $172/per room x 2 nights = $4,470. Total = $8,900.

Professional development, CTAE conference, Atlanta – Registration of $295 x 3 faculty = $885. Hotel $185 x 3 x 2 nights = $1,110. Mileage to Atlanta, 375 mi roundtrip x 50 cents/mile x 2 = $345. Per diem (meals, parking, incidentals) = $60/day x 3 x 2 = $360. Total = $2,700.

YEAR TWO: Total = $14,700
TSA Competition, Perry, Georgia – Registration = $90 x 43 = $3,870. Per diem (meals, incidentals) = $20/day x 43 x 2 = $1,720. Lodging for 40 students and 3 instructors = 21 rooms at approximately $152/per room x 2 nights = $6,410. Total = $12,000

Professional development –CTAE conference, Atlanta – Registration of $295 x 3 faculty = $885. Hotel $185 x 3 x 2 nights = $1,110. Mileage to Atlanta, 375 mi roundtrip x 50 cents/mile x 2 = $345. Per diem (meals, parking, incidentals) = $60/day x 3 x 2 = $360. Total = $2,700.

YEAR THREE: Total = $17,700
TSA Competition, Perry, Georgia – Registration = $90 x 63 = $5,670. Per diem (meals, incidentals) = $20/day x 43 x 2 = $2,520. Lodging for 40 students and 3 instructors = 31 rooms at approximately $110/per room x 2 nights = $6,810. Total = $15,000

Professional development – CTAE conference, Atlanta – Registration of $295 x 3 faculty = $885. Hotel $185 x 3 x 2 nights = $1,110. Mileage to Atlanta, 375 mi roundtrip x 50 cents/mile x 2 = $345. Per diem (meals, parking, incidentals) = $60/day x 3 x 2 = $360. Total = $2,700.

D. EQUIPMENT: $365,338 REQUESTED INNOVATION FUND

The high percentage (38 percent) of equipment costs in the budget proposal is requested to provide state-of-the-art, industry-like settings for students that will provide real-world training and experience.

YEAR ONE: Total = $157,479
10 Electronics Training Systems = $79,710

2 Electronics Project Kits = $7,500
1 Mechanical Training System = $44,123. System includes bearings, couplings, chain drive, belt drive and gear drive tools
1 Process Control Training Station = $20,296
5 Digital Meter Kits = $250 x 5 = $1,250
2 Process Meters/Calibrators = $800 x 2 = $1,600
1 Projector/Promethean board for classroom = $3,000.

YEAR TWO: Total = $146,174
1 Electronic Project Kit = $3,750
1 Hydraulic Training System = $19,837
1 Pneumatic Training System = $31,895
1 Motor Controls Training System = $32,519
1 Programmable Logic Control Training System = $40,000
1 Robotics Training System = $18,173

YEAR THREE: Total = $61,685
10 Electronics Microprocessor Training System = $22,290
2 Electronics Project Kit = $7,500
1 Pneumatic Training System = $31,895

E. SUPPLIES: $63,000 REQUESTED INNOVATION FUND

YEAR ONE: Total = $15,000
Classroom Supplies, $200 x 20 students = $4,000
Summer Engineering Camp Supplies for Students, Instructors, $175 x 20 students = $3,500
Laptops for GAPS training = $750 x 10 students = $7,500
Total = $15,000

YEAR TWO: Total = $21,500
Office and Instructional Supplies = $1,500
Classroom Supplies, $200 x 40 students = $8,000
Summer Engineering Camp Supplies for Students, Instructors, $112.50 x 40 students = $4,500
Laptops for GAPS training = $750 x 10 new students = $7,500
Total = $21,500

YEAR THREE: Total = $26,500
Office and Instructional Supplies = $1,500
Classroom Supplies, $200 x 60 students = $12,000
Summer Engineering Camp Supplies for Students, Instructors, approximately $92 x 60 students = $5,500
Laptops for GAPS training = $750 x 10 new students = $7,500
Total = $26,500

F. CONTRACTUAL: REQUESTED INNOVATION FUND $131,634

YEAR ONE: Total = $40,878
Moultrie Technical College Instructional Support
Books, fees, tuition for 5 non-HOPE eligible students = $1,890 x 5 = $9,450

Moultrie Technical College Administrative Support
Vice President of Economic Development will serve as college program director, establish intern sites, coordinate curriculum, admissions and graduation = 0.10 FTE of $101,472 annual salary = $10,147. 0.10 FTE of $37,819 annual benefits = $3,781. Total = $13,928.

Evaluation
Contract with Sharpe Solutions LLC for external evaluator to write evaluation plan, assist in data collection, conduct pre/post assessment of participant progress/satisfaction/skill acquisition, and follow up with participants and employers for satisfaction. Prepare annual outcomes evaluation report. Conduct focus groups with participants to provide input into continuous program improvement.
$80/hr x approximately 18 hr/mo x 12 mo = $17,500

YEAR TWO: Total =$45,378
Moultrie Technical College Instructional Support
Books, fees, tuition for 5 students not eligible for HOPE = $1,890 x 5 = $9,450

Moultrie Technical College Administrative Support
Vice President of Economic Development will serve as college program director, establish intern sites, coordinate curriculum, admissions and graduation = 0.10 FTE of $101,472 annual salary = $10,147. 0.10 FTE of $37,819 annual benefits = $3,781. Total = $13,928.

Evaluation
Contract with Sharpe Solutions LLC for external evaluator to assist in data collection, conduct pre/post assessment of participant progress/satisfaction/skill acquisition, and follow up with participants and employers for satisfaction. Prepare annual outcomes evaluation report. Conduct focus groups with participants to provide input into continuous program improvement
$80/hr x approximately 23 hr/mo x 12 mo = $22,000

YEAR THREE: Total = $45,378
Moultrie Technical College Instructional Support
Books, fees, tuition for 5 non-HOPE eligible students = $1,890 x 5 = $9,450

Moultrie Technical College Administrative Support
Vice President of Economic Development will serve as college program director, establish intern sites, coordinate curriculum, admissions and graduation = 0.10 FTE of $101,472 annual salary = $10,147. 0.10 FTE of $37,819 annual benefits = $3,781. Total = $13,928.

Evaluation
Contract with Sharpe Solutions LLC for external evaluator to assist in data collection, conduct pre/post assessment of participant progress/satisfaction/skill acquisition, and follow up with participants and employers for satisfaction. Prepare annual outcomes evaluation report. Conduct focus groups with participants to provide input into continuous program improvement
$80/hr x approximately 23 hr/mo x 12 mo = $22,000

G. OTHER: $113,855 REQUESTED INNOVATION FUND

YEAR ONE: Total = $20,620
Lease of modular building for instructional space
1 24'x60' Classroom = $900 x 12 mo = $10,800
2 OSHA Stairs- Galvalume 30" to 36" = $210 x 12 mo =$2,520
1 Ramp – Galvalume 12-14' Straight = $275 x 12 mo = $3,300
Total = $16,620

Delivery of modular building
Delivery = $350
Building set-up = $2,800

Skirting Delivery = $850
Total = $4,000

YEAR TWO: Total = $16,620
Lease of modular building for instructional space
1 24'x60' Classroom = $900 x 12 mo = $10,800
2 OSHA Stairs- Galvalume 30" to 36" = $210 x 12 mo =$2,520
1 Ramp – Galvalume 12-14' Straight = $275 x 12 mo = $3,300
Total = $16,620

YEAR THREE: Total = $76,615
Lease of modular building for instructional space
1 24'x60' Classroom = $900 x 9 mo = $8,100
2 OSHA Stairs- Galvalume 30" to 36" = $210 x 9 mo =$1,890
1 Ramp – Galvalume 12-14' Straight = $275 x 9 mo = $2,475
Total = $12,465

Return delivery of modular building for instructional space
Return delivery = $350
Dismantle of building = $2,000
Dismantle = $600
Total = $2,950

Apprenticeship Stipends
20 students x minimum wage $8.50 x 2 hours per day x 180 days = $61,200

MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding (MOU) is entered into by and between the Governor's Office of Planning and Budget (OPB) and Tift County Mechatronics Partnership. The purpose of this agreement is to establish a framework of collaboration, as well as articulate specific roles and responsibilities in support of the State in its implementation of approved Innovation Fund projects.

I. SCOPE OF WORK

Exhibit 1, the Preliminary Scope of Work, indicates the work that the Partnership is agreeing to implement.

II. PROJECT ADMINISTRATION

A. PARTNERSHIP RESPONSIBILITIES

The Partnership agrees to:

1) Implement the plan as identified in Exhibit I of this agreement;
2) Actively participate in all relevant convenings, communities of practice, or other practice-sharing events that are organized or sponsored by OPB, the Georgia Department of Education, the Governor's Office of Student Achievement and the US Department of Education;
3) Post to any website specified by the State in a timely manner, all non-proprietary products and lessons learned using funds associated with the Innovation Fund;
4) Participate, as requested, in any evaluations of this grant conducted by the State or agency conducting business on behalf of the State;
5) Be responsive to State requests for information including the status of the project, project implementation, outcomes, and any problems anticipated or encountered; and
6) Participate in meetings and telephone conferences with the State to discuss (a) progress of the project, (b) potential dissemination of resulting non-proprietary products and lessons learned, (c) plans for subsequent years of the Innovation Fund grant period, and (d) other matters related to the Innovation Fund grant and associated plans.

B. STATE RESPONSIBILITIES

The State agrees to:

1) Timely distribute the Partnership's grant during the course of the project period;
2) Provide feedback on the Partnership's status updates, annual reports, any interim reports, and projects plans and products; and
3) Identify sources of technical assistance for the project.

C. JOINT RESPONSIBILITIES

1) OPB and the Partnership will each appoint a key contact person for the Innovation Fund grant.
2) These key contacts from OPB and the Partnership will maintain frequent communication to facilitate cooperation under this MOU.
3) State and Partnership grant personnel will work together to determine appropriate timelines for project updates and status reports throughout the grant period.
4) State and Partnership grant personnel will negotiate in good faith to continue to achieve the overall goals of the Innovation Fund.

D. STATE RECOURSE FOR PARTNERSHIP NON-PERFORMANCE

If OPB determines that the Partnership is not meeting its goals, timelines, budget, or annual targets or is not fulfilling other applicable requirements, OPB will take appropriate enforcement action, which could include a collaborative process between OPB and the Partnership, or any of the enforcement measures that are detailed in 34 CFR section 80.43 including putting the Partnership on reimbursement payment status, temporarily withholding funds, or disallowing costs.

III. ASSURANCES

The Partnership hereby certifies and represents that it:

1) Has all requisite power and authority to execute this MOU;
2) Agrees to implement the work indicated in Exhibit I, if funded;
3) Will comply with all terms of the grant and all applicable Federal and State laws and regulations, including laws and regulations applicable to the Race to the Top program and the applicable provisions of EDGAR (34 CFR Parts 74,75, 77, 79, 80, 81, 82, 84, 85, 86, 97, 98 and 99).

IV. MODIFICATIONS

This Memorandum of Understanding may be amended only by written agreement signed by each of the parties involved.

V. DURATION/TERMINATION

This Memorandum of Understanding shall be effective, beginning with the date of the last signature hereon and, if a grant is received, ending upon the expiration of the grant project period, or upon mutual agreement of the parties, whichever occurs first.

VI. SIGNATURES

Partnership Executive Official – required:

Patrick Atwater

Signature/Date

Patrick Atwater, Superintendent, Tift County School System

Print Name/Title

Partnership Member

Partnership Member – Moultrie Technical College:

Tina K. Anderson

Signature/Date

Dr. Tina Anderson, President, Moultrie Technical College
Print Name/Title

Partnership Member: Heatcraft

Signature/Date

Mike McDaniel

Print Name/Title

Partnership Member: Tifton/Tift County Chamber of Commerce

Signature/Date

Brian Marlowe / President
Print Name/Title

Partnership Member: Tift Regional Medical Center

Ellen S Eaton 10/27/2011
Signature/Date

Ellen Eaton - HR Administrator
Print Name/Title

Partnership Member: Conagra

David E. Taylor
Signature/Date

DAVID E. TAYLOR PLANT MANAGER
Print Name/Title

Governor's Office of Planning and Budget – required:

Signature/Date

Print Name/Title

ASSURANCES

The Applicant hereby assures and certifies compliance with all federal statutes, regulations, policies, guidelines and requirements, including OMB Circulars No. A-21, A-87, A-110, A-122, A-133; E.O. 12372 and Uniform Administrative Requirements for Grants and Cooperative Agreements 28 CFR, Part 66, Common rule, that govern the application, acceptance and use of federal funds for this federally-assisted project.
Also the Applicant assures and certifies that:

1. It possesses legal authority to apply for the grant; that a resolution, motion or similar action has been duly adopted or passed as an official act of the applicant's governing body, authorizing the filing of the application, including all understandings and assurances contained therein, and directing and authorizing the person identified as the official representative of the applicant to act in connection with the application and to provide such additional information
2. It will comply with requirements of the provisions of the Uniform Relocation Assistance and Real Property Acquisitions Act of 1970 (P.L. 91-646) which provides for fair and equitable treatment of persons displaced as a result of federal and federally - assisted programs.
3. It will comply with provisions of federal law which limit certain political activities of employees of a State or local unit of government whose principal employment is in connection with an activity financed in whole or in part by federal grants. (5 USC 1501, et seq.)
4. It will comply with the minimum wage and maximum hours provisions of the Federal Fair Labor Standards Act if applicable.
5. It will establish safeguards to prohibit employees from using their positions for a purpose that is or gives the appearance of being motivated by a desire for private gain for themselves or others, particularly those with whom they have family, business, or other ties.
6. It will give the sponsoring agency or the Comptroller General, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the grant.
7. It will comply with all requirements imposed by the federal sponsoring agency concerning special requirements of law, program requirements, and other administrative requirements.
8. It will insure that the facilities under its ownership, lease or supervision which shall be utilized in the accomplishment of the project are not listed on the Environmental Protection Agency's (EPA) list of Violating Facilities and that it will notify the federal grantor agency of the receipt of any communication from the Director of the EPA Office of Federal Activities indicating that a facility to be used in the project is under consideration for listing by the EPA.
9. It will comply with the flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973, Public Law 93-234, 87 Stat. 975, approved December 31, 1976, Section 102(a) requires, on and after March 2, 1975, the purchase of flood insurance in communities where such insurance is available as a condition for the receipt of any federal financial assistance for construction or acquisition purposes for use in any area that has been identified by the Secretary of the Department of Housing and Urban Development as an area having special flood hazards. The phrase "federal financial assistance" includes any form of loan, grant, guaranty, insurance payment, rebate, subsidy, disaster assistance loan or grant, or any other form of direct or indirect federal assistance.
10. It will assist the federal grantor agency in its compliance with Section 106 of the National Historic Preservation Act of 1966 as amended (16 USC 470), Executive Order 11593, and the Archeological and Historical Preservation Act of 1966 (16 USC 569 a-1 et seq.) by (a) consulting with the State Historic Preservation Officer on the conduct of investigations, as necessary, to identify properties

listed in or eligible for inclusion in the National Register of Historic Places that are subject to adverse effects (see 36 CFR Part 800.8) by the activity, and notifying the federal grantor agency of the existence of any such properties, and by (b) complying with all requirements established by the federal grantor agency to avoid or mitigate adverse effects upon such properties.

11. It will comply, and assure the compliance of all its sub-grantees and contractors, with the applicable provisions of Title I of the Omnibus Crime Control and Safe Streets Act of 1968, as amended, the Juvenile Justice and Delinquency Prevention Act, or the Victims of Crime Act, as appropriate; the provisions of the current edition of the Office of Justice Programs Financial and Administrative Guide for Grants, M7100.1; and all other applicable federal laws, orders, circulars, or regulations.
12. It will comply with the provisions of 28 CFR applicable to grants and cooperative agreements including Part 18, Administrative Review Procedure; Part 20, Criminal Justice Information Systems; Part 22, Confidentiality of Identifiable Research and Statistical Information; Part 23, Criminal Intelligence Systems Operating Policies; Part 30, Intergovernmental Review of Department of Justice Programs and Activities; Part 42, Nondiscrimination/Equal Employment Opportunity Policies and Procedures; Part 61, Procedures for Implementing the National Environmental Policy Act; Part 63, Floodplain Management and Wetland Protection Procedures; and federal laws or regulations applicable to Federal Assistance Programs.
13. It will comply, and all its contractors will comply, with the nondiscrimination requirements of the Omnibus Crime Control and Safe Streets Act of 1968, as amended, 42 USC 3789(d), or Victims of Crime Act (as appropriate); Title VI of the Civil Rights Act of 1964, as amended; Section 504 of the Rehabilitation Act of 1973, as amended; Subtitle A, Title II of the Americans with Disabilities Act (ADA) (1990); Title IX of the Education Amendments of 1972; the Age Discrimination Act of 1975; Department of Justice Non-Discrimination Regulations, 28 CFR Part 42, Subparts C, D, E, and G; and Department of Justice regulations on disability discrimination, 28 CFR Part 35 and Part 39.
14. In the event a federal or state court or federal or state administrative agency makes a finding of discrimination after a due process hearing on the grounds of race, color, religion, national origin, sex, or disability against a recipient of funds, the recipient will forward a copy of the finding to the Office for Civil Rights, Office of Justice Programs.
15. It will provide an Equal Employment Opportunity Program if required to maintain one, where the application is for $500,000 or more.
16. It will comply with the provisions of the Coastal Barrier Resources Act (P.L. 97-348) dated October 19, 1982 (16 USC 3501 et seq.) which prohibits the expenditure of most new federal funds within the units of the Coastal Barrier Resources System.
17. It will comply will all ARRA requirements. All funds must be spent with an unprecedented level of transparency and accountability. Accordingly, recipients of ARRA funds must maintain accurate, complete, and reliable documentation of all ARRA expenditures.

Authorizing Official:

Patrick Atwark Superintendent 10-27-11

Signature and Title Date

NON-SUPPLANTING CERTIFICATION

Regulations require certification to the effect that grant funds will not be used to increase state or local funds that would, in the absence of such grant aid, be made available for the purpose of this grant program.

CERTIFICATION:

I certify that grant funds will not be used to supplant state or local funds that would otherwise be available for implementation of this grant program.

I further certify that the program proposed in the grant application meets all the requirements of the applicable Race to the Top Innovation Fund Request for Proposal; that all the information presented is correct and that the applicant will comply with the provisions of the Governor's Office of Planning and Budget, all applicable federal and state laws, and the above mentioned certification should a grant be awarded.

Authorizing Official:

Patrick Atwell

Signature

Superintendent

10-27-11

Title Date

IMMIGRATION AND SECURITY FORM

A. In order to insure compliance with the Immigration Reform and Control Act of 1986 (IRCA), D.L. 99-603 and the Georgia Security and Immigration Compliance Act OCGA 13-10-90 et.seq., Contractor must initial one of the sections below:

Contractor has 500 or more employees and Contractor warrants that Contractor has complied with the Immigration Reform and Control Act of 1986 (IRCA), D.L. 99-603 and the Georgia Security and Immigration Compliance Act by registering at https://www.vis-dhs.com/EmployerRegistration and verifying information of all new employees; and by executing any affidavits required by the rules and regulations issued by the Georgia Department of Labor set forth at Rule 300-10-1-.01 et.seq. Contractor has 100-499 employees and Contractor warrants that no later than July 1, 2008, Contractor will register at https://www.visdhs.com/EmployerRegistration to verify information of all new employees in order to comply with the Immigration Reform and Control Act of 1986 (IRCA), D.L. 99-603 and the Georgia Security and Immigration Compliance Act; and by executing any affidavits required by the rules and regulations issued by the Georgia Department of Labor set forth at Rule 300-10-1-.01 et.seq. Contractor has 99 or fewer employees and Contractor warrants that no later than July 1, 2009, Contractor will register at https://www.visdhs.com/EmployerRegistration to verify information of all new employees in order to comply with the Immigration Reform and Control Act of 1986 (IRCA), D.L. 99-603 and the Georgia Security and Immigration Compliance Act; and by executing any affidavits required by the rules and regulations issued by the Georgia Department of Labor set forth at Rule 300-10-1-.01 et.seq.

B. Contractor warrants that Contractor has included a similar provision in all written agreements with any subcontractors engaged to perform site under this Contract.

Authorizing Official:

Patrick Atwater ,Superintendent, 10-27-11

Signature and Title Date

CERTIFICATION REGARDING LOBBYING (ED 80-0013)

Certification for Contracts, Grants, Loans and Cooperative Agreements.

The undersigned certifies, to the best of his or her knowledge and belief, that:

1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal Loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan or cooperative agreement.

2) If any funds other Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loam or cooperative agreement, the undersigned shall complete and submit Standard Form – LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.

3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Statement for Loan Guarantees and Loan Insurance.

The undersigned states, to the best of his or her knowledge and belief, that:

If any funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee or any agency, a member of Congress, an officer or employee of Congress or an employee of a Member of Congress in connection with this commitment providing for the United States to insure or guarantee a loan, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions. Submission of this statement is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required statement shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Authorizing Official:

Patrick Atwater Superintendent 10-27-11

Signature and Title Date

OTHER CERTIFICATIONS

Regulations require certification to the effect that grant funds will not be used to increase state or local funds that would, in the absence of such grant aid, be made available for the purpose of this grant program.

1. Any person associated with the program that has reasonable cause to believe that a child has been or is being abused, shall be required to report or cause report to be made with regard to the abuse as provided in O.C.G.A. 19-7-5.

2. Background investigations (Georgia Crime Information Center) are required on all persons with direct contact with children and youth. It is left to the discretion of the Partnership to determine the methodology for completing these investigations.

3. Establish/enforce an Internet Security Policy when minor participants and/or staff have online access (supervised or unsupervised). This includes any technology provided by PLC funding and technology used by participants.

4. The grantee agrees to comply with Public Law 103-227, also known as the Pro-Children Act of 1994, which requires that smoking not be permitted in any portion of any indoor facility owed or leased or contracted for by the grantee and used routinely or regularly for the provision of healthy care, day care, early childhood development site, education or library site to children under the age of 18. Failure to comply with the provisions of the law may result in the imposition of a civil monetary penalty up to $1,000 for each violation and/or the imposition of an administrative compliance order on the grantee.

Authorizing Official:

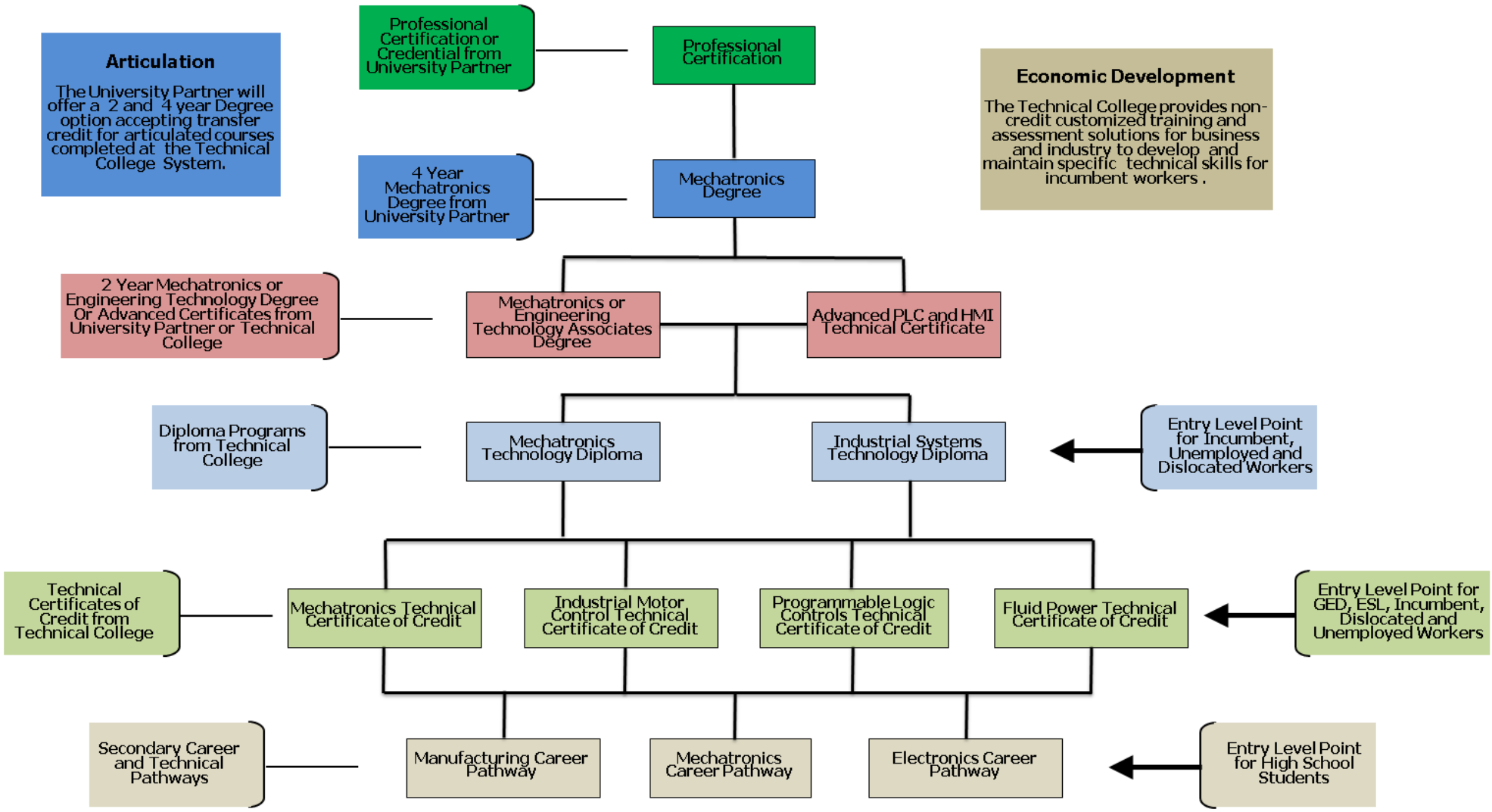
Patrick Atwell

Signature

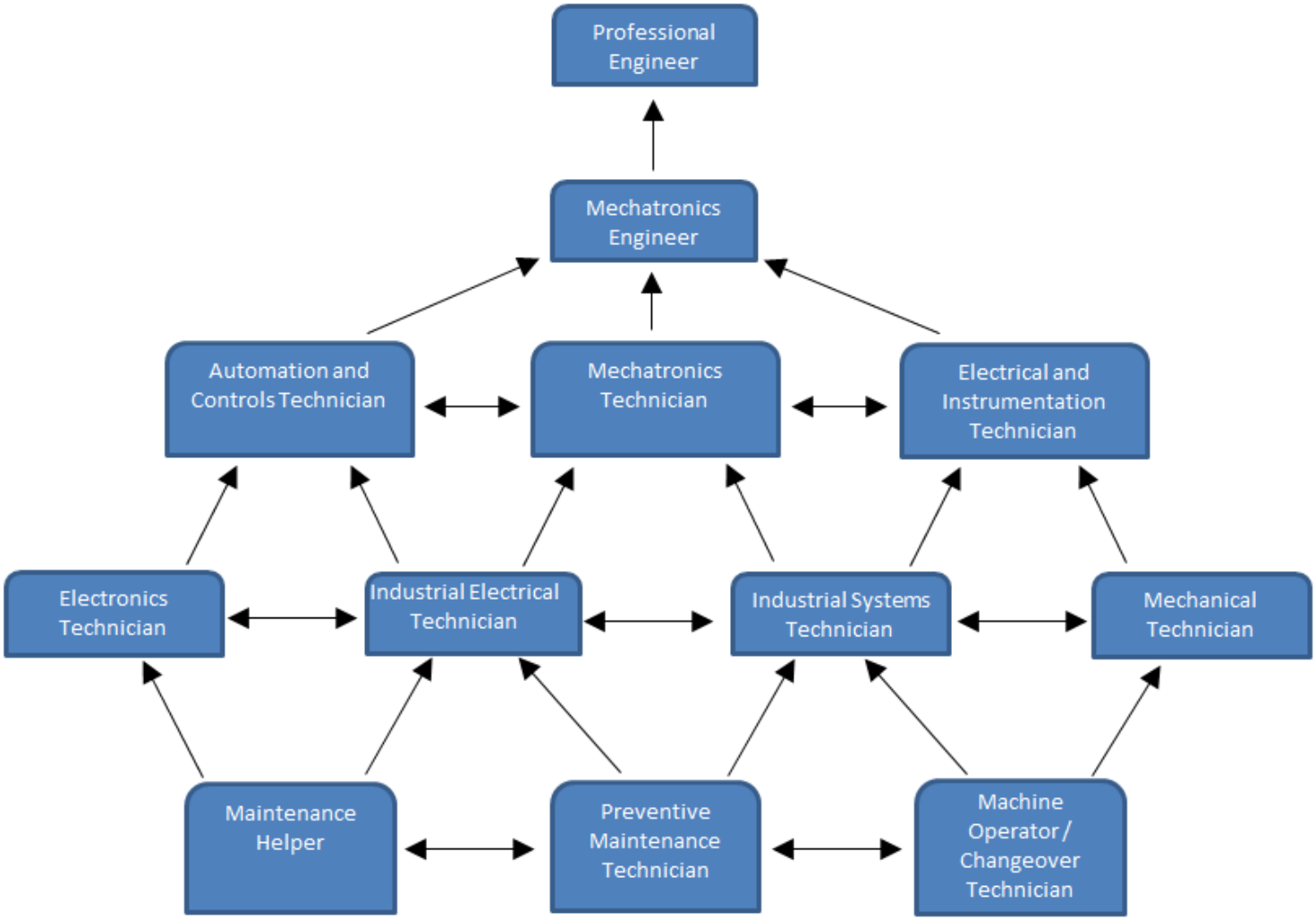
Superintendent — 10-27-11

Title — Date

Mechatronics Career Pathway



Mechatronics Career Lattice



Tiftarea Academy

P.O. Box 10
3144 Highway 41 North
Chula, Georgia 31733
(229) 382-0436 • Fax (229) 382-7742

Diane Womack, Ed.S.
Headmaster

Larry Creamer, Ph.D.
Counselor/Assistant Headmaster

Chip Champion, M.Ed.
High School Principal/Athletic Director

Mike Patrick, B.S.
Middle School Principal

Beth Langston, B.S.
Elementary School Principal

October 6, 2011

Dr. Shawn Utley
Vice President of Economic Development
Moultrie Technical College
52 Tech Drive
Tifton, GA 31794

To Dr. Shawn Utley &
To Whom It May Concern:

Three years ago Moultrie Technical College agreed to offer the Remote Automation Management Project (RAMP) on the Tiftarea Academy Campus. The program utilizes advanced communication technologies such as Streaming Video, Voice Over IP, and Remote Network Computers to create a unique learning and training experience.

The program has been highly effective and enrollment has grown each year. As a matter of fact, a second section could have easily made this school year if scheduling had been available.

The program provides our students with the opportunity to develop knowledge and skills in Electronics, Electrical Controls and Sensors, Programmable Controllers, Mechanical Assembly, and Pneumatics. The students are introduced and become familiar with these and other engineering technologies at an early stage. They are better informed in the engineering fields prior to graduation.

Students enrolled in the RAMP program through MTC as a participant in the dual enrollment program earn both dual high school and college credit at the same time. The program challenges the students and motivates them to achieve as a participant in this unique opportunity.

The Tiftarea Academy program is greatly enhanced by MTC programs on our campus. The RAMP program provides learning experiences that would otherwise be impossible for us to provide. The addition of the RAMP program greatly enhances the academic transcript of the participants. Colleges and Universities are impressed with the students' participation. It simply sets them apart from other applicants.

Tiftarea faculty, staff, students, and parents are impressed with the quality of this educational opportunity. It is one of the best programs at our school. We are indeed a better school because of the excellence of the MTC programs available to our students.

Sincerely,

Larry Creamer

Larry Creamer, PhD
Assistant Head Master/Counselor

October 5, 2011

Aaron Estes
145 Hawthorn Lane
Ocilla, GA 31774

To Whom It May Concern,

As a senior at Tiftarea Academy, I participated in Moultrie Technical College's Remote Automation Management Project (RAMP) Certificate program. I am writing to you in support of the Tift County School Systems application for Race to the Top Innovation Funds. The RAMP program provides students a head start into the technology and engineering career path. Career opportunities exist in many places ranging from a hospital emergency room to high tech manufacturing.

The skills that I learned while taking RAMP classes provided insight to the opportunities and careers available in the engineering field. Through RAMP we were introduced to technologies such as electronics, robotics, fluid power and automation. Previously, this would not have been possible as there were no technology or engineering classes available at Tiftarea prior to RAMP. This program was our sole source for technology training during our high school years.

Presently a 2nd year pre-medical student at Berry College, I have related back to skills gained via RAMP during several of my physics and chemistry classes. The courses not only provided an insight to technology, but also introduced logical thinking skills that help in many other areas. Although I chose to seek a medical career, this program was extremely beneficial to me as well as other students at this level. I hope that any future funding for continuation or expansion of RAMP will be granted.

Sincerely,

Mitchell County High School
Robert Adams, Principal
1000 Newton Road * Camilla, GA 31765
229-336-0970

Sherrea Williams
1000 Newton Road
Mitchell County High School
Camilla, GA 31730
October 5, 2011

To Whom It May Concern:

As a student of Mitchell County High School, I was allowed to participate in the RAMP program provided by Moultrie Technical College. This program has introduced me to new technologies being used in manufacturing and engineering. Through this program I was provided instructions covering electronics, programmable controllers and fluid power systems as it relates to manufacturing machinery.

I think the part that I enjoy the most about the RAMP course is that it allowed me to take the information that I learned in my high school math and science classes and apply them to real world skills. I must admit at first I thought that this was going to be a difficult course, but as I begin to proceed with the course and with the help of my assiduous instructor, I realize it's a course that would help me throughout life.

My high school did not have an engineering program prior to MTC offering RAMP classes. The RAMP classes have allowed me the opportunity to learn about hydraulics, pneumatics,electronics and robotics while in high school has made me aware of the technology and opportunities available in manufacturing. I appreciate the opportunity to participate in this program and fully support any future activities and funding to continue RAMP at Mitchell County High.

Sincerely,

Sherrea Williams

Sherrea Williams

229-238-2191

To whom it may concern:

My name is William Howell and I am a senior at Tiftarea Academy in Chula, Georgia. Last year during my junior year I had the privilege of taking the RAMP class through joint enrollment with Moultrie Technical College. Taking this class was a wonderful experience. As a student in the class I learned all about electricity, voltage, circuits, and pneumatics. This is a different aspect in that not many high school students are given the opportunity to learn how many of the every day simple items we use are put to use. We learned as a class how assembly lines, traffic lights, and even how automated doors are programmed and function. I also enjoyed our instructor George Griffin. He is an excellent teacher, and very knowledgeable of the RAMP program. I would highly recommend this class to all other high school students.

Sincerely,

William Howell

William Howell