

July 25, 2007

**MEMORANDUM**

**To:** Members, Advisory Committee on Academic Programs

**From:** Dr. Gail M. Morrison, Director of Academic Affairs and Licensing

**Report on Institutional Acceptance of Course Credits for Project Lead the Way  
(PLTW)**

One of the benefits of the Education and Economic Development Act of 2005 (EEDA) has been the increased attention given to programs that serve to ease the transition from high school to college, especially those programs which allow students to earn college credit in high school. As a result of that attention, institutions have recognized the need to examine policies on credit awarded, set institutional policies based on program content, and make those policies freely available to the public in order that high school students and their parents will be able to make informed decisions about courses taken. Project Lead The Way (PLTW) is one of the existing programs that has received additional attention through the EEDA.

According to the Southern Regional Education Board, which has been a strong advocate for PLTW since its inception, PLTW is “a not-for-profit organization that promotes pre-engineering courses for middle grades and high school students. PLTW forms partnerships with public schools, higher education institutions and the private sector to increase the quantity and quality of engineers and engineering technologists graduating from the educational system.”

The PLTW programs of interest in this document are those in the high schools which may lead to credit for college courses. The PLTW website describes the High School Program as “a four year sequence of courses which, when combined with traditional mathematics and science courses in high school, introduces students to the scope, rigor and discipline of engineering prior to entering college.” (<http://www.pltw.org/curriculum/hs-engineering.html>) The high school courses available through PLTW have two significant attributes which they share with both the Advanced Placement (AP) and the International Baccalaureate (IB) programs—they are taught to a

standard national curriculum and they have a standardized national exam as an end-of-course measure of learning.

The subject of PLTW course acceptance by the state's institutions of higher education first came before the EEDA Articulation, Dual Enrollment, High School Graduation and Postsecondary Education Alignment Committee (hereinafter called the Committee) in February 2006. At that meeting it was agreed that institutions in the state having either engineering or engineering technology programs would assess their internal policy on PLTW course acceptance and present to the committee at a future meeting a detailed description of course credit accepted and requirements for acceptance. Four of the state's senior institutions and 14 technical colleges offer relevant programs of study. One of the senior institutions, South Carolina State University, is unique in the state in that it is a senior institution offering an engineering technology degree.

Coursework for PLTW falls into three categories: Foundation courses taken by all participants; Specialization courses, in which a student chooses one of three courses; and a Capstone course taken by all participants. The PLTW courses available are:

#### Foundation Courses

- Introduction to Engineering Design
- Principles of Engineering
- Digital Electronics

#### Specialization Courses:

- Aerospace Engineering
- Biotechnical Engineering
- Civil Engineering and Architecture
- Computer Integrated Manufacturing

#### Capstone Course:

- Engineering Design and Development

Charts showing the PLTW courses for which credit is awarded, the college courses for which that credit applies, and the requirements that a student must meet to receive credit are presented below. The information in these charts will be posted on the Commission's website and on the websites of the institutions offering engineering or engineering technology programs and/or courses.

**Project Lead the Way (PLTW) College Course Credit Chart  
For Credit Awarded in Four-year Engineering Programs**

	<b>Citadel</b>	<b>Clemson</b>	<b>USC</b>
<b>Courses</b>			
<b>PLTW Principles of Engineering</b>			
Credit given for  <i>if</i> PLTW Course Grade at least <i>and</i> PLTW college credit exam at least  Other	Engineering Fundamental (ELEC 104) 1 Credit Hour <b>or</b> Introduction to Civil and Environmental Engineering (Civl 100) 2 Credit Hours  <i>if</i> B <i>and</i> 70%	Engineering Disciplines and Skills (CES 102) 2 Credit Hours  <i>if</i> B <i>and</i> 70%  and Student must also make a "B" and score at least 70% on the college credit exam on any other PLTW course	Principles of Engineering (ENGR 101) 3 Credit Hours  <i>if</i> 85% <i>and</i> 70% <i>and</i> (At Least) 3.0 GPA or 1100 SAT or 110 PSAT
<b>PLTW Digital Electronics</b>			
Credit given for  <i>if</i> PLTW Course Grade at least <i>and</i> PLTW college credit exam at least	None	None	Intro to Electrical Engineering (ELCT 101) 3 Credit Hours  <i>if</i> 85% <i>and</i> 70%
<b>PLTW Intro to Engineering Design</b>			
Credit given for  <i>if</i> PLTW Course Grade at least <i>and</i> PLTW college credit exam at least	None	None	Introduction to Engineering Graphics and Visualization (EMCH 111) 3 Credit Hours  <i>if</i> 85% <i>and</i> 70%
<b>Tuition</b>	Tuition not charged for course credit.	Tuition not charged for course credit.	\$66 per credit hour

**Project Lead the Way (PLTW) College Course Credit Chart**  
**For Credit Awarded in Four-year Engineering Technology Program**

	<b>SCSU</b>
<b>Courses</b>	
PLTW Principles of Engineering	
Credit given for <i>if</i> PLTW Course Grade at least <i>and</i> PLTW college credit exam at least Other	Introduction to Engineering Technology (ET 170) 3 Credit Hours <i>if</i> B <i>and</i> 70% <i>and</i> (At Least) 3.0 GPA
PLTW Digital Electronics	
Credit given for <i>if</i> PLTW Course Grade at least <i>and</i> PLTW college credit exam at least	None
PLTW Intro to Engineering Design	
Credit given for <i>if</i> PLTW Course Grade at least <i>and</i> PLTW college credit exam at least	None
<b>Tuition</b>	Tuition not charged for course credit.

**Aiken Tech - Midlands Tech**  
**Project Lead the Way (PLTW) College Course Credit Chart**  
**For Credit Awarded in Two-year Engineering Technology Programs**

	Aiken Technical College	Central Carolina Technical College	Denmark Technical College	Florence Darlington Technical College	Greenville Technical College	Horry Georgetown Technical College	Midlands Technical College
<b>Courses</b>							
PLTW Principles of Engineering							
Credit given for	None	None	None	None	EGR 269- Engineering Disciplines and Skills	None	None
<i>if</i>					<i>if</i>		
PLTW Course Grade at least					B		
<b>and</b>					<b>and</b>		
PLTW college credit exam at least					71%		
Other					Enroll at GTC within 12 Months of HS grad		
PLTW Digital Electronics							
Credit given for	EET 145 - Digital Circuits	None	None	EET 145, Digital Circuits	EET 145 - Digital Circuits	EET 145 Digital Circuits	EET 103
<i>if</i>	<i>if</i>			<i>if</i>	<i>if</i>	<i>if</i>	
PLTW Course Grade at least	B			B	B	B	B
<b>and</b>	<b>and</b>			<b>and</b>	<b>and</b>	<b>and</b>	<b>and</b>
PLTW college credit exam at least	70%			70%	71%	70%	70%
PLTW Intro to Engineering Design							
Credit given for	EGT 152 Fundamentals of CAD	EGT 106	EGT 151 Introduction to Engineering Design	EGT 151 - Introduction to CAD	EGT 151 - Introduction to CAD	EGT 151 Intro to CAD	EGT 106
<i>if</i>	<i>if</i>	<i>if</i>	<i>if</i>	<i>if</i>	<i>if</i>	<i>if</i>	<i>if</i>
PLTW Course Grade at least	B	B	B	B	B	B	B
<b>and</b>	<b>and</b>	<b>and</b>	<b>and</b>	<b>and</b>	<b>and</b>	<b>and</b>	<b>and</b>
PLTW college credit exam at least	70%	70%	70%	70%	71%	70%	70%

**Aiken Tech - Midlands Tech**  
**Project Lead the Way (PLTW) College Course Credit Chart**  
**For Credit Awarded in Two-year Engineering Technology Programs**

	Aiken Technical College	Central Carolina Technical College	Denmark Technical College	Florence Darlington Technical College	Greenville Technical College	Horry Georgetown Technical College	Midlands Technical College
<b>Courses</b>							
<b>PLTW Computer Integrated Manufacturing</b>							
Credit given for  <i>if</i> PLTW Course Grade at least <i>and</i> PLTW college credit exam at least	None	None	None	None	MTT-250 Principles of CNC  <i>if</i> B	None	None
<b>PLTW Civil Eng. &amp; Architecture</b>							
Credit given for  <i>if</i> PLTW Course Grade at least <i>and</i> PLTW college credit exam at least	None	None	None	AET 101 - Building Systems  <i>if</i> B  Will meet Technical Elective Requirement	None	None	None
<b>PLTW Eng. Design and Del</b>							
Credit given for  <i>if</i> PLTW Course Grade at least <i>and</i> PLTW college credit exam at least	None	None	None	None	None	None	None
<b>PLTW Biotechnical Engineering</b>							
Credit given for  <i>if</i> PLTW Course Grade at least <i>and</i> PLTW college credit exam at least	None	None	None	None	None	None	None

**Orangeburg Calhoun Tech - York Tech**  
**Project Lead the Way (PLTW) College Course Credit Chart**  
**For Credit Awarded in Two-year Engineering Technology Programs**

	Orangeburg Calhoun Technical College	Piedmont Technical College	Spartanburg Community College	Technical College of the Lowcountry	TriCounty Technical College	Trident Technical College	York Technical College
Courses							
PLTW Principles of Engineering							
Credit given for	EGR 104 Engineering Technology Foundations	EGR 130 Engineering Technology Applications and Programming	None	EGR-103 Preparation for Engineering Technology 2 credits		ECE 201 - Electrical and Computer Eng Seminar (1 credit) or EGR 282 - Intro to Civil Engineering (2 credits)	None
<i>if</i> PLTW Course Grade at least <b>and</b> PLTW college credit exam at least	<i>if</i> B <b>and</b> 70%	<i>if</i> B		<i>if</i> B <b>and</b> 70%		<i>if</i> B <b>and</b> 71%	
Other						Enroll at Trident Technical College within 12 months following high school	
PLTW Digital Electronics							
Credit given for	EET 103 Introduction to Electronics	EET 149 - Digital Circuits	EET 145 - Digital Electronics	EGT-245 Principles of Parametric CAD 3 credits	EET 145 Digital Circuits	EET 145 - Digital Circuits	EET 145, Digital Circuits
<i>if</i> PLTW Course Grade at least <b>and</b> PLTW college credit exam at least	<i>if</i> B <b>and</b> 70%	<i>if</i> B	<i>if</i> B <b>and</b> 70%	<i>if</i> B <b>and</b> 70%	<i>if</i> B <b>and</b> 70%	<i>if</i> B <b>and</b> 71%	B  70%
PLTW Intro to Engineering Design							
Credit given for	EGT 151 Introduction to CAD	EGT 152 - Fundamentals of CAD	None	None	EGT 110 - Engineering Graphics I	EGT 265 - CAD/CAM Applications (3 credits)	None
<i>if</i> PLTW Course Grade at least <b>and</b> PLTW college credit exam at least	<i>if</i> B <b>and</b> 70%	<i>if</i> B			<i>if</i> B <b>and</b> 70%	<i>if</i> B <b>and</b> 85%	
						Pass a TTC designed practical exam with an an 80% grade and enroll at TTC within 12 months following high school graduation.	

**Orangeburg Calhoun Tech - York Tech**  
**Project Lead the Way (PLTW) College Course Credit Chart**  
**For Credit Awarded in Two-year Engineering Technology Programs**

	Orangeburg Calhoun Technical College	Piedmont Technical College	Spartanburg Community College	Technical College of the Lowcountry	TriCounty Technical College	Trident Technical College	York Technical College
<b>Courses</b>							
<b>PLTW Computer Integrated Manufacturing</b>							
Credit given for  <i>if</i> PLTW Course Grade at least <b>and</b> PLTW college credit exam at least	CIM 241 Automated Manufacturing Equipment  <i>if</i> B <b>and</b> 70%	CIM 131 - Computer Integrated Manufacturing  <i>if</i> B	None	None	None	MTT 250 - Principles of CNC  B <b>and</b> 71%	None
<b>PLTW Civil Eng. &amp; Architecture</b>							
Credit given for  <i>if</i> PLTW Course Grade at least <b>and</b> PLTW college credit exam at least	None	AET 101 - Building Systems  <i>if</i> B	None	None	None	None	None
<b>PLTW Eng. Design and Del</b>							
Credit given for  <i>if</i> PLTW Course Grade at least <b>and</b> PLTW college credit exam at least	None	EGR 184 - Problem Based Integrated Technology  <i>if</i> B  71%	EGT 151 Intro to Engineering Design  <i>if</i> B and 70%	None	None	None	None
<b>PLTW Biotechnical Engineering</b>							
Credit given for  <i>if</i> PLTW Course Grade at least <b>and</b> PLTW college credit exam at least	BIO 125 Biotechnology Explorations  <i>if</i> B <b>and</b> 70%	Will Determine for Fall 2007  <i>if</i> B	None	None	None	None	None