

Illinois Project Lead the Way Course Delivery Options for Federal Perkins and Illinois State CTE Funding Eligibility

- Taught by Technology Education certified teacher (or provisional Tech Ed teacher) with 2000 hours paid work experience in the field;
and
- Part of an ISBE-approved 3-credit program which includes:
 - ✓ 1 credit CRI Foundation of Technology (see www.ilcte.org) OR Illinois Plan (consisting of production, communication, transportation, energy components); **and**
 - ✓ 2 credits of Junior-Senior training level courses, which may include cooperative educational work experience.
 - ✓ Additional orientation level courses may be included in the sequence in addition to the above.

The newly-defined **21.0201 Technology and Pre-Engineering Education CIP** (see option below) provides the broadest and most flexible option for offering Project Lead the Way courses to Illinois high school students as part of an approved CTE program. However, PLTW courses also fit into some other more specialized CIP programs such as Architectural Drafting, Electrical/Electronics Equipment Installation, and Manufacturing Technology/Technician.

See below for ISBE CIP (Classification for Instructional Programs) options for PLTW courses.

21.0201 Technology & Pre-Engineering Education

An instructional program that focuses on the technological concepts, design, processes and systems, such as: the evolution, utilization and significance of technology as related to industry; and its organization, personnel, systems, techniques, resources and products. Includes instruction in technological literacy, basic applied science, specific technologies and their applications, and related methods of research and experimentation.

- (required) 1 credit CRI Foundation of Technology OR Illinois Plan (refer to ISBE or Education for Employment System Director)
- (optional) Orientation level courses, which may included these PLTW courses (1 credit each)
 - Introduction to Engineering Design
 - Principles of Engineering
- (required) 2 credits Training level courses, which may be selected from any of these PLTW courses (1 credit each):
 - Digital Electronics
 - Computer Integrated Manufacturing
 - Civil Engineering and Architecture
 - Biotechnical Engineering
 - Aerospace Engineering
 - Engineering Design and Development
 - (1 credit of cooperative educational work experience is an acceptable Training level course in this sequence also)

15.1303 Architectural Drafting and Architectural CAD/CADD or 48.0101 Drafting and Design Technology/Technician

A program that prepares individuals to apply technical knowledge and skills to develop working drawings and electronic simulations for architectural and related construction projects. Includes instruction in basic construction and structural design, architectural rendering, architectural-aided drafting (CAD), layout and designs, architectural blueprint interpretation, building materials, and basic structural wiring diagramming.

- (required) 1 credit CRI Foundation of Technology OR Illinois Plan (refer to ISBE or Education for Employment System Director)
- (optional) Orientation level courses, which may included this PLTW course (1 credit)
 - Introduction to Engineering Design
 - Principles of Engineering
- (required) 2 credits Training level courses, which may include this PLTW course (1 credit):
 - Civil Engineering and Architecture
 - (1 credit of cooperative educational work experience is an acceptable Training level course in this sequence also)

47.0101 Electrical/Electronics Equipment Installation and Repair, General

A program that generally prepares individuals to apply technical knowledge and skills to operate, maintain, and repair electrical and electronic equipment. Includes instruction in electrical circuitry, simple gearing, linkages and lubrication of machines and appliances, and the use of testing equipment.

- (required) 1 credit CRI Foundation of Technology OR Illinois Plan (refer to ISBE or Education for Employment System Director)
- (required) 2 credits Training level courses, which may include this PLTW course (1 credit):
 - Digital Electronics
 - (1 credit of cooperative educational work experience is an acceptable Training level course in this sequence also)

15.0613 Manufacturing Technology/Technician

48.0500 Precision Metal Working

A program that prepares individuals to apply basic engineering principles and technical skills to the identification and resolution of production problems in the manufacture of products. Includes instruction in machine operations, production line operations, engineering analysis, systems analysis, instrumentation, physical controls, automation, computer-aided manufacturing (CAM), manufacturing planning, quality control, and informational infrastructure.

- (required) 1 credit CRI Foundation of Technology OR Illinois Plan (refer to ISBE or Education for Employment System Director)
- (required) 2 Training level courses, which may include this PLTW course (1 credit):
 - Computer Integrated Manufacturing
 - (1 credit of cooperative educational work experience is an acceptable Training level course in this sequence also)

Illinois State Board of Education / Illinois Project Lead the Way Course Delivery Models

	Teacher Qualifications	Federal Perkins and Illinois CTE Funding Support Eligibility	Student Eligibility (grade level; math pre-requisites)	PLTW Courses*	Course Administrative Structure Options**	College credit/articulation options
CTE Credit Options	<p>Tech Ed certified; <i>or</i></p> <p>Provisional certified with 2000 hours paid work experience in field of teaching;</p> <p>Successful completion of PLTW Summer Training Institute for specific course.</p>	<p>Eligible if taught by Tech Ed certified teacher in an ISBE-approved program.</p> <p>See detail charts for: CIP 21.0201 Technology & Pre-Engineering Education CIP 15.1303 Architectural Drafting CIP 48.0101 Drafting and Design CIP 47.0101 Electrical/Electronics CIP 15.0613 Manufacturing Technology CIP 48.0500 Precision Metal Working</p>	<p>Freshman or above for Illinois Plan course;</p> <p>Junior-Senior for Training level courses;</p> <p>Algebra I or concurrent enrollment to begin PLTW courses; maintain college math and science enrollment each year thereafter (PLTW expectations);</p> <p>Algebra I or concurrent enrollment recommended for Principles of Engineering;</p> <p>Geometry or concurrent enrollment recommended for Intro to Engineering Design;</p> <p>Algebra II or concurrent enrollment recommended for Digital Electronics</p>	<p><i>Approved plan 3-course minimum sequence which includes:</i> <u>CRI Foundation of Technology</u> OR <u>Illinois Plan:</u> PLUS <i>Two training level (Jr-Sr) courses from among PLTW courses as part of an approved plan (see specific CIP lists):</i> -DE Digital Electronics -CEA Civil Eng & Architecture -CIM Computer Integrated Man. -BE Biotechnical Engineering -ASE Aero Aerospace Engineering -EDD Engineering Design & Development -(Optional) Plans may include additional PLTW orientation level courses within an approved CIP sequence: -IED Intro to Eng Design -POE Principles of Engineering</p>	<p><i>A minimum of four courses taught at local High School(s) within a district by Tech Ed certified teachers; and/or</i></p> <p><i>Some courses taught at local High School and some at another cooperating High School or career center by Tech Ed certified teachers (providing access to a total of a minimum of four courses); and/or</i></p> <p><i>Some courses taught at local High School and some at community college or university by Tech-Ed qualified teachers (providing access to a total of a minimum of four courses).</i></p>	<p>If local teachers in PLTW certified school meet community college instructor requirements, potential for dual credit from PLTW colleges</p> <p>PLTW certified school students eligible for testing and transcript tuition payment to RIT, U of Iowa, MSOE, other Affiliates;</p> <p>PLTW certified school students who pass college level exams and have PLTW course credit on HS transcripts are eligible for Bradley University Manufacturing Engineering or Manufacturing Engineering Technology course credit upon acceptance and enrollment in the University.</p> <p>Other options may become available in the future.</p>

*Note that PLTW Certified schools are expected to develop a plan to offer access to at least 4 courses within 4 years. Order of courses may vary, but typically schools offer IED and POE first (in either order), then DE or one or more specialized courses in the third year, followed by EDD in the fourth year.

**Schools are expected to offer at least one course locally and to develop a plan to offer access to at least 4 courses within 4 years, whether within a single high school, or among high schools within a single district, or by a combination of local school and regional programming among cooperating schools, career centers, or colleges offering PLTW courses. Educational agents (such as EFE Systems, etc.) which do not also serve as actual course instructional sites will be recognized separately within Illinois PLTW to acknowledge regional program planning support; however national PLTW no longer uses Lead Education Agency membership category designations.

Illinois State Board of Education / Illinois Project Lead the Way Course Delivery Models

	Teacher Qualifications	Federal Perkins and Illinois CTE Funding Support Eligibility	Student Eligibility (grade level; math pre-requisites)	PLTW Courses*	Course Administrative Structure Options**	College credit/articulation options
Math/Science Elective Credit Options	<p>Math certified /highly qualified teacher (math elective);</p> <p>Science certified/ highly qualified teacher (science elective);</p> <p>Successful completion of PLTW Summer Training Institute for specific course.</p>	NOT eligible	<p>Grades 9-12 or as per local school requirements</p> <p>Algebra I or concurrent enrollment to begin PLTW courses; maintain college math and science enrollment each year thereafter;</p> <p>Algebra I or concurrent enrollment recommended for Principles of Engineering;</p> <p>Geometry or concurrent enrollment recommended for Intro to Engineering Design;</p> <p>Algebra II or concurrent enrollment recommended for Digital Electronics</p>	<p><u>PLTW Foundation courses:</u></p> <ul style="list-style-type: none"> -IED Intro to Eng Design -POE Principles of Engineering -DE Digital Electronics <p><u>Specialized courses</u></p> <ul style="list-style-type: none"> -CEA Civil Eng & Architecture -CIM Computer Integrated Man. -BE Biotechnical Engineering -ASE Aero Aerospace Engineering <p><u>Capstone Course:</u></p> <ul style="list-style-type: none"> -EDD Engineering Design &Development 	<p><i>A minimum of four courses taught at local High School(s) within a district by math/science certified teachers; and/or</i></p> <p><i>Some courses taught at local High School and some at another cooperating High School or career center by math/science certified teachers (providing access to a total of a minimum of four courses); and/or</i></p> <p><i>Some courses taught at local High School and some at community college or university by teachers who are not Tech-Ed qualified (providing access to a total of a minimum of four courses).</i></p>	<p>If local teachers in PLTW certified school meet community college instructor requirements, potential for dual credit from PLTW colleges</p> <p>PLTW certified school students eligible for testing and transcript tuition payment to RIT, U of Iowa, MSOE, other Affiliates;</p> <p>PLTW certified school students who pass college level exams and have PLTW course credit on HS transcripts are eligible for Bradley University Manufacturing Engineering or Manufacturing Engineering Technology course credit upon acceptance and enrollment in the University.</p> <p>Other options may become available in the future.</p> <p>Some schools have approved PLTW courses for honors math/science elective credit.</p>

*Note that PLTW Certified schools are expected to develop a plan to offer access to at least 4 courses within 4 years. Order of courses may vary, but typically schools offer IED and POE first (in either order), then DE or one or more specialized courses in the third year, followed by EDD in the fourth year.

**Schools are expected to offer at least one course locally and to develop a plan to offer access to at least 4 courses within 4 years, whether within a single high school, or among high schools within a single district, or by a combination of local school and regional programming among cooperating schools, career centers, or colleges offering PLTW courses. Educational agents (such as EFE Systems, etc.) which do not also serve as actual course instructional sites will be recognized separately within Illinois PLTW to acknowledge regional program planning support; however national PLTW no longer uses Lead Education Agency membership category designations.

Illinois State Board of Education / Illinois Project Lead the Way Course Delivery Models

	Teacher Qualifications	Federal Perkins and Illinois CTE Funding Support Eligibility	Student Eligibility (grade level; math pre-requisites)	PLTW Courses*	Course Administrative Structure Options**	College credit/articulation options
Hybrid or Combination Options	<p>If teacher is Tech-Ed certified AND math or science certified/highly qualified, school or cooperative program may determine which kind of course credit to be assigned, <i>OR</i> may assign one kind of credit for some students and another for other students;</p> <p>If teachers of some PLTW courses are math or science certified/highly qualified, and if teachers of other PLTW courses are Tech Ed certified, then a school program needs to define course credit accordingly;</p> <p>Successful completion of PLTW Summer Training Institute for specific course</p>	<p>Eligible if taught by Tech Ed certified teacher for students in approved CTE program</p> <p>Eligible if team-taught by Tech Ed certified teacher of record with math or science certified teacher in an approved CTE program</p>	<p>Grades 9-12 as per local requirements for math/science elective credit;</p> <p>Grades 9-12 for CTE orientation level credit reimbursement and Grades 11-12 for CTE training level program credit reimbursement;</p> <p>Algebra I or concurrent enrollment to begin PLTW courses; maintain college math and science enrollment each year thereafter;</p> <p>Algebra I or concurrent enrollment recommended for Principles of Engineering;</p> <p>Geometry or concurrent enrollment recommended for Intro to Engineering Design;</p> <p>Algebra II or concurrent enrollment recommended for Digital Electronics</p>	<p>Follow requirements for whichever type of credit student's program requires.</p> <p><u>PLTW Foundation courses:</u></p> <ul style="list-style-type: none"> -IED Intro to Eng Design -POE Principles of Engineering -DE Digital Electronics <p><u>Specialized courses</u></p> <ul style="list-style-type: none"> -CEA Civil Eng & Architecture -CIM Computer Integrated Man. -BTE Biotechnical Engineering -ASE Aero Aerospace Engineering <p><u>Capstone Course:</u></p> <ul style="list-style-type: none"> -EDD Engineering Design & Development 	<p><i>A minimum of four courses</i> taught at <i>local</i> High School(s) within a district could be math/science electives or Career Tech Ed courses depending upon teacher certification and upon approved program plan status.</p> <p><i>Some</i> courses taught at <i>local</i> High School (typically IED and POE), and <i>some</i> courses offered at other high schools, career centers, or colleges (providing access to a total of a minimum of four courses). Math/science or CTE credit depending upon teacher certification and upon approved program plan status.</p>	<p>If local teachers in PLTW certified school meet community college instructor requirements, potential for dual credit from PLTW colleges</p> <p>PLTW certified school students eligible for testing and transcript tuition payment to RIT, U of Iowa, MSOE, other Affiliates;</p> <p>PLTW certified school students who pass college level exams and have PLTW course credit on HS transcripts are eligible for Bradley University Manufacturing Engineering or Manufacturing Engineering Technology course credit upon acceptance and enrollment in the University.</p> <p>Other options may become available in the future.</p> <p>Some schools have approved PLTW courses for honors math/science elective credit.</p>

*Note that PLTW Certified schools are expected to develop a plan to offer access to at least 4 courses within 4 years. Order of courses may vary, but typically schools offer IED and POE first (in either order), then DE or one or more specialized courses in the third year, followed by EDD in the fourth year.

**Schools are expected to offer at least one course locally and to develop a plan to offer access to at least 4 courses within 4 years, whether within a single high school, or among high schools within a single district, or by a combination of local school and regional programming among cooperating schools, career centers, or colleges offering PLTW courses. Educational agents (such as EFE Systems, etc.) which do not also serve as actual course instructional sites will be recognized separately within Illinois PLTW to acknowledge regional program planning support; however national PLTW no longer uses Lead Education Agency membership category designations.

REVISED March 2007