# **ADVANCE CTE EXCELLENCE IN ACTION AWARD**

**PROGRAM SUMMARY**

Advance CTE is pleased to announce a call for applications for the fifth annual Excellence in Action awards, through which we recognize and honor superior Career Technical Education (CTE) programs of study from across the nation.

**CRITERIA FOR JUDGING**

Selected programs will exemplify excellence in:

* Implementing Career Cluster®-based [programs of study](https://careertech.org/programs-study);
* Maintaining effective employer and business partnerships;
* Demonstrating alignment to rigorous and relevant college- and career-ready expectations;
* Demonstrating a clear progression of knowledge and skills and student transitions across secondary and postsecondary systems;
* Integrating successful career guidance and advisement;
* Integrating high-quality work-based learning experiences;
* Highlighting alignment to workforce and employer needs in the community; and
* Providing concrete data on the program of study’s impact on student achievement and success at both the secondary and postsecondary levels.

**ELIGIBILITY**

* This award is open to any secondary or postsecondary schools or colleges in the United States. Your school or institution may submit one application per [Career Cluster](http://careertech.org/career-clusters);
* The program of study must have at least one full graduating class;
* Your program must be eligible to receive funding from the Carl D. Perkins Career and Technical Education Act;
* Applications that do not include data to demonstrate positive impact on student achievement will not be eligible for consideration.
* If your program has received in an award in the past, you may not apply for that same Career Cluster. However, your school or institution may apply in a different Career Cluster.

**AWARD SUBMISSION REQUIREMENTS**

Complete applications will contain the following:

* A completed application including supplemental materials by the application deadline of **November 15, 2017 at 5 p.m. ET.**
* At least one letter of support from an employer or business partner supporting the program of study; and
* At least one additional letter of support from a partner (education, community or business) of your choosing.
* *Optional:* Supplemental materials including photos, videos, news articles, etc., are welcome but not required.

The application must be submitted using [this form](https://careertech.org/2018-excellence-action-application). The application must be submitted in a Microsoft Word format. Supplemental materials, including the letters of recommendation, must be combined and submitted as **one** PDF document.

*Please note:*

* Submissions should **not** include any personally identifiable student. ANY PHOTOS IN THE SUPPORT MATERIALS HAVE BEEN VETTED
* The application does not have a page limit, however, many questions do have a word limit. Please do not submit responses that go beyond this limit. Also, submissions that do not contain all the required materials (a completed application, two letters of support and supplemental materials in the correct formats) will not be advanced for consideration.

**WINNERS WILL RECEIVE**

* A banner to hang in their school or institution;
* A digital banner to use in email and print materials as they so choose; and
* Travel and one hotel room for one night in Washington, DC for a representative to be recognized at an awards ceremony to be held the week of April 4-6, 2018.

**WINNERS WILL ALSO BE FEATURED IN**

* A national press release, which will be distributed to national media.
* A winner-specific press release to distribute to local media;
* A standalone one-pager;
* A standalone blog on the [Learning that Works blog](http://blog.careertech.org/);
* Representation on the Advance CTE [website](http://www.careertech.org).
* Many past winners have been featured in national conferences, in briefs and reports, on webinars and in the media.

**HOW TO APPLY**

* Fill out the following application.
* Once you have finished, complete [this form](https://careertech.org/2018-excellence-action-application) and upload the following:
* Your full application saved as a Word document (.docx)
* All of your supplemental documents or evidence consolidated as one PDF document.

# **BACKGROUND INFORMATION**

1. Program of study name: Building Construction Technology
2. Point of Contact
 **Name: Sandra Traynor**

**Email Address: straynor@dcts.org**

**Phone Number: 717.652.3170 Extension 7428
Address: 6001 Locust Lane, Harrisburg, PA 17109**

1. Applicant’s School/College: Dauphin County Technical School
2. State: **Pennsylvania**
3. Type of institution (click the box to check)

 [x]  Area technical center

[ ]  Career academy

 [ ]  Comprehensive high school

 [ ]  Community college

 [ ]  Technical college

Other (please specify)

|  |
| --- |
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1. Career Cluster in which your program of study should be considered (Follow this link for a further explanation of each Career Cluster [careertech.org/career-clusters](http://careertech.org/career-clusters)) **(Select only ONE):**

 [ ]  Agriculture, Food & Natural Resources Career Cluster

 [x]  Architecture & Construction Career Cluster

 [ ]  Arts, A/V Technology & Communications Career Cluster

 [ ]  Business Management & Administration Career Cluster

 [ ]  Education & Training Career Cluster

 [ ]  Finance Career Cluster

 [ ]  Government & Public Administration Career Cluster

 [ ]  Health Sciences Career Cluster

 [ ]  Hospitality & Tourism Career Cluster

 [ ]  Human Services Career Cluster

 [ ]  Information Technology Career Cluster

 [ ]  Law, Public Safety, Corrections & Security Career Cluster

 [ ]  Manufacturing Career Cluster

 [ ]  Marketing Career Cluster

 [ ]  Science, Technology, Engineering & Mathematics Career Cluster

 [ ]  Transportation, Distribution & Logistics Career Cluster

1. In three sentences or less, describe your program of study, including the secondary and postsecondary components and how long the program of study has been in place.

**Building Construction Technology (BCT) has been a part of the program offerings since 1970, and it became a Program of Study in 2011. BCT is a part of SOAR (Students Occupationally Academically Ready) through the Pennsylvania Department of Education, Bureau of Career and Technical Education. Students who complete the program articulate 9 college credits with Harrisburg Area Community College: *Introduction to Masonry, Carpentry Fundamentals, and Construction Print Reading.***

1. Please check the geographical and demographic setting for your program of study and describe the geographic and economic conditions of the region served by the school.

 [ ]  Urban

 [ ]  Suburban

 [ ]  Rural

 [x]  Other

**Dauphin County Technical School (DCTS) is a comprehensive career and technical school, grades 9-12, located in Lower Paxton Township, PA, a suburb of Harrisburg, PA. DCTS is well respected in Central Pennsylvania for providing a comprehensive technical education for students in Dauphin County. DCTS is supported by both member and tuition school districts in the County of Dauphin. The member school districts that are governed through the Articles of Agreement include: Halifax, Derry Township, Lower Dauphin, Central Dauphin, Harrisburg, Middletown, and Susquehanna Township. Furthermore, DCTS accepts students from Steelton-Highspire, Millersburg, and Upper Dauphin for tuition.**

**Currently, DCTS has an enrollment of 1100 students. DCTS currently operates on a half day about schedule, where the students spend half day in academic classes and the other half in their program areas.**

**DCTS transformed our program exploration process from clusters to a defined academy rotation for freshman students. DCTS students choose from 26 Career and Technical Programs in seven academy areas: Advanced Manufacturing, Construction, Health Science, IT Academy, Service, Transportation, and Visual Arts and Marketing.**

**DCTS offers College in the High School courses, Dual Enrollment opportunities, and AP classes. All students complete a Career Portfolio and participate in junior mock interviews and community service. We have a robust School to Work program that offers Job Shadowing, Service Learning, and Cooperative Education.**

**We work to have a positive image in our community. Our students and staff have participated in numerous community service projects both locally and nationally. DCTS transformed its Open House into a Middle School Expo, allowing our districts' middle level learners the opportunity to visit programs and meet with teachers. In addition, DCTS opens its doors to all 6th and 8th grade students for tours yearly. In addition, our Vocational Transition Counselor takes student ambassadors to district schools for presentations and panel discussions Future programs are based on needs assessment, data analysis and recommendations from the Workforce Investment Board (WIB) and Local Advisory and Occupational Advisory Committees and the Planning for the Future Committee.**

# **STUDENT POPULATION & DATA**

1. Please describe your program of study’s demographic and outcome data for the most recent academic year(s). It is our strong preference to have data from both secondary and postsecondary levels. If this is not available, please provide an explanation as to why the data from the other learner level is not available. Applications that do not include data to support positive impact on student achievement will not be eligible for consideration. (100 word limit)

**Data for post-secondary enrollment and articulation credits are not available for public access. Data for our secondary students enrolled in Building Construction Technology is provided below.**

**NOTE**: Please specify if and when you are using a percentage with a different denominator (e.g., seniors) than the one listed.

**When completing the data section, please only use percentages and include data that is from your program of study, not the entire school/institution. Additionally, only include data where students are eligible to participate (e.g., only seniors in high school will be eligible for the section asking for percent of seniors who graduated high school, so only seniors should be included in that data; if your work-based learning only occurs within a specific grade level, only include them in your data for that category.)**

|  |  |  |  |
| --- | --- | --- | --- |
| SCHOOL YEAR | 2014-15 | 2015-16 | 2016-17 |
| **SECONDARY-LEVEL DATA** |
| **Total number of students served by your program of study**  | 39 Total StudentsGrades 9-12 | 40 Total Students Grades 9-12 | 48 Students Grades 9-12 |
| % male students  | 90%  | 90% | 83% |
| % female students  | 10% | 10% | 17% |
| % minority students | 38% | 43% | 52% |
| % low-income students  | 46% | 44% | 58% |
| % students with disabilities  | 38% | 53% | 46% |
| % English language learners | 3% | 3% | 6% |
| Other relevant *demographic* data  |  |  |  |
| % of students who earned postsecondary credit (dual enrollment, AP, etc.)  | 56% (Grade 12)9 Seniors | 80% (Grade 12)5 Seniors | 83% (Grade 12)12 Seniors |
| % of students who earned an industry-recognized credential  | 100% (Grade 12)9 Seniors | 100% (Grade 12)5 Seniors | 100% (Grade 12)12 Seniors |
| % of students who participated in work-based learning | 100% (Grade 12)9 Seniors | 100% (Grade 12)5 Seniors | 100% (Grade 12)12 Seniors |
| % of seniors who graduated high school (who were eligible/seniors)  | 100% (Grade 12)9 Seniors | 100% (Grade 12)5 Seniors | 100% (Grade 12)12 Seniors |
| % of graduates who enrolled in postsecondary education (who were eligible/seniors)  | 25%8 Graduates Reporting | 20%5 Graduates Reporting | 0%10 Graduates Reporting |
| % of graduates who entered the workplace and/or military (who were eligible/seniors)  | 75%8 Graduates Reporting | 100%5 Graduates Reporting | 100%10 Graduates Reporting |
| **POSTSECONDARY-LEVEL DATA** |
| **Total number of students served by your program of study**  | Data Not Available | Data Not Available | Data Not Available |
| % male students  | % | % | % |
| % female students  | % | % | % |
| % minority students | % | % | % |
| % low-income students  | % | % | % |
| % students with disabilities  | % | % | % |
| % English language learners | % | % | % |
| Other relevant *demographic* data  |  |  |  |
| % of students who completed postsecondary/earned a degree or certificate (who were eligible)  | % | % | % |
| % of students who earned an industry-recognized credential (who were eligible)  | % | % | % |
| % of graduates who entered the workplace and/or military (who were eligible)  | % | % | % |
| % of graduates who transitioned to further postsecondary education (who were eligible) |  |  |  |

1. Provide links to the source of the above data. If the links are not publicly accessible, please explain the source of the data.
* **Data listed above is gathered from PIMS and our Student Management System, PowerSchool. Neither are available to the public.**
* **Program related post-secondary survey of graduates**
1. How does your school or institution ensure equitable access and outcomes for students with diverse backgrounds? (150 word limit)

**Equitable access with anonymous rating systems for applications for admission to DCTS and to programs are in place.**

**All students entering Dauphin County Technical School are pre-assessed in both Math and Reading and placed in courses accordingly. Assessments are used to pinpoint skill gaps and the school will provide programs to realign students in the areas of concern.**

**DCTS offers direct instruction special education classes in all four core subjects as well as regular education inclusion classes. A resource room serves all students.**

**Instructional Coaches, Paraprofessionals, Guidance Counselors, and Vocational Transition Counselors assist students with academics, CTE classes, career resources, etc.**

1. If applicable, what strategies or technologies do you use to close access gaps? (e.g. integrated digital learning, virtual work based learning.)

**As an example, DCTS has a one-to-one initiative. All students are issued a laptop. Assistance is provided to those students who cannot afford Internet access. In addition, classrooms are equipped with IPads. Students use Google, Schoology, etc.**

**Additionally, if we do not offer a course at DCTS, students may access on-line courses through the Capital Area Intermediate Unit. Utilizing the CAOLA program, students work independently on an online course during a class period within their schedule. Some rigorous coursework will require students to complete assignments outside the school day.**

1. What activities does your school or institution do to recruit elementary, middle, high school students and/or adult learners into the program of study? Please provide examples. (150 word limit)

**DCTS employs a Vocational Transitional Counselor who is dedicated to recruitment. She visits elementary and middle schools in Dauphin County. Additionally, we conduct in-house programs, building tours, and a summer career camp. We have student ambassadors (featuring non-traditional students) representing all programs of study, including BCT, who visit elementary and middle schools. The CTE instructors have brochures for their respective program areas. Students Occupationally and Academically Ready (SOAR) information is posted on the DCTS website. We conduct a CTE Middle School XPO, and invite all 6-8th grade students and their parents to this event. This allows parents and students to experience a school lunch, take surveys, and meet one on one with CTE teachers in their program areas. DCTS was selected as a TAP Pathway school. We partner with our member school districts to develop middle school recruitment initiatives. We produced recruitment videos and PowerPoints to showcase our non-traditional population.**

1. Is your program of study associated with a Career Technical Student Organization (CTSO)? If so, which one(s) and in what way(s)? (Check the [approved list](http://www.ctsos.org/ctsos/) of CTSOs) (50 word limit)

**Yes, DCTS Building Construction Trade students are active in SkillsUSA. BCT students compete in both the SkillsUSA Building Construction Competition and Team Works (DCTS was runner up in 2017). Mr. Brightbill, BCT instructor, oversees the State BCT competitions and has done so for 15 years.**

1. Describe how career guidance/advisement is integrated into your program of study to support students’ completion of the program of study and entry into additional education/training and/or a successful career. Where applicable, describe the tools (individual career and academic plans, career exploration websites, etc.) that are provided to learners and how they are used. (200 word limit)

**Students are working with high school and college guidance counselors, as well as vocational facilitators. Additionally, juniors and seniors participate in annual workshops to better educate them on SOAR opportunities.**

**Students in the Construction Academy participate in an annual construction career fair that includes area business/industry.**

**All students receive career counseling and course selection each fall with a guidance counselor. Students meet with a counselor to discuss both career objectives career options for the future.**

**Beginning in 9th grade all students at DCTS are introduced to SOAR and they work on a culminating career portfolio. Students take career inventories, personality inventories, etc. They complete career acquisition documents such as cover letters, resumes, and references. In addition, 9th grade students participate in workshops that encompass real work topics. All juniors participate in mock interviews, which allow members of business/industry to mentor the students. DCTS juniors and seniors have the opportunity to meet with representatives from post-secondary schools, as well as tour various post-secondary schools, and they have the opportunity to Job Shadow, participate in Service Learning and Cooperative Education with business/industry. The Vocational Transitional Counselor coordinates visits and tours with post-secondary partners and local business/industry representatives.**

# **COLLEGE- AND CAREER-READY STANDARDS/EXPECTATIONS**

1. Please describe how your program of study was developed and how it ensures students are academically and technically prepared for postsecondary education and careers. Please also address the following:
	1. How were employers involved in the development and/or maintenance of your program of study?
	2. How does this program of study meet the economic needs of your community?
	3. How does this program prepare students for postsecondary education? (if applicable)
	4. How were both secondary and postsecondary educators involved in the development and/or maintenance of the program of study? (500 word limit)

**Building Construction Technology has a developed Program of Study (POS). The POS is developed with the help of subject matter experts (SME) that include stakeholders who serve on the BCT Occupational Advisory Committee. These experts also represent the Workforce investment Board in South Central Pennsylvania.**

**Other stakeholders sit on the Local Advisory Committee that meet to discuss overriding school issues and evaluations. This committee is made up of private and public members of business and industry, Workforce Investment Board members and local officials. Other advisory committees’ such as Perkins, Act 48 and Strategic Planning committees also draw on public membership and school officials to gather input on the career and technical school and its mission to its students. Finally, a Planning for the Future Committee has recently been made a standing committee by the Joint Operating Committee (JOC). This committee is comprised of JOC, Administrators, teachers, community representatives, and students to assist in the future programming at DCTS.**

**Building Construction is a high priority occupation. High Priority Occupations (HPOs) are one component of Pennsylvania's industry-driven approach to workforce development. The purpose of the HPO lists is to align workforce training and education investments with occupations that are in demand by employers, have higher skill needs and are most likely to provide family sustaining wages. Combining statistical data with regional expert input allow for a complete picture of the actual workforce needs of the** **commonwealth.**

**The Student Occupationally Academically Ready (SOAR) program of study, which Building Construction is aligned with, incorporate secondary and post-secondary education elements to insure relevant career and technical content. Students who complete the BCT Program of Study, take and pass the NOCTI exam, and maintain a 2.5 GPA in BCT, earn college credits.**

**Pennsylvania has a statewide articulation agreement with post-secondary schools across the commonwealth. Post-secondary partners are an integral part of DCTS. For example, we have a counselor representing Harrisburg Area Community College in house several days per week to assist students with transition to post-secondary. Other universities are in house each week to give presentations and field trips to post-secondary schools are an important part of the educational culture at DCTS.**

1. Which technical, academic and/or employability skill standards does your program of study incorporate at the secondary and/or postsecondary level and how? (Please list the standards you use and be specific regarding how your program uses industry, national, state and/or locally-developed standards) (250 word limit)

|  |  |
| --- | --- |
| **Standard Types**  | **Please list the standards your program of study uses and how it uses them below:**  |
| **Academic Standards** | **Academic Standards for Reading and Writing in Science and Technical Subjects****Academic Standards for Mathematics****(Pennsylvania Department of Education)** |
| **Career Cluster or Technical Standards** | **Construction Trades, Other****CIP Code 46.9999****(Pennsylvania Department of Education, Bureau of Career and Technical Education)** |
| **Employability Standards**  | **Academic Standards for Career Education and Work****Pennsylvania Department of Education** |
| **Other** | **Industry Credentials—OSHA 10 (Construction)****Fall Protection****JLG Lift Certification** |

# **SEQUENCE OF COURSES & CREDIT TRANSFER**

1. Please fill out the chart below, and describe your program of study’s course sequence by grade level, including the relevant or required academic and technical courses, as well as other required activities.

Make sure to highlight the course sequence that bridges secondary and postsecondary education, and explain how your program of study ensures students gain the broader Career Cluster-level knowledge/skills and, over time, gain the more specific occupation-level knowledge/skills as they progress through the program of study. You can also include graphics or [plans of study](http://careertech.org/sites/default/files/PlanStudy-CareerCluster-AG_0.pdf) of the course sequence in lieu of filling out the chart below.

|  |  |  |
| --- | --- | --- |
| **Unit/Standard Number** | 2008 NEW PDE logo.tif

|  |
| --- |
|  **High School Graduation Years 2017, 2018 and 2019Construction TradesCIP 46.9999Task Grid** |

 |
|  | **Secondary Competency Task List** |
|   |   |
| **100** | **DEMONSTRATE SAFETY RULES FOR THE CONSTRUCTION TRADES** |
| 101 | Demonstrate knowledge of OSHA and its mission of safety in the work place. |
| 102 | Demonstrate knowledge of hazard communications. |
| 103 | Demonstrate knowledge of working safely with hazardous materials. |
| 104 | Describe and demonstrate the use of personal protective equipment. |
| 105 | Follow rules and regulations for fire protection. |
| 106 | Safely handle and store construction materials. |
| 107 | Perform safe operations with hand and power tools. |
| 108 | Perform safe operations with welding and cutting equipment. |
| 109 | Demonstrate knowledge and skill to ensure electrical safety. |
| 110 | Demonstrate knowledge of "stuck-by" and "caught-in-between" hazards. |
| 111 | Demonstrate and follow procedures that protect workers from falling from elevated structures. |
| 112 | Describe and demonstrate safety procedures to follow when working around excavations. |
| 113 | Explain safety rules to follow when working around excavations. |
| 114 | Describe and follow safety rules for working with concrete and masonry construction. |
| 115 | Demonstrate safe use of ladders and scaffolding. |
| 116 | Explain and follow safety procedures for working in confined spaces. |
| 117 | Explain safety procedures to follow when using explosive or powder-actuated tools. |
|   |   |
| **200** | **DEMONSTRATE PROPER USE OF HAND TOOLS** |
| 201 | Identify and follow all basic safety rules for using hand tools. |
| 202 | Identify and demonstrate the proper use of layout tools. |
| 203 | Identify and demonstrate the proper use cutting tools. |
| 204 | Identify and demonstrate the proper use shaping tools. |
| 205 | Identify and demonstrate the proper use fastening tools. |
| 206 | Identify and demonstrate the proper use dismantling tools. |
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| **300** | **OPERATE PORTABLE POWER TOOLS AND EQUIPMENT** |
| 301 | Operate a circular saw safely and accurately. |
| 302 | Operate battery and electric drills safely and accurately. |
| 303 | Operate belt and hand sanders safely and accurately. |
| 304 | Operate reciprocating saws safely and accurately. |
| 305 | Operate routers safely and accurately. |
| 306 | Operate a pneumatic nailer safely and accurately. |
| 307 | Operate a power miter box safely and accurately. |
| 308 | Operate a table saw safely and accurately. |
| 309 | Operate an electric planer safely and accurately. |
|   |   |
| **400** | **READ PLANS AND BLUEPRINTS** |
| 401 | Demonstrate the ability to references building codes as needed. |
| 402 | Demonstrate a need to know zoning regulations. |
| 403 | Read and interpret plans, sketches and blueprints. |
| 404 | Recognize and identify basic blueprint terms, components, abbreviations and symbols. |
| 405 | Interpret architectural specifications. |
| 406 | Use an Architect scale. |
| 407 | Identify structural components. |
|   |   |
| **500** | **PERFORM SITE AND BUILDING LAYOUT** |
| 501 | Use a builder’s level, transit and/or laser level to determine site and building elevations. |
| 502 | Square a building using the "3-4-5 rule" or by measuring diagonals. |
|   |   |
| **600** | **DEMONSTRATE SKILL IN PLACING CONCRETE** |
| 601 | Describe modern concrete materials and renewal methods. |
| 602 | Associate trade terms with the appropriate concrete finishing processes and equipment. |
| 603 | Estimate the amount of concrete needed for footers and slabs. |
| 604 | Lay out and build concrete forms. |
| 605 | Demonstrate the use of equipment and tools for placing concrete. |
| 606 | Demonstrate the process of depositing, spreading, consolidating, and striking off concrete. |
| 607 | Demonstrate the basic concrete finishing processes. |
| 608 | Demonstrate the tools used to edge, groove, and cut concrete. |
|   |   |
| **700** | **LAY BLOCK AND BRICK MASONRY UNITS** |
| 701 | Describe the most common types of masonry units. |
| 702 | Identify concrete block by size and type. |
| 703 | Estimate masonry units needed for block construction. |
| 704 | Demonstrate masonry cutting techniques. |
| 705 | Lay out and construct a block laying project to specifications. |
| 706 | Describe various masonry positions and bonds. |
| 707 | Lay block to a line. |
| 708 | Describe the function of wall ties. |
| 709 | Describe installation of anchor bolts. |
| 710 | Mix mortar to proper proportions and consistency. |
| 711 | Describe different mortar types and applications. |
| 712 | Demonstrate proper brick and block laying techniques. |
| 713 | Demonstrate the installation of lintels in block or brick walls. |
|   |   |
| **800** | **DEMONSTRATE SKILL IN FRAME FLOORS** |
| 801 | Identify different types of framing materials and systems. |
| 802 | Demonstrate how to install girders and sills. |
| 803 | Demonstrate and perform layout of floor joists and openings. |
| 804 | Demonstrate how to install various floor joists and band joists. |
| 805 | Demonstrate how to install various types of bridging. |
| 806 | Demonstrate how to install various types of columns and supports. |
| 807 | Demonstrate how to install various types of subfloor materials. |
|   |   |
| **900** | **DEMONSTRATE SKILL IN WALL FRAMING** |
| 901 | Describe and demonstrate how to install various components of interior and exterior walls. |
| 902 | Describe and demonstrate how to install various ceiling joists. |
| 903 | Describe and demonstrate how to install various steel framing components. |
|   |   |
| **1000** | **DEMONSTRATE SKILL IN ROOF FRAMING** |
| 1001 | Describe how to identify various roof types. |
| 1002 | Demonstrate how to install various roof components for gable roofs. |
| 1003 | Demonstrate how to install various types of roof trusses. |
| 1004 | Demonstrate how to install various types of roof sheathing materials. |
| 1005 | Estimate various roof component materials. |
|   |   |
| **1100** | **INSTALL ROOF COVERINGS** |
| 1101 | Demonstrate how to install various types of asphalt shingles. |
| 1102 | Describe and demonstrate how to install various types of underlayment materials. |
| 1103 | Describe and demonstrate how to install various types of flashing. |
| 1104 | Estimate various roof covering materials. |
|   |   |
| **1200** | **INSTALL INSULATION MATERIALS** |
| 1201 | Describe and demonstrate how to install various types of insulation and ventilation. |
| 1202 | Estimate quantities of insulation and ventilation materials. |
|   |   |
| **1300** | **APPLY EXTERIOR FINISHES** |
| 1301 | Demonstrate how to install various types of horizontal sidings. |
| 1302 | Demonstrate how to install various types of vertical sidings. |
| 1303 | Demonstrate how to install various types of cornices. |
| 1304 | Estimate various exterior finish materials. |
| 1305 | Identify how to install various types of windows. |
| 1306 | Identify how to install various types of exterior doors. |
| 1307 | Describe and demonstrate how to install various types of soffit and fascia/windows and doors. |
|   |   |
| **1400** | **INSTALL BASIC PLUMBING** |
| 1401 | Describe and demonstrate plumbing hand tools and basic safe use. |
| 1402 | Identify and demonstrate plumbing power tools and basic safe use. |
| 1403 | Identify various types of pipe. |
| 1404 | Identify various types of fittings. |
| 1405 | Describe/demonstrate how to install various types of valves and devices. |
| 1406 | Describe/demonstrate how to install faucets and drain assemblies. |
| 1407 | Describe how to install various appliances. |
| 1408 | Describe how to interpret blueprints and specifications. |
| 1409 | Describe how to install water distribution systems. |
| 1410 | Describe/demonstrate how to correctly size drain, waste and vent systems. |
| 1411 | Describe how to install fixtures and equipment. |
| 1412 | Describe/demonstrate how to troubleshoot and repair various common plumbing problems. |
|   |   |
| **1500** | **INSTALL RESIDENTIAL ELECTRIC CIRCUITS AND COMPONENTS**  |
| 1501 | Identify electrical hazards and practice electrical safety. |
| 1502 | Apply the National Electric Code (NEC) to common residential installations. |
| 1503 | Read and interpret electrical drawings. |
| 1504 | Understand and apply electrical theory. |
| 1505 | Describe basic electrical circuits. |
| 1506 | Describe and identify various wire types and sizes. |
| 1507 | Identify and use electrical tools. |
| 1508 | Identify and install ground fault circuit interrupters. |
| 1509 | Identify and install arc fault circuit interrupters. |
| 1510 | Identify and install over current protection devices. |
| 1511 | Install a junction box. |
| 1512 | Rough in a ceiling fan box. |
| 1513 | Install light fixtures. |
| 1514 | Install various receptacle circuits. |
| 1515 | Install various switch circuits. |
| 1516 | Install a 220-volt circuit. |
| 1517 | Install a recessed light. |
| 1518 | Trim out and finish electrical circuits. |
| 1519 | Describe service entrance installation. |
| 1520 | Describe low voltage electrical circuits. |
| 1521 | Describe panel installation. |
|   |   |
| **1600** | **DEMONSTRATE KNOWLEDGE AND SKILL IN WALL INTERIOR FINISHES** |
| 1601 | Demonstrate how to install various wall surfaces (including drywall). |
| 1602 | Describe and demonstrate how to install various interior moldings. |
| 1603 | Estimate various materials for wall surfaces. |
| 1604 | Estimate various types of interior moldings. |
|   |   |
| **1700** | **DEMONSTRATE KNOWLEDGE OF INTERIOR FINISHES** |
| 1701 | Demonstrate how to apply different types of paints and their uses. |
| 1702 | Demonstrate how to apply different paints and stains to different surfaces.  |
| 1703 | Clean painting tools. |
| 1705 | Describe and apply various types of caulking. |
| 1706 | Describe and demonstrate how to install ceramic tile. |
|   |   |
| **1800** | **INSTALL STAIRWAYS** |
| 1801 | Describe various types of stairways and components. |
| 1802 | Calculate, layout and cut stair stringers. |

**BCT Scope and Sequence**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| --- | --- | --- |
|  | **Secondary School** | **Postsecondary Institution** |
| **Subject(Hours)** |

|  |
| --- |
| **Grade 9(Hours)** |

 | **Grade 10(Hours)** | **Grade 11(Hours)** | **Grade12(Hours)** | **First Semester** | **Second Semester** | **Third Semester** | **Fourth Semester** |
| Technical(1380) | Intro to Carpentry(18) | Safety with Tools(40) | Construction Safety(30) | Advanced Carpentry(80) | TBD | TBD | TBD | TBD |
|  | Intro to Building Construction Trades(18) | Floor Framing(60) | Roof Framing(30) | Advanced Electrical II(60) |  |  |  |  |
|  | Intro to HVAC(18) | Wall Framing(60) | Roofing(30) | Adv Plumbing & Masonry(110) |  |  |  |  |
|  | Intro to Electrical(18) | Concrete(45) | Interior Finishes(30) | Blueprint Reading(60) |  |  |  |  |
|  | Intro to Masonry(18) | Electrical(60) | Concrete Forming, Pouting, and Figuring(40) | OSHA 10(30) |  |  |  |  |
|  | Intro to Construction Industry(180) | Plumbing(30) | Adv Framing, Elec. & Plumbing(110) | Materials Estimation(40) |  |  |  |  |
|  |  | Drywall Taping & Finishing(45) | Masonry(40) | Stairs(50) |  |  |  |  |
|  |  |  | Estimation, Building Materials I(30) |  |  |  |  |  |
| English | English 9 | English 10 | English 11 | English 12 |  |  |  |  |
|  | College Prep English 9 | College Prep English 10 | College Prep English 11 | College Prep English 12 |  |  |  |  |
|  | Honors English 9 | Honors English 10 | Honors English 11 | AP English 12-Lang & Comp. |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| Math | Intro to Algebra | Algebra I | Algebra II | Financial Math |  |  |  |  |
|  | Algebra I | Algebra II | Geometry | Statistics |  |  |  |  |
|  | Algebra II | Geometry | Pre-Calculus A | Transition to College Math |  |  |  |  |
|  | Geometry | Honors Geometry | Statistics | Pre-Calculus B |  |  |  |  |
| Science | Science | Biology | Astronomy/Geo/Meteor. | Astronomy/Geo/Meteor. |  |  |  |  |
|  | Honors Biology | Honors Biology | Anat. & Physiology | Anat. & Physiology |  |  |  |  |
|  |  | Honors Chemistry | Chemistry | Chemistry |  |  |  |  |
|  |  |  | Physics or AP Chemistry | Physics or AP Chemistry |  |  |  |  |
| Humanities | American History II | American Government | World History |  |  |  |  |  |
|  | Hon American History II | Honors Am. Government | Hon. World History |  |  |  |  |  |
| Other | Honors Geometry | Pre-Calculus A | Honors Algebra | Honors Pre-Calculus |  |  |  |  |
|  | Honors Algebra II | Honors Algebra II | Pre-Calculus B | AP Calculus |  |  |  |  |
|  |  | Honors Pre-Calculus | Honors Pre-Calculus |  |  |  |  |  |
|  |  |  | AP Calculus |  |  |  |  |  |

 |

1. How do you ensure that CTE instruction and coursework is integrated with core academics?

**Through SOAR, professional development, and building culture. All teachers integrate the technical programs with academics. The SOAR initiatives requires that all students graduate with skills for immediate employment and skills that prepare them for post-secondary opportunities. Curriculum and lesson plans are developed with this in mind.**

**Professional Development opportunities are provided that allow teachers to work together to develop integrated lesson plans. These include in-house, regional, statewide and national professional development opportunities. Our BCT teacher has partnered with his academic peers during professional development days and through his Differentiated Supervision Plan.**

**DCTS employs three instructional coaches—Math, Literacy, and Technology to assist teachers with integration. Paraprofessionals are safety nets to assist students with CORE content.**

**DCTS is a data-driven school, which is a part of the culture. All stakeholders work with DCTS staff to discuss data with respect to CORE standards and integration.**

1. List the opportunities for students to earn articulate and/or transcript dual enrollment credit across K-12 and postsecondary, such as AP/IB, dual and concurrent enrollment, capstone experiences and/or transcripted credit articulation agreements. (250 word limit)

**NOCTI (National Occupational Competency Testing Institute) National standards are used for the development of each NOCTI exam, which is designed to align with industry and business standards in a given occupation. Seniors who complete a CTE program are tested each year at DCTS. Students who meet a 70% benchmark on a number of approved NOCTI multiple-choice assessments are eligible for a College Credit Recommendation Report. The report can be used as part of a student’s portfolio, and can be presented at any of the 1500+ participating colleges and universities for college credit consideration.**

**Dual Enrollment Qualifying DCTS seniors may choose to participate in our Dual Enrollment Program at HACC, Harrisburg University or Penn State Harrisburg depending on course availability. Eligible students may earn up to nine college credits per semester. Students attend classes at the college campus in the morning and are required to attend their career and technical program at DCTS in the afternoon.**

**College in the High School HACC’s CHS (College in the High School) courses are available to eligible juniors and seniors attending DCTS. CHS students earn concurrent high school and college credit at a reduced rate. Thirteen CHS courses are taught at DCTS by high school teachers who qualify as HACC adjunct faculty members.**

**Advanced Placement AP (Advanced Placement) courses are offered at DCTS. Currently, we offer AP English, AP Calculus AB, AP Chemistry, AP Psychology, and AP Computer Science Principles. On-line courses are also available and must be approved by the high school principal.**

1. Please provide information on **at least three partnerships** with *education institutions and groups* your program of study has, and describe how these partnerships have been built, maintained and sustained over time. Use this space to specifically address the secondary and postsecondary partners that contribute to and maintain this program of study.

|  |  |  |
| --- | --- | --- |
| **Education Partnership Name** | **What role does this partner have in directly supporting your program of study?** | **How many years has this partnership been active, and how was this partnership developed?** |
| **Harrisburg Area Community College** | * **HACC professor serves on BCT Occupational Advisory Committee**
* **Professional Development via CTE Regional Collaboration**
* **Faculty In-Service**
* **Dual Enrollment and College in the High School opportunities for DCTS Students**
* **Guest Speakers for BCT program**
* **Students articulate college credits**
 | **18 years. Mr. Brightbill has built relationships through tours, programming, OAC partnerships, etc.****HACC is a TechLink partner with DCTS** |
| **Thaddeus Stevens College of Technology** | * **Program promotion through student tours**
* **Students articulate college credits**
* **Program visits by Mr. Brightbill to review curriculum**
 | **18 years. Mr. Brightbill has built relationships with instructors; former DCTS students have attended this school** |
| **PA College of Technology** | * **Program promotion through tours and workshops. For example, non-traditional students have attended “Girls Build” workshop.**
* **Students articulate college credits**
 | **27 years. Mr. Brightbill graduated with an Associate’s Degree in Construction Technology. As an alumnus of the school, he promotes post-secondary opportunities.** |

# **ALIGNMENT WITH INDUSTRY AND BUSINESS NEEDS**

1. Please describe how your program of study is aligned with the needs of the workforce and industry in your community. Make sure to include information on how the program of study helps meet workforce demand identified by business and industry. If applicable, what labor market data does your program of study use to align to workforce needs? (250 word limit)

**The Program of Study for Building Construction Technology is developed after regional data is gathered and reviewed by the Workforce Investment Board, industry leaders, and Subject Matter Experts.**

**The Center for Workforce Information and Analysis, Harrisburg, Pennsylvania analyzes employment trends in the construction cluster, i.e. employment concentration, educational requirements, and occupations with significant employment. (A copy of the 2015-2016 report is included in the supporting documents).**

**This information is shared with the Pennsylvania Department of Education, Bureau of Career and Technical Education. Through SOAR the data ensures the development of programs that meet regional industry needs. The development of programs that offer life sustaining wages are crucial to SOAR.**

**Mr. Brightbill meets with his Occupational Advisory Committee to encourage them to serve as Subject Matter Experts when his Program of Study is revamped. Mr. Brightbill is sent to the workshop to represent his Program of Study when his program is up for revisions. Finally, the BCT program includes the South Central Workforce Investment Board (WIB) Represent on his Occupational Advisory Committee.**

**The WIB representative also serves on our DCTS Local Advisory Committee and Planning for the Future Committee to assist us with our strategic planning.**

1. Are ALL students in the program of study required to participate in a work-based learning opportunity? YES or NO.

**Yes**

1. Please describe the work-based learning opportunities available to students who participate in this program of study. (250 word limit)

**Much of the curriculum of the Building Construction program is taught in a project based manner. Projects are real-life and often are customer based. Examples include sheds, handicap ramps, and construction projects around the school. Students have renovated a double wide modular classroom on campus, installed and finished drywall in the school’s hallways, built play sets and musical sets, constructed a 32 x 40 foot pole barn, erected lofts for other CTE programs and more. Projects like these allow students to learn everything about the construction process from design, zoning, permitting, customer service, quality control, contracts, time constraints, estimating, and team work. All students in the program participate in these projects. The best thing about the projects that the program completes is that these projects have permanence in the building and the community. This creates a sense of pride and job satisfaction that motivates the students to build their skills and techniques. As seniors, the students are also encouraged to participate in the DCTS Capstone Cooperative Education Program. Students are also strongly encouraged to job shadow someone in the construction industry during their junior or senior years to help them learn about employment opportunities in the industry.**

1. Please list the industry-recognized credentials/certifications/licenses offered/required. If your program of study does not include industry-based credentials/certifications, please explain why. (200 word limit)

|  |  |
| --- | --- |
| **Offered** | **Required** |
| JLG Lift Certification | OSHA 10 |
|  | Fall Protection |
|  |  |

1. Please describe how you ensure the instructors teaching this program of study keep up-to-date on advancements in the workplace, such as participating in externships and/or requirements to have current industry credentials. (100 word limit)

**Mr. Brightbill maintains an Occupational Advisory Committee that meets formally twice a year, and Mr. Brightbill gets together informally a minimum of once a month for a “Wing Night” with members of his Occupational Advisory Committee. Mr. Brightbill also stays up to date by working in the field on summer breaks. He is very active in the Harrisburg Home Builders Association working with the organization on projects that bring industry and his program together.**

**Professional Development opportunities are available and Mr. Brightbill has received training, for example, on OSHA 10.**

1. Please provide information on **at least three** *business, industry and/or labor* partnerships your program of study has, and describe how these partnerships have been built, maintained and sustained over time.

|  |  |  |
| --- | --- | --- |
| **Business/Industry Name** | **What role does this partner have in directly supporting your program of study?** | **How many years has this partnership been active, and how was this partnership developed?** |
| **Don Updegrave Construction Co.** | **Has accompanied the BC Cares Program on 3 trips, has served on the OAC for 16 year, has been a NOCTI Judge for the program for 14 years and has been a co-op employer many times over the years.**  | **Mr. Updegrave and Mr. Brightbill were colleagues in the construction industry before his tenure at DCTS. They have been friends for 20 years and Don has been active on the OAC and in the BCT program for 16 years.** |
| **Dauphin Enterprises, LLC****Sam Wesner and Ron Wesner** | **Has accompanied the BC Cares program on 3 trips, has served on the OAC for 16 years (Sam started as a student member) has been a co-op employer and Sam won an award from the PA Association of Vocational Administrators for Outstanding OAC member. Sam has been a NOCTI Judge for 7 years.**  | **Mr. Brightbill first met Sam and Ron Wesner in 2002 when Sam was a new student in his program. Sam was an incredible student who went on to own Dauphin Enterprises, LLC in 2006. Sam and Mr. Brightbill have remained very close, working together outside of school and becoming friends.** |
| **Harrisburg Home  Builders Association** | **The HBA is a direct connection between the school and industry. The HBA provides projects at their annual home builders show that allow the building construction program to show off their skills and abilities.**  | **Mr. Brightbill was active with the HBA before coming to DCTS. Over the last 16 years, the students have completed many projects for the HBA at the annual Home Builders show including: Landscaping common areas, the “Wrong Way House” display, Erected panelized walls for the decorators showcase,  and built several handicap ramps to allow access to the feature home at the builders show.**  |

1. Please feel free to use the space below to share any other information or evidence of success of your program of study and the students who participate. (Optional)

**After Hurricane Katrina, Mr. Brightbill saw an opportunity for his students to experience work on a jobsite while giving back to others, and so Dauphin County Technical School’s Building Construction Cares was born.  Once or twice a school-year, starting in January 2008, this organization, an extension of the Building Construction Technology Program, has sponsored weeklong trips to a disaster relief site.  Here are some of the impacts by the numbers:**

|  |  |
| --- | --- |
| **13** | **Trips** |
| **121** | **Different Students** |
| **31** | **Students on two trips** |
| **11** | **Students on three trips** |
| **17** | **Programs represented** |
| **36** | **Projects/families** |
| **18** | **Adults/Chaperones involved** |
| **12790** | **Minimum miles traveled** |
| **6** | **States impacted** |

**Link to group pictures:**

[**https://docs.google.com/presentation/d/1h1KdthM2C6sViE3cik\_q71SZvV0elNLc8g17qi-CfV8/edit?usp=sharing**](https://docs.google.com/presentation/d/1h1KdthM2C6sViE3cik_q71SZvV0elNLc8g17qi-CfV8/edit?usp=sharing)

**Link to BCC website:**

[**https://sites.google.com/a/dc-tech.org/building-construction-cares/home**](https://sites.google.com/a/dc-tech.org/building-construction-cares/home)

**Crummel’s Classroom ABC News**

**http://abc27.com/2016/12/21/crummels-classroom-students-building-their-way-to-a-brighter-future/**

**Building Construction Technology Local and Regional Involvement**

**Toy Drive, Toys for Tots, US Marine Corp, Harrisburg**

**Girls Softball Dugouts Construction, Central Dauphin SD**

**Maintenance Shed Construction, Susquehanna SD**

**Press Box Construction, Landis Field, Central Dauphin SD**

**Roof Replacement, Central Dauphin SD**

**Handicap Ramp Construction, PA Home Builder’s Show, Harrisburg Area Home Builder’s Association**

**Handicap Ramp, Rebuilding Together, Harrisburg**

1. If applicable, please provide more detail on any partnerships your program of study has that have not been mentioned already. This includes community groups, non-profits, volunteer organizations, etc. Describe how these partnerships have been built, maintained and sustained over time. (Optional)

|  |  |  |
| --- | --- | --- |
| **Additional Partnerships** | **What role does this partner have in directly supporting your program of study?** | **How many years has this partnership been active, and how was this partnership developed?** |
| **Colonial Park Rotary** | **Provides grants to the Building Construction Cares Program as well as mentorship and scholarships to students in the Building Construction Program** | **A 10-year partnership started when the Rotary Club and Mr. Brightbill joined together to travel to Biloxi, MI after hurricane Katrina.** |
| **Lower Paxton Lions Club** | **Has provided assistance in the annual Pancake Breakfast fundraiser for the Building Construction Cares Program.** | **A 10-year partnership began when Mr. Brightbill and his students spoke at a monthly meeting regarding the Building Construction Cares Trip.** |
| **UMCOR****United Methodist Committee on Relief** | **Has provided the projects and materials for the Building Construction Cares Program.** | **A 4-year partnership began after Superstorm Sandy. Mr. Brightbill reached out to the project managers.** |

# **SUBMIT YOUR APPLICATION**

**SUBMIT YOUR APPLICATION**

* Fill out this application.
* Once you have finished, complete [this form](https://careertech.org/2018-excellence-action-application) and upload the following:
* Your full application saved as a Word document (.docx)
* All of your supplemental documents or evidence consolidated as one PDF document.

**THANK YOU!**

Thank you for completing this application! The selection committee will convene in December 2017 to review the applications and make final decisions. You will know the status of your application by January 25, 2018. The programs of study will be evaluated based on their effective leveraging of partnerships, alignment to rigorous and relevant college- and career-ready expectations, clear progression of knowledge and skills across secondary and postsecondary systems, integration of successful career guidance/advisement, and key indicators of student success.

Don’t forget to use the Excellence in Action award submission checklist to make sure you’ve completed your application in its entirety.

We look forward to learning more about your program!

For questions, concerns please contact awards@careertech.org.