# **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.
* 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: Knight High School Digital Design and Engineering Academy
2. Point of Contact
 Name: James Stockdale

Email Address: jstockdale@avhsd.org

Phone Number: (661) 533-9000
Address: 37423 70th Street East, Palmdale, CA 93536

1. Applicant’s School/College: William J. “Pete” Knight High School
2. State: California
3. Type of institution (click the box to check)

 [ ]  Area technical center

[x]  Career academy

 [ ]  Comprehensive high school

 [ ]  Community college

 [ ]  Technical college

Other (please specify)

|  |
| --- |
|  |

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

 [ ]  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

 [x]  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.

The Knight HS Digital Design & Engineering Academy is a California School Boards Association Golden Bell award-winning academy that has been delivering superior STEM education to students since 2010. Operating as a school-within-a-school, students are able to take advantage of the opportunities of a small learning community featuring rigorous integrated academics, high-quality career-technical education focusing on a fully-developed engineering pathway and the first and most advanced makerspace in the Antelope Valley, an integrated system of student supports, a full continuum of work-based learning experiences, and the ability to gain college credit for both engineering and general education/core academic courses through articulation and Advanced Placement. DDE students create integrated projects as part of their cohorted class offerings, and have a wide range of extra-curricular activities in which they can participate, including athletics, social gatherings, clubs, career-technical student organization, robotics, electric car, and an internationally ranked autonomous drone team, among others.

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

 [x]  Suburban

 [ ]  Rural

 [ ]  Other

#

# **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)

The secondary data is regularly kept in relation to a grant from the California Dept of Ed and is accurate, highly reliable, and shows a clear advantage for the at risk population that largely makes up our academy. The postsecondary data is only available for our graduates who stay at our local community college. We have included their information, as it is mostly available; however, we have no means of tracking information for those students who leave the area for their postsecondary programs.

**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**  | 303 | 368 | 396 |
| % male students  | 70% | 66% | 65% |
| % female students  | 29% | 33% | 34% |
| % minority students | 79% | 82% | 81% |
| % low-income students  | 67% | 62% | 73% |
| % students with disabilities  | 1% | 2% | 2% |
| % English language learners | 45% | 60% | 42% |
| Other relevant *demographic* data  |  |  |  |
| % of students who earned postsecondary credit (dual enrollment, AP, etc.)  | 38% | 37% | 39% |
| % of students who earned an industry-recognized credential  | 20% | 19% | 22% |
| % of students who participated in work-based learning | 100% | 100% | 100% |
| % of seniors who graduated high school (who were eligible/seniors)  | 98% | 98% | 97% |
| % of graduates who enrolled in postsecondary education (who were eligible/seniors)  | 84% | 75% | 85% |
| % of graduates who entered the workplace and/or military (who were eligible/seniors)  | 6% | 6% | 5% |
| **POSTSECONDARY-LEVEL DATA** |
| **Total number of students served by your program of study**  | 35 | 24 | 31 |
| % male students  | 57% | 63% | 56% |
| % female students  | 43% | 37% | 44% |
| % minority students | 81% | 82% | 81% |
| % low-income students  | 68% | 71% | 72% |
| % students with disabilities  | 3% | 4% | 3% |
| % English language learners | 48% | 55% | 52% |
| Other relevant *demographic* data  |  |  |  |
| % of students who completed postsecondary/earned a degree or certificate (who were eligible)  | 71% | %In progress | %In progress |
| % of students who earned an industry-recognized credential (who were eligible)  | 15% | %In progress | %In progress |
| % of graduates who entered the workplace and/or military (who were eligible)  | 77% | %In progress | %In progress |
| % of graduates who transitioned to further postsecondary education (who were eligible) | 57% | In progress | In progress |

1. Provide links to the source of the above data. If the links are not publicly accessible, please explain the source of the data.

This data is compiled from an extract from CalPADS (California Department of Education’s data reporting system), the AV Union High School District’s student information system (PowerSchool) and student survey and follow-up contacts conducted by the DDE Academy.

1. How does your school or institution ensure equitable access and outcomes for students with diverse backgrounds? (150 word limit)

Every student at Knight HS has a homeroom teacher who watches over him/her from 9th grade through graduation. An academic plan is made with students that takes into account their goals and how to reach them, as well as encourages students to reach beyond what they might deem possible. Mentors, both adult and peer, work with students to encourage participation in honors, AP, and articulated/dual-enrollment classes. The school has an open-access policy for all honors and AP courses allowing all interested students to enroll in the courses. All academy students are encouraged to attempt honors and AP classes, and they have been embedded into integrated pathways for academy students making participation in them easier on students’ schedules. AP test fees are subsidized by the district so that students pay only $5 for AP tests. Regular tutoring is offered before and after school, and on Saturdays for all levels of students.

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

Although the program is doing rather well in offering equitable access to students, in prior years the academy identified a potential issue with non-traditional students accessing it. DDE has put in place a plan to address this gap and has begun to see encouraging results from it. The plan has included hiring of women teachers in engineering, bringing in professional women speakers from local industry to encourage young women in our program, holding events focused on young women in STEM, and incorporating projects that our young women have expressed interest in doing. These efforts, in concert with gender-sensitive marketing and recruitment efforts, have led to increasing numbers of young women joining the program, with the most encouraging data point being this year’s incoming 9th grade class showing 45% of students as young women; this is much improved over the 29% rate from a few years prior.

Other access gap strategies implemented in the program include providing Chromebooks to academy students that are checked-out for the school year. This allows them to access the district provided Google Suite, Princeton Review/tutor.com supports available in English and Spanish, Solid Professor online lessons, Khan Academy, Naviance planning tools, online gradebooks, and more. Students are also offered the PSAT for free, along with district paid online test prep materials. The academy partners with Green 360 to offer industry mentors and virtual job shadow opportunities to students as well. In addition to these, all students in the district have access to classes through the Virtual Academy where they can supplement their regular schedule with AP classes, electives, or other courses that otherwise might not fit in their schedule or be outside of their transportation abilities. Lastly, DDE has built a top of the line MakerSpace that offers students the ability to come in after school and on Saturday to learn industry skills as they make innovative projects of their choosing. The space can be accessed in an open way to create unstructured projects as they desire, or formally as part of a team doing competitions related to drones, robotics, or SkillsUSA.

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)

DDE teams present at feeder schools about program offerings, and participate in regional events to provide demonstrations and information to the community. For example, DDE has presented at the local “Celebrate America” event, Fair “Tech Expo,” Greater AV “STEMPosium,” “Salute to Youth: Career Connection,” “College Information Night,” AVC’s “I’m Going to College,” AVUHSD’s “Academy Information Nights,” and at both Greater AV Economic Alliance and AV Board of Trade luncheons. Notably, AVUHSD’s dependent charter middle school, Knight Preparatory Academy, was founded specifically to prepare students to proceed to advanced study in the DDE Academy. On the same campus, its staff and students work closely with DDE on integrated projects. DDE also participates in AVUHSD’s open enrollment process, allowing students from outside attendance boundaries to apply for open slots. Further, the local AJCC presents to academy students about opportunities in AVC’s Airframe Fabrication partnership with Northrop, encouraging them to apply upon graduation.

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)

DDE students are afforded the opportunity to participate in a local SkillsUSA Chapter, developing and implementing leadership skills and reinforcing CTE Model Curriculum Standards and Career Preparation Standards. In addition,, students compete in regional, state, and national events.

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)

The DDE Academy has a designated counselor to assist with student scheduling, review of student grades and support for at-risk students, as well as post-secondary readiness in the form of college and financial aid applications. Likewise, the academy has a homeroom program for regular teacher interaction with students. Each homeroom teacher tracks student academic plans, makes necessary interventions, and mentors students. The district has implemented the Naviance/Family Connections online college and career readiness program for its students, allowing them to access a variety of tools (e.g., career assessment and strengths inventory, RoadTrip Nation videos, common application, financial aid resources, etc.) to prepare them for a wide variety of post-secondary options. Students at each grade level review different modules within Naviance and complete assignments, as well as being able to investigate and track college and career interests through individualized plans. Our academy counselor meets regularly with students to monitor progress, answer questions, etc and does sessions with our students every Thursday after school to focus on scholarships. Also from our counseling office we have a specific career counselor who meets with our students to discuss career exploration, plan visits, and bring in classroom presenters.

# **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)

The DDE Academy was established to meet the nation’s challenge to increase numbers of students in STEM fields and meet the region’s labor market demand. The academy’s unique approach was based on the premise that if students had a platform to create and design work based on their individual interests, STEM education would become more relevant to them. The focus of the DDE Academy is reflected in the need to address the economic development of the Antelope Valley by creating and sustaining “home-grown” STEM workers beginning at the secondary level and continuing through a range of post-secondary options, from certificates to post-baccalaureate degrees.

The region, located in northern-most Los Angeles County, is home to aerospace and research entities such as Northrop Grumman, Edwards AFB, Air Force Research Laboratory (AFRL) Propulsion Directorate, Lockheed Martin, NASA AFRC, and tenants at the Mojave Air and Spaceport including The Spaceship Company and Virgin Galactic. In addition, the area has attracted numbers of sustainable/renewable energy businesses in solar and wind technologies. Each of these industries is challenged to attract and retain highly skilled and educated workers due to the relative remoteness and desert climate of the area. Likewise, the “Silver Tsunami” of the aging workforce in these disciplines over the last decade necessitates an increased focus on developing a larger pipeline of future workers who are eligible for employment in these positions. It was important that this need be addressed through creating a learning community using strategies to engage students who might not be identified as interested in STEM to pursue these career opportunities through rigorous and relevant instruction that was both innovative and challenging.

DDE students are prepared for post-secondary options through rigorous, integrated core academic and elective courses, including Advanced Placement and those receiving articulation credit with colleges, and a high-quality CTE sequence of PLTW engineering classes. Further, students are provided AVID strategies embedded in each of their courses.

Regional employers and post-secondary representatives from Antelope Valley College (AVC) and Cal State Long Beach AV Engineering Program (CSULB-AVEP) have been consistently involved in the academy’s operations, from annual advisory committee meetings addressing workforce development needs to active participation in assisting with integrated projects which implement real-world skills and knowledge, mentoring students, and providing work-based learning opportunities such as guest speakers, field trips, job shadowing, and internships, as well as offering college scholarships and employment in some cases.

Among the local post-secondary options available to students include engineering associate’s degree courses at AVC, a transfer degree completion program in mechanical or electrical engineering at the ABET-accredited CSULB-AVEP center, a nationally-recognized Airframe Fabrication and Assembly certificate program in partnership between AVC and Northrop Grumman, as well as the cutting-edge Airframe Manufacturing Technology baccalaureate program at AVC. In addition to these, DDE graduates are accepted at highly competitive universities and colleges around the nation, including MIT, Stanford, Harvard, and almost all University of California campuses.

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 | California-adopted Common Core State Standards and Next Generation Science Standards; California state standards for English Language Development, social science, world languages, visual and performing arts, and other core academic subjects are implemented in all core academy (secondary) courses. |
| Career Cluster or Technical Standards | California Model Curriculum Standards for Career-Technical Education, particularly in the Engineering and Architecture industry sector, are implemented in Introduction to Engineering Design, Principles of Engineering, Digital Electronics, Aerospace Engineering, and Engineering Development and Design courses at the secondary level. |
| Employability Standards  | California Model Curriculum Standards for Career-Technical Education, particularly including the Standards for Career-Ready Practice and anchor/pathway standards related to career preparation are implemented in all academy (secondary) courses. |
| Other |  |

The above listed standards are adopted throughout the students course of study by means of project based learning and a mastery based grading approach. Projects are integrated across the subject areas and students are given ample freedom to show innovation, creativity, and presentation skills as they complete projects that demonstrate their mastery of the standards and culminate in a community exhibition of knowledge piece.

# **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.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Grade/Year | English/Language Arts | Math | Science | Social Studies/ Sciences | Other Required Courses/Other Electives/Learner Activities  | CTE Courses and/or Degree Major Courses |
| **9** | English 9/Honors | Algebra 1/2 | Biology/Honors |  | Multimedia 1 | Introduction to Engineering |
| **10** | English 10/Hnrs | Algebra 2/ Geometry/ GeoTrig | Chemistry/ Honors | World History/ AP | Multimedia 2 | Digital Electronics |
| **11** | English 11/ AP | Geometry/ GeoTrig/ Calculus AB | Physics/ AP Physics 1 | US History/ AP | AP Computer Science | Principles of Engineering  |
| **12** | English 12/ AP | GeoTrig/Calc AB/ Calc BC | AP Physics 1/2 | Civics Economics/ AP | 3D Media | Aerospace Engineering / Engineering Development & Design Practicum |

 AFAB CSULB- AV Direct to 4 Year University

 AirFrame Fabrication Local Engineering Program

 Certificate Program

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

DDE teachers, both CTE and core academic, work together with industry partners to design and implement integrated cross-curricular projects annually in which students at each grade level participate. For example, this year we are holding a community exhibition entitled “Maker to Market” where students are to design, prototype, package, and market a product of their own creation. This will incorporate many subject areas as students have to write proposals and make presentations in English, and create budgets and detailed drawings in math, as well as discuss science principles as they relate to their projects. In their CTE courses they prototype and build their creations before the whole project culminates in an evening of the community coming out to see the students work and give feedback. Projects similar to this are done annually or more, with the prior year being a similar project where students created games that were tasked to teach environmental principles.

Furthermore, the California Model Curriculum Standards for CTE, with which our CTE courses are aligned, ensure that we include activities which meet the California-adopted Common Core State Standards for English and math, as well as the Next-Generation Science Standards, particularly in the engineering cross-cutting principles.

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)

DDE students who successfully complete (with a grade of “C” or better each semester) either of two courses in the engineering pathway, Principles of Engineering and Digital Electronics, are eligible to receive articulation credit, through the credit-by-exam mechanism, at Antelope Valley College. Likewise, these courses are also part of a Statewide Pathways template, meaning that the coursework is accepted at many community colleges throughout the state of California. Further, students who successfully complete Project Lead the Way (PLTW) end-of-course assessments at a certain “cut score” are eligible for transcripted credit through the Rochester Institute of Technology. In addition, DDE offers students access to over 9 Advanced Placement courses as part of its program of study, allowing those who achieve a score of 3 or above the ability to receive college credit nationwide. The AV Union High School District uses funding from its College Readiness Block Grant to subsidize the majority of fees for students who want to take the AP exams; as a result, any student who wishes to take an AP exam may do so for a fee of $5 each. We are also in the process of completing a new optional capstone course in composites that will be offered next fall and likewise be articulated with the community college and get students a head start on the Airframe Fabrication certificate program offered locally.

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?** |
| California State Polytechnic University - Pomona | They specifically help us to recruit girls into our engineering programs by offering speakers, visits to their campus with activities, and a “Femineers” program.  | We have been working with them on strategies to encourage under represented groups for 5 years. This partnership began with one of our students attending there and becoming an active member of their organization.  |
| Palmdale School District | We work directly with this feeder district to reach out to middle schools, coordinate events and do presentations to encourage kids into our program.  | This relationship has been long standing since we began as they have a middle school just down the street that our students volunteer at and provide service with their students.  |
| Antelope Valley College | As we are developing students to feed into programs, such as the Airframe Fabrication and Assembly program, Antelope Valley College works closely to support our students with curriculum guidance, allowing instructors to audit classes, and regular site visits and presentations.  | This partnership has been active since the inception of the academy and was developed in the initial planning stages of the academy as they were brought on as part of the advisory committee.  |
| California State University Long Beach- AV extension | As another program that our students are looking to take advantage of in their futures, CSULB-AV has taken an active role on advisory committee for the academy and presentations to students as well as curricular development and sequence of courses so students are ready to feed into their programs seamlessly.  | This partnership is also as old as the academy itself as they were initial partners in the starting advisory committee and came about by recommendation of district personnel.  |

# **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)

As noted above, the DDE Academy was specifically organized with regional workforce development needs in engineering and green technologies in mind. US Department of Labor Bureau of Labor Statistics and California Employment Development Department Labor Market Information statistics are used regarding local, regional, and national trends. Additionally, regional employers are consulted regularly through advisory committee proceedings on hiring and workforce needs.

Specific examples for the area are centered around the massive amounts of aerospace employers in the area, and the current and future projected needs. Northrop Grumman upon receiving the next generation bomber contract has stated they need to hire an additional 5,000 highly skilled workers over the next 10 years in Palmdale alone. Similarly, Lockheed Martin, Boeing, NASA, Edwards Air Force Base, Scaled Composites, the Mojave Space Port, and General Atomics all have major plants/ testing facilities in the area and create a high demand for local hiring of skilled employees. Most of these companies either currently sit on our advisory committee and contribute to our program of study to bring students in or have previously sat on our committee in the past.

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)

A full complement of work-based learning opportunities is provided across the academy, including industry guest speakers, field trips to industry sites and college campuses, industry job shadowing, industry-involved integrated projects, and industry internships at sites such as Lockheed Martin Aeronautics, Northrop Grumman Corporation, and the Cities of Palmdale and Lancaster.

Students are exposed early in 9th grade as they visit local sites, hear from speakers, and complete projects under the direction of mentors. They expand that over the years as they do more complex projects, get feedback, and job shadow before culminating in internships for students their senior year. Even with difficult security clearances, we have had a successful run of opportunities for our students to intern at some of the best engineering companies in the world.

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**  |
| Autodesk Certified User |  |
| Adobe Certified User |  |
| FAA part 107 UAS Remote Pilot License  |  |

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)

DDE instructors are offered the opportunity to participate in annual industry externships with regional partners to maintain industry currency (including completing documentation of their experience), as well as to attend conferences and trainings in both industry and education settings. Teachers of CTE courses are expected to maintain current CTE credentials and skills.

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?** |
| Northrop GrummanCorporation | High School Involvement Partnership (HIP) program, allowing seniors to participate in internships with the company, providing each student intern with a company mentor, and, in many cases, a scholarship and future employment opportunities. Northrop Grumman also sponsors the High School Innovation Challenge, allowing students to compete in an annual design challenge with NGC mentors assisting students. Northrop Grumman also assist with occasional grant funding for the program. | The partnership has been in place with the district for over fifteen years, and has been available for DDE for its entire seven-year history. Northrop Grumman worked with the district to provide internships for students as a means to expose them to real-world application of curriculum and to expose them to regional employment opportunities. The HSIC has been hosted by the DDE academy for 5 years now and grows stronger each year.  |
| Air Force ResearchLabaoratory | DDE works closely with AFRL on the AV Unmanned Aerial Vehicle Challenge; AFRL provides equipment and assistance in preparing students to compete in an annual event, which also helps students ready themselves for an international drone competition. AFRL also supports the academy and school site through occasional grant funding for the program. | This partnership has been in place with the district for approximately fifteen years, and has been growing with DDE over the last four years. AFRL saw the need for additional STEM outreach to prepare additional qualified future workforce members. |
| Lockheed Martin | They provide internships for students and volunteer as mentors as well as providing class speakers and advise on our advisory panel.  | They are original members of our advisory committee from when we started. They became partners when we called to ask for help when forming the academy.  |
|  |  |  |
|  |  |  |

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)

Our site has sent an international drone team to compete in Australia (UAV Challenge) the last 4 years, placing 3rd twice and first place once against teams from Australia, China, Malaysia, Poland, New Zealand, and the United States.

We have had our students win the Engineering Technology/Design competition with SkillsUSA for the state of California and placed nationally.

Students have served internationally for the past few summers installing solar arrays in Nicaragua, and building a MakerSpace at a school in Costa rica.

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?** |
| Mojave Environmental Education Consortium | They provide workshops and materials to our teachers as well as local competitions for students such as solar oven competition and Youth Leadership summit.  | Active partners for 5 years, partnership began early as one of academy teachers is a board member for the non-profit.  |
| Global Illuminations | Non-profit organization that specializes in setting up MakerSpaces in high need international areas. DDE students worked with them to fund, install, and train at a site in Costa Rica.  | New partnership of 2 years that came about with a parent who started the group to provide our student these international options to serve.  |
| Grid Alternatives | Help to provide local opportunities for students to serve by putting in solar arrays for low income homes, as well as international opportunities such as Nicaragua where students helped to put in an off grid solar array.  |  4 year partnership where students contacted the organization to set up opportunities to serve.  |

# **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.