

Budget

Upper Valley Career Center (062125) - Miami County - 2017 - Straight A Fund - Rev 0 - Straight A Fund - Application Number (52)

U.S.A.S. Fund #: 466

Plus/Minus Sheet ([opens new window](#))

Purpose Code	Object Code	Salaries 100	Retirement Fringe Benefits 200	Purchased Services 400	Supplies 500	Capital Outlay 600	Other 800	Total
Instruction		0.00	0.00	5,000.00	18,686.92	329,173.92	0.00	352,860.84
Support Services		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Governance/Admin		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prof Development		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Family/Community		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Safety		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Facilities		0.00	0.00	0.00	30,492.29	0.00	0.00	30,492.29
Transportation		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indirect Cost							0.00	0.00
Total		0.00	0.00	5,000.00	49,179.21	329,173.92	0.00	383,353.13
							Adjusted Allocation	0.00
							Remaining	-383,353.13

Application

Upper Valley Career Center (062125) - Miami County - 2017 - Straight A Fund - Rev 0 - Straight A Fund - Application Number (52)

Please respond to the prompts or questions in the areas listed below in a narrative form.

A) APPLICANT INFORMATION - General Information

1. Project Title:
Upper Valley Career Center Makerspace

2. Project Tweet: Please limit your responses to 140 characters.
UVCC Makerspace = students + adults doing hands on work + career preparation = trained, living wage workers + well-staffed area businesses
This is an ultra-concise introduction to the project.

3. Estimate of total students at each grade level to be directly impacted each year.

*This is the number of students that will receive services or other benefits as a **direct result** of implementing this project. This does not include students that may be impacted if the project is replicated or scaled up in the future. It excludes students who have merely a tangential or indirect benefit (such as students having use of improved facilities, equipment etc. for other uses than those intended as a part of the project). The Grant Year is the year in which funds are received from the Ohio Department of Education. Years 1 through 5 are the sustainability years during which the project must be fiscally and programmatically sustained.*

Grant Year					
Education	Pre-K Special	K	1	2	3
4	5	6	641 7	1458 8	
104 9	1475 10	148 11	125 12		

Year 1					
Education	Pre-K Special	K	1	2	3
4	5	6	583 7	1475 8	
110 9	1467 10	150 11	128 12		

Year 2					
Education	Pre-K Special	K	1	2	3
4	5	6	596 7	1371 8	
115 9	1468 10	155 11	130 12		

Year 3					
Education	Pre-K Special	K	1	2	3
4	5	6	613 7	1400 8	
120 9	1475 10	160 11	135 12		

Year 4					
Education	Pre-K Special	K	1	2	3
4	5	6	617 7	1452 8	
125 9	1371 10	165 11	140 12		

Year 5					
Education	Pre-K Special	K	1	2	3
4	5	6	631 7	1403 8	

4. Explanation of any additional students to be impacted throughout the life of the project.

This includes any students impacted indirectly and estimates of students who might be impacted through replication or an increase in the scope of the original project.

Elementary class tours (1400 students annually) Additional section of Camp Excel (100 students) A mobile lab for satellite programs - duplicates students in item 3 but gives them an opportunity for more in-depth use

5. Lead applicant primary contact: - Provide the following information:

First and last name of contact for lead applicant

Dr. Nancy D. Luce

Organizational name of lead applicant

Upper Valley Career Center

Address of lead applicant

8811 Career Dr., Piqua, OH 45356

Phone Number of lead applicant

937-381-1465

Email Address of lead applicant

lucen@uppervalleycc.org

Community School Applicants: After your application has been submitted and is in Authorized Representative Approved status an email will be sent to your sponsoring entity automatically informing the sponsor of your application.

6. Are you submitting your application as a consortium? - Select one checkbox below

Yes

No

If you are applying as consortium, please list all consortium members by name on the "Consortium Member" page by clicking on the link below. If an educational service center is applying as the lead applicant for a consortium, the first consortium member entered must be a client district of the educational service center.

[Add Consortium Members](#)

7. Are you partnering with anyone to plan, implement, or evaluate your project? - Select one checkbox below

Yes

No

If you are partnering with anyone, please list all partners (vendors, service providers, sponsors, management companies, schools, districts, ESCs, IHEs) by name on the "Partnering Member" page by clicking on the link below.

[Add Partnering Members](#)

B) PROJECT DESCRIPTION - Overall description of project and alignment with goals

8. Describe the innovative project: - Provide the following information

The response should provide a clear and concise description of the project and its major components. The following questions will address specific outcomes and measures of success.

a. The current state or problem to be solved; and

Our region has many advanced manufacturing shops that pay living wages yet cannot find workers. Advanced Manufacturing(AM) is one of Ohio's in-demand occupations with a projected increases of 6.5-9.1% in job openings. Unfortunately, students have limited interest in Advanced Manufacturing careers as a result of negative images from factory closings which are reinforced by Rust Belt media messages and lack of exposure to "industrial arts classes" in the younger grades. Consequently, unaware of options, many settle for lesser paying jobs. In short, they don't know what they don't know about the high skilled, high paying jobs in advanced manufacturing. The UVCC Makerspace will give thousands of students a look at AM via active learning as well as encourage independent entrepreneurial activities.

b. The proposed innovation and how it relates to solving the problem or improving on the current state.

With a Makerspace, we propose to educate a generation about AM careers and opportunities and to encourage students to learn by doing, thereby increasing the pool of students that are aware of and eventually who choose these job options. Our primary targeted student populations are those in grades 8-12. We also will involve younger students via class tours, specialized camps, and after hours events for youth clubs/groups. The UVCC Makerspace will be the first of its kind in our area. The Makerspace will provide a venue to demonstrate advanced manufacturing, to discuss the many career opportunities available, and to build the skills needed to enter the workforce directly after high school or to pursue higher education in that career field. Active hands-on preparation will improve students' skills and

understanding of careers. With more information and proper training, more students will enter an AM career with living wage potential and area businesses will have a larger pool of workers to meet their needs. Major Components: 1. Student Usage of Makerspace Grades 6-10 - Awareness: The UVCC Makerspace will provide career exploration and limited hands-on work for students in these grades. Some students will revisit following tours for hands-on opportunities detailed below. Grades 8-10 - Limited Practice: In addition to tours and other awareness activities, students enrolled in STEM classes at the 14 association school districts will be invited to use the lab for short term projects. Grades 11-12 - Students as Makers: Students enrolled in career technical programs in engineering and manufacturing at UVCC and its five satellite programs, as well as, students enrolled in other STEM classes will use the Makerspace to work on their own projects and inventions and explore careers as well as learn to functionally use Autodesk Fusion 360. The Makerspace will provide the venue to design, prototype, reimagine and build their own creations. Students in on-campus manufacturing and engineering programs will all complete the Manufacturing Operations course in the Makerspace. 2. Career Exploration in the Makerspace At each grade level, students will be informed about the careers available in manufacturing in an age appropriate way. By seeing equipment demonstrations and finished projects, younger students will become aware of the work. They will also learn some basic engineering/manufacturing vocabulary and engage in simple projects. Older students will be given more specific career information and guidance. 3. Research Factors Related to Enrollment and Success in Engineering and Manufacturing Students who attend Camp Excel, a summer camp for students in grades 4-7 sponsored by UVCC, will be surveyed to determine interest in engineering and manufacturing. Students will be tracked to determine the number who return each year and who enroll in manufacturing and engineering programs at the high school level. 4., Facility The space is two existing classrooms, separated by a wall of windows. One room will be The Design Center with computers equipped with necessary software. These computers will link to a variety of tools and printers in the other room, The Shop, and will allow students to print their work in 2-D or 3-D or send projects to various other equipment. Both The Design Center and The Shop have the power and connections necessary to operate the machinery housed in each and will require only minor modifications. 5. Community Use The Makerspace will be available to the larger community. In the Grant Year, we anticipate opening the Makerspace for limited use by community groups - scouts, clubs, church groups and so on. In Year One of the grant, we anticipate opening the space at least one evening each week and one Saturday per month so that residents can use it for the same purpose as high school students. Each year, our goal is to expand the opportunities for community members to access the site

9. Select which (up to four) of the goals your project will address. For each of the selected goals please provide the requested information to demonstrate your innovative process. - (Check all that apply)

a. Student achievement

i. List the desired outcomes.

Examples: fewer students retained at 3rd grade, increase in graduation rate, increased proficiency rate in a content area, etc.

1. To increase enrollment in engineering and manufacturing classes at the main UVCC campus and in satellite locations (grades 11-12). 2. To improve achievement on Manufacturing Operations End of Course WebXam. 3. To provide training in Autodesk Fusion 360 to all students in manufacturing and engineering programs as well as anyone using the Makerspace for project work so that they can design and prototype more quickly. 4. To provide SOLIDWORKS training to all engineering students. 5 To increase the number of student apprenticeships (grades 11-12). 6. To increase student knowledge of engineering and manufacturing careers (grades 6-10) as measured by pre and post assessments. 7. To expand the program by adding a mobile lab and more sections of engineering and manufacturing. 8. To increase the number of graduates who enter advanced manufacturing employment.

ii. What assumptions must be true for this outcome to be realized?

Examples: early diagnosis and intervention are needed to support all children learning to read on grade level; project-based learning results in higher levels of student engagement and learning, etc.

1. More students in engineering and manufacturing classes will lead to more students entering advanced manufacturing careers. 2. More information about the nature of engineering and manufacturing careers will lead more students to choose those careers. 3. Early career information and opportunities to experiment with the work of engineering and manufacturing will lead more students to choose those careers. 4. Hands-on learning will increase overall student learning. 5. Ongoing formative assessments and an annual review to examine program progress toward goals and redirect activities based on data will make the project more effective.

iii. Describe any early efforts you have made to test these assumptions (pilot implementation, etc), or how these are well-supported by the literature.

Open houses and middle school visits to career centers have been used in Ohio for many years to introduce students to career training. Career exploration classes in middle school and high school have also been provided in our area. Our project builds on these efforts with the latest equipment in advanced manufacturing to be provided for student use. For elementary students, supplying information about careers is a widely supported early step in career education. For high school students who actually work in the Makerspace, they could have no better introduction to the daily work in advanced manufacturing. The approach to learning that will take place in the Makerspace has wide support. Active hands-on projects will result in increased student learning. In his review of literature on active learning in the Journal of Engineering Education, July 2004, Michael Prince found that the benefits included increased retention of information, improved problem solving skills and increased student engagement. Misconceptions about advanced manufacturing block worker training. According to Purdue's Jay Timmons (quoted in IndustryWeek, 2/4/15) people "believe manufacturing's best days are behind it... They think of the old way of doing things." The challenge is to communicate the new technologies and good pay in order to counter the Rust Belt nickname and images of "burned out smokestacks and boarded up factories".

iv. List the specific indicators that you will use to measure progress toward your desired outcome.

These should be measurable changes, not merely the accomplishment of tasks. Example: Teachers will each implement one new project using new collaborative instructional skills, (indicates a change in the classroom) NOT; teachers will be trained in collaborative instruction (which may or may not result in change).

As the project gets underway, teachers and the project supervisor will add the Makerspace as an agenda item in their regular month staff meeting to raise issues and make mid-course corrections. By comparing data points on an annual basis, we will measure our progress. Each year's annual review will track progress toward the student achievement goals and will guide decision making on program activities for the following year.

v. List and describe pertinent data points that you will use to measure student achievement, providing baseline data to be used for future

comparison.

1. Enrollment in engineering and manufacturing programs on the main campus and in satellites. Our current enrollment is 173 and we expect it to grow to 315 by the end of the project. 2. Number of students in apprenticeship program. There are currently 31 students serving as apprentices and we expect it to grow to 60 students by the end of the project. 3. The Manufacturing Operations course is being added. Passage rate and scores on the end of course webxam will be tracked. 4. Ninety percent of engineering students will earn Certified SOLIDWORKS Associate Academic status. 5. Ninety percent of students in manufacturing and engineering will be able to utilize Autodesk Fusion 360 to design and prototype a project. 6. Visiting students who use the Makerspace will show a 90% growth in their understanding of manufacturing careers. 7. Twenty percent more CTE students will be engaged in advanced manufacturing/engineering jobs or post-secondary training within one year of graduation.

vi. How are you prepared to alter the course of your project if assumptions prove false or outcomes are not realized?

1. Hold an annual review in which progress toward goals will be measured and activities adjusted to make more progress, as needed. 2. Identify and schedule teacher training for credentials and other updates. 3. Continue to seek the most recent information on locally valued industry credentials. 4. Apply to ODE for identified credentials to be added to the state list, if necessary. 5. Communicate with districts if younger students are not visiting the Makerspace in the numbers projected and break down any barriers. 6. Identify and address any barriers to high school students earning credentials.

b. Spending reductions in the 5 year forecast

i. List the desired outcomes.

Examples: lowered facility cost as a result of transition to more efficient systems of heating and lighting, etc.; or cost savings due to transition from textbook to digital resources for teaching.

ii. What assumptions must be true for this outcome to be realized?

Example: transition to "green energy" solutions produce financial efficiencies, etc.; or available digital resources are equivalent to or better than previously purchased textbooks.

iii. Describe any early efforts you have made to test these assumptions (pilot implementation, etc), or how these are well-supported by the literature.

iv. Please enter the Net Cost Savings from your FIT.

v. List and describe the budget line items where spending reductions will occur.

vi. How are you prepared to alter the course of your project if assumptions prove false or outcomes are not realized?

c. Utilization of a greater share of resources in the classroom

i. List the desired outcomes.

Example: change the ratio of leadership time spent in response to discipline issues to the time available for curricular leadership.

ii. What assumptions must be true for this outcome to be realized?

Examples: improvements to school and classroom climate will result in fewer disciplinary instances allowing leadership to devote more time to curricular oversight.

iii. Describe any early efforts you have made to test these assumptions (pilot implementation, etc), or how these are well-supported by the literature.

iv. Please provide the most recent instructional spending percentage (from the annual Ohio School Report Card) and discuss any impact you anticipate as a result of this project.

Note: this is the preferred indicator for this goal.

v. List any additional indicators that you will use to monitor progress toward your desired outcome. Provide baseline data if available.

These should be specific outcomes, not just the accomplishment of tasks. Example: fewer instances of playground fighting.

vi. How are you prepared to alter the course of your project if assumptions prove false or outcomes are not realized?

- d. Implementing a shared services delivery model

i. List the desired outcomes.

Examples: increase in quality and quantity of employment applications to districts; greater efficiency in delivery of transportation services, etc.

Area small businesses, entrepreneurs, and hobbyists will have access to the Makerspace. Students from 14 area associate districts will be actively involved in tours and use of the Makerspace. Students from Piqua High School and Piqua Junior High School enrolled in UVCC pre-engineering classes will utilize the space for ongoing projects due to being located adjacent to UVCC.

ii. What assumptions must be true for this outcome to be realized?

Example: neighboring districts have overlapping needs in administrative areas that can be combined to create efficiencies.

1. Area small businesses will utilize a Makerspace if one is available. 2. Parents and students typically do not understand the work of advanced manufacturing and the many opportunities for careers in our area. 3. Some parents and students would use a Makerspace for their own projects. 4. Some makers will start small businesses. 5. Non-educational users will be willing to pay a small fee for supplies provided.

iii. Describe any early efforts you have made to test these assumptions (pilot implementation, data analysis etc), or how these are well-supported by the literature.

In 2015, Edison State Community College surveyed members of the local manufacturing community to assess their interest in using a Makerspace. Many respondents indicated a strong interest in using a Makerspace and a willingness to pay for that opportunity. Because the survey was sent out by email and was forwarded to several organizations, it is not possible to know the number surveyed and compare it to the number of responses. But the many enthusiastic responses leads us to believe there will be makers in the community utilizing the space. In addition, the City of Piqua is promoting the value of the Makerspace as part of its future economic development planning.

iv. List the specific indicators that you will use to monitor progress toward your desired outcomes.

These should be measurable changes, not the accomplishment of tasks.

Example: consolidation of transportation services between two districts.

By comparing data points on an annual basis, we will measure our progress toward increasing usage by all partners, 14 associate school districts, area businesses, and interested individuals/groups.

v. List and describe pertinent data points that you will use to evaluate the success of your efforts, providing baseline data to be used for future comparison.

Example: change in the number of school buses or miles travelled.

1. Number of businesses using the Makerspace 2. Number of individuals and groups that utilize the Makerspace 3. Number and type of attempted and completed projects 4. User satisfaction surveys 5. Number of new business ventures initiated

vi. How are you prepared to alter the course of your project if assumptions prove false or outcomes are not realized?

1. As the project gets underway, teachers and the project supervisor will add the Makerspace as an agenda item in their regular monthly staff meetings to raise issues and make mid-course corrections. 2. Evaluate safety of both students and adults who use the Makerspace based on teacher observation, initial accident reports, and ongoing feedback. Change training as indicated. 3. Data will be collected and analyzed annually.

10. Which of the following best describes the proposed project? - (Select one)

- a. New - Never before implemented
- b. Existing - Never implemented in your community school or school district but proven successful in other educational environments
- c. Replication - Expansion or new implementation of a previous Straight A Project
- d. Mixed Concept - Incorporates new and existing elements
- e. Established - Elevating or expanding an effective program that is already implemented in your district, school or consortia partnership

C) BUDGET AND SUSTAINABILITY

11. Financial Information: - All applicants must enter or upload the following supporting information. The information in these documents must correspond to your responses in questions 12-19.

a. Enter a project budget in CCIP (by clicking the link below)

[Enter Budget](#)

b. If applicable, upload the Consortium Budget Worksheet (by clicking the Upload Documents link below)

c. Upload the Financial Impact Table (by clicking the Upload Documents link below)

[Upload Documents](#)

The project budget is entered directly in CCIP. For consortia, this project budget must reflect the information provided by the applicant in the Consortium Budget Worksheet. Directions for the Financial Impact Table are located on the first tab of the workbook. Applicants must submit one Financial Impact Table with each application. For consortium applications, please add additional sheets instead of submitting separate Financial Impact Tables.

383,353.13 12. What is the amount of this grant request?

13. Provide a brief narrative explanation of the overall budget.

Responses should provide a rationale and evidence for each of the budget items and associated costs outlined in the project budget. In no case should the total projected expenses in the budget narrative exceed the total project costs in the budget grid.

In order for the UVCC Makerspace lab to come to fruition, we will need to purchase some innovative pieces of equipment, supplies and furniture to make the lab functional. This lab will house multiple 3D printers, a desktop milling machine, a desktop lathe, a desktop CNC machine, laser engraver, 3D scanners, large-scale vinyl printer and cutter, and a 3D mobile presentation unit. We can purchase all of this, including the computers and software to run this equipment, for \$329,173.92. Each piece of equipment includes a five-year warranty or maintenance agreement to help minimize the cost to maintain the equipment over the course of the grant. We will also purchase some extra start-up supplies that will enhance the learning capability of our equipment for \$18,685.51. The furniture that will be needed includes various tables and benches to house our equipment and chairs for around the lab. The furniture budget is \$30,492.29. Finally, we will need to provide some professional development of our instructors on how to utilize the new equipment. We feel that we can accomplish this for \$5,000.00.

14. Please provide an estimate of the total costs associated with maintaining this program through each of the five years following the initial grant implementation year (sustainability costs). This is the sum of expenditures from Section A of the Financial Impact Table.

11,700.00 a. Sustainability Year 1

11,700.00 b. Sustainability Year 2

11,700.00 c. Sustainability Year 3

11,700.00 d. Sustainability Year 4

11,700.00 e. Sustainability Year 5

15. Please provide a narrative explanation of sustainability costs.

Sustainability costs include any ongoing spending related to the grant project after June 30, 2017. Examples of sustainability costs include annual professional development, staffing costs, equipment maintenance, and software license agreements. To every extent possible, rationale for the specific amounts given should be outlined. The costs outlined in this narrative section should be consistent and verified by the financial documentation submitted and explained in the Financial Impact Table. If the project does not have sustainability costs, applicants should explain why.

Our sustainability costs are estimated to be \$11,700 per year based on the increase in electric, continual professional development, and maintenance/supplies to keep the equipment up and running. Every piece of equipment has a five-year warranty and/or maintenance agreement that will cover labor and the majority of the parts. We realize that there are consumable supplies required to produce 3D prototypes, and we have included the added supplies into our sustainability costs. Also, please note that these are supplies that we are already used to buying in our normal program budgets for our aging, existing 3D printers. With that being said, we feel that we are overestimating our annual sustaining supply costs. This grant is primarily for the pieces of equipment so that we can build and create an innovative Makerspace lab for our students and community to use.

0 16. What percentage of these costs will be met through cost savings achieved through implementation of the program?

Total cost savings from section B of the Financial Impact Table divided by total sustainability cost from section A of the Financial Impact Table. If the calculated amount is greater than 100, enter 100 here.

17. Please explain how these cost savings will be derived from the program.

Applicants who selected spending reductions in the five-year forecast as a goal must identify those expected savings in questions 16 and 17. All spending reductions must be verifiable, permanent, and credible. Explanation of savings must be specific as to staff counts; salary/benefits; equipment costs, etc.

Our savings are being achieved through reallocation of our existing budget. Please see question 19 for more detail.

100 18. What percentage of sustainability costs will be met through reallocation of savings from elsewhere in the general budget?

*Total reallocation from section C of the Financial Impact Table divided by total sustainability cost from section A of the Financial Impact Table
Note: the responses to questions 16 and 18 must total 100%*

19. Please explain the source of these reallocated funds.

Reallocation of funds implies that a reduction has been made elsewhere in the budget. Straight A encourages projects to determine up front what can be replaced in order to ensure the life of the innovative project.

We are estimating that we will see an overall savings of \$508,985 over the course of the grant from natural attrition of our certified and classified staff as well as not needing to purchase replacement equipment for our existing labs. FY18 - \$175,339 (\$165,039 from salaries and benefits and \$22,000 for a replacement 3D printer), FY19 - \$40,036 from salaries and benefits, FY20 - \$118,657 (\$96,117 from salaries and benefits and \$22,540 for a replacement vinyl printer/cutter), FY21 - \$112,159 from salaries and benefits, FY22 -- \$51,094 from salaries and benefits. Our overall sustainability total over the course of the grant is a \$450,485 savings to our five-year forecast.

D) IMPLEMENTATION

20. Please provide a brief description of the team or individuals responsible for the implementation of this project, including other consortium members or partners.

This response should include a list of qualifications for the applicant and others associated with the grant. Please list key personnel only. If the application is for a consortium or a partnership, the lead should provide information on its ability to manage the grant in an effective and efficient

manner. Include the partner/consortium members' qualifications, skills and experience with innovative project implementation and projects of similar scope.

Enter Implementation Team Key Personnel information by clicking the link below:

[Add Implementation Team](#)

For Questions 21-23 please describe each phase of your project including its timeline, and scope of work.

A complete response to these questions will demonstrate awareness of the context in which the project will be implemented and the time it will take to implement the project with fidelity. A strong plan for implementing, communicating and coordinating the project should be apparent, including coordination and communication in and amongst members of the consortium or partnership (if applicable). Not every specific action step need be included, but the outline of the major steps should demonstrate a thoughtful plan for achieving the goals of the project. The timeline should reflect significant and important milestones in an appropriate time frame.

21. Planning

a. Date Range Fall 2014 - present

b. Scope of activities - include all specific completion benchmarks.

Late Fall, 2014 - Group convened at Edison State Community College to explore opening a Makerspace at the college - the group included representatives from Edison State, Edison Foundation, Upper Valley CC and Piqua Economic Development Office Spring, 2015 - Group surveys over 200 adults from various local manufacturing email lists; 40 people express strong interest in the makerspace and stated they were very likely to use it Fall, 2015 - College is unable to proceed with development of the space due to lack of space and leadership changes. Upper Valley CC expresses interest in housing the makerspace at its site, next door to the college. Fall, 2015/Winter 2016 - Makerspace planning team from UVCC visits three regional makerspace models: ProtoBuildBar, 534 1st St., Dayton, Buildmore Workshop, 6196 Wilcom Rd., Dublin, and Columbus Idea Foundry, 421 Wilcox Rd., Columbus Winter, 2016 - UVCC holds feasibility meetings with planning team and senior management and gathers additional skills gap data in manufacturing and engineering sectors Winter, 2016 - Planning team makes initial presentation to the Edison Foundation and the International Association of Workforce Professionals to outline plans and seek input. Winter, 2016 - UVCC identifies location within the main campus for the Makerspace. Space requires minimal renovation. Spring, 2016 - UVCC reconvenes planning group, adding high school partners, to discuss plans with the group and make revisions based on input

22. Implementation (grant funded start-up activities)

a. Date Range June 2016-May 2017

b. Scope of activities - include all specific completion benchmarks

Summer, 2016 1. Finalize equipment lists. 2. Order equipment, including furnishings. 3. Renovate space. 4. Instructors attend training - Project Coordinator to 3-D boot camp and Engineering Instructor to SolidWorks training. 5. Install equipment. 6. Develop safety training plan. 7. Develop lesson plans and schedule for fall classes for engineering and manufacturing students. Fall, 2016 1. Plan marketing campaign. 2. Implement safety training plan with each group of students using the Makerspace. 3. Teach Manufacturing Operations classes for manufacturing and engineering students in the Makerspace. 4. Collaborate with Career Tech instructors to host UVCC students for special programming or individual project development in the Makerspace. 5. Create pre and post assessments for K-12 target groups. 6. Host eighth grade tours in Makerspace. 7. Host sophomore tours in Makerspace. 8. Host Open House/Ribbon Cutting. 9. Gather data, including all baseline data. 10. Include Makerspace implementation on agenda of monthly CT staff meetings. 11. Continue to work with partners to develop plan for community use of the Makerspace, including coverage for evenings and weekends and to create fee structure for supplies. 12. Hold monthly meetings with Partners to evaluate and revise. Winter, 2016-2017 1. Host second and fifth grade visits in the Makerspace. 2. Implement marketing plan. 3. Gather data. 4. Open Makerspace to community on a limited basis. Spring, 2017 1. Work with area business partners to continue to develop the Makerspace and increase available equipment. 2. Gather data including projected enrollment in manufacturing and engineering programs on campus and in satellites. for 2017-18 school year. 3. Identify professional development needed during summer. 4. Schedule main campus and satellite instructors' project planning meeting. 5. Evaluate Grant Year activities. 6. Schedule machine maintenance. 7. Publicize Camp Excel

23. Programmatic Sustainability (years following implementation, including institutionalization of program, evaluation and communication of program outcomes)

a. Date Range Years 1-5

b. Scope of activities - include all specific completion benchmarks

Year 1 (2017-2018) 1. Continue Makerspace classes for on-campus manufacturing and engineering students. 2. Implement plan created with main campus and satellite instructors for their students to utilize the Makerspace to engage in special training and project creation. 3. Expand efforts to market Makerspace to community groups and individuals including Open House. 4. Continue to hold monthly meetings with Partners to evaluate and revise. Years 2-5 1. Continue Makerspace work. 2. Update equipment as needed. 3. Continue to market to community groups and individuals. 4. Highlight student projects via social media and print media. 5. Respond to input from Partners and users of the space to better meet needs of users. 6. Pursue funding from Partners and Business and Industry for mobile Makerspace. 7. Offer additional sessions of Camp Excel.

E) SUBSTANTIAL IMPACT AND LASTING VALUE

24. Describe the expected changes to the instructional and/or organizational practices in your institution.

The response should illustrate the critical instructional and/or organizational changes that will result from implementation of the grant and the impact of these changes. These changes can include permanent changes to current district processes, new processes that will be incorporated or the removal of redundant processes. The response may also outline the expected change in behaviors of individuals (changes to classroom practice, collaboration across district boundaries, changes to a typical work day for specific staff members, etc.). The expected changes should be realistic and significant in moving the institution forward.

Please enter your response below:

The Makerspace will continue to evolve and build new connections among area schools, the UVCC and the larger community. Specifically, 1. Our satellite engineering programs will be more integrated with the main campus programs. 2. Satellite and main campus teachers and students will collaborate more frequently to design and prototype projects. 3. By opening the Makerspace to the community, we will become an even stronger resource for small business owners and community members that share our interest in manufacturing and engineering. 4. By providing information about advanced manufacturing careers to hundreds of students every year and by providing hands-on opportunities, we will encourage young people to select these careers. 5. Long range goals include offering summer workshops for area teachers in the Makerspace, bringing more educators into the space to expand their awareness of classroom projects they can implement, and emphasizing the role that UVCC can play as an ongoing resource. 6. We plan to offer additional sessions of Camp Excel during the summer. 7. These new connections will help us achieve the project's main goal - preparing more students and adults for careers in advanced manufacturing by providing information, instruction, and skill building in an engaging, well equipped and staffed environment.

25. Please provide the name and contact information for the person and/or organization who will oversee the evaluation of this project.

Projects may be evaluated either internally or externally. However, evaluation must be ongoing throughout the entire period of sustainability and have the capacity to provide the Ohio Department of Education with clear metrics related to each selected goal.

Please enter your response below:

David Larson, Miami County ESC Director of Curriculum and Instruction will serve as external evaluator. Mr. Larson has assisted with the writing, implementation, and evaluation of other Straight A grants. His phone number is 937-339-5100. His email is dave.larson@miami.k12.oh.us.

26. Describe the overall plan for evaluation, including plans for data collection, underlying research rationale, measurement timelines and methods of analysis.

This plan should include the methodology for measuring all of the project outcomes. Applicants should make sure to outline quantitative approaches to assess progress and measure the overall impact of the project proposal. The response should provide a clear outline of the methods, process, timelines and data requirements for the final analysis of the project's progress, success or shortfall. The applicant should provide information on how the lessons learned from the project can and will be shared with other education providers in Ohio. Note: A complete and comprehensive version of the evaluation plan must be submitted to ODE by all selected projects.

Our primary goals are to inform K-12 students and community members about careers in advanced manufacturing and to increase the number of people who pursue those careers. Therefore, our data collection will be a quantitative measure of those goals described in Question 9 above that will be compiled annually: 1. Enrollment data showing increased number of students in engineering and manufacturing classes on the UVCC main campus and in satellite locations. 2. Data showing increased number of students in apprenticeship program - both main campus and satellite locations. 3. Strong passage rate on the Manufacturing Operations End-of-Course Webxam. 4. Number of engineering students earning SOLIDWORKS certification - Associate - Academic. 5. Based on follow-up survey of career tech concentrators, number of students who pursue careers in manufacturing and engineering. 6. Number of projects designed and prototyped using Autodesk Fusion 360. 7. Number of students who attended annual Camp Excel who on a survey indicated an interest in manufacturing and engineering who subsequently enroll in one of our engineering or manufacturing programs. 8. Pre and post survey data from students (elementary, middle and high school) who visit the Makerspace indicating increased level of awareness and knowledge of manufacturing and engineering careers. 9. Survey of students who enroll in manufacturing and engineering classes to determine number who participated in Makerspace tours and activities.

27. Please describe the likelihood that this project, if successful, can be scaled-up, expanded and/or replicated. Include a description of potential replications both within the district or collaborative group, as well as an estimation of the probability that this solution will prove useful to others. Discuss the possibility of publications, etc., to make others aware of what has been learned in this project.

The response should provide an explanation of the time and effort it would take to implement the project in another district, as well as any plans to share lessons learned with other districts. To every extent possible, applicants should outline how this project can become part of a model so that other districts across the state can take advantage of the learnings from this proposed innovative project. If there is a plan to increase the scale and scope of the project within the district or consortium, it should be noted here.

Yes, replication is very likely. Schools, workforce development entities, and business/industry representatives share a concern for the lack of trained people currently available as well as an understanding of the need to encourage younger students to pursue careers in manufacturing and engineering. Efforts to "fill the pipeline" need to start early. Demonstrated success of this project will encourage partners to support the expansion of this concept in other schools and communities. Given Ohio's ongoing efforts to build new schools, many districts have more flexible and updated space that will support the infrastructure needed for Makerspace equipment. Given the strength of and commitment to manufacturing in our region and growing belief that the elimination of industrial arts in schools has contributed to the problem, it is expected that additional sites will be created by schools and communities.

By virtue of applying for the Straight A Fund, all applicants agree to participate in the overall evaluation of the Straight A Fund for the duration of the evaluation time frame. The Governing Board of the Straight A Fund reserves the right to conduct an evaluation of the project and request additional information in the form of data, surveys, interviews, focus groups and other related data on behalf of the General Assembly, Governor and other interested parties for an overall evaluation of the Straight A Fund.

PROGRAM ASSURANCES: I agree, on behalf of this applicant, and any or all identified consortium members or partners, that all supporting documents contain information approved by a relevant executive board or its equivalent and to abide by all assurances outlined in the Straight A Assurances

(available in the document library section of the CCIP).

Dr. Nancy D. Luce, Superintendent, Upper Valley Career Center

Consortium Contacts

No consortium contacts added yet. Please add a new consortium contact using the form below.

Partnerships

Upper Valley Career Center (062125) - Miami County - 2017 - Straight A Fund - Rev 0 - Straight A Fund

Sections 

Partnerships

First Name	Last Name	Telephone Number	Email Address	Organization Name	IRN	Address	Delete Contact
Doreen	Larson	937-778-7801	dlarson@edisonohio.edu	Edison State Community College		1973 Edison Dr., , Piqua, Ohio, 45356	
Justin	Sommer	937-778-2051	jsommer@piqua.org	City of Piqua		201 West Water St., , Piqua , Ohio, 45356	
Phil	Ratermann	937-229-1376	phil.ratermann@udri.udayton.edu	FASTLANE		University of Dayton Research Institute, 300 College Park, Dayton, Ohio, 45469	
Chad	Whited	614-376-6209	cwhited@atctrain.com	Advanced Technologies Consultants		PO Box 905, 110 West Main St., Northville , MI , 48167	
Jason	Hoffman	419-566-8758	jhoffman@buckeye-edu.com	Buckeye Educational Systems		150 Industrial Dr., , Lexington, Ohio, 44904	
Richard	Hanes	937-773-4321	hanesr@piqua.org	Piqua City	044644	719 E Ash St, Piqua, OH, 45356-2411	

Implementation Team

Upper Valley Career Center (062125) - Miami County - 2017 - Straight A Fund - Rev 0 - Straight A Fund

Sections 

Implementation Team								
First Name	Last Name	Title	Responsibilities	Qualifications	Prior Relevant Experience	Education	% FTE on Project	Delete Contact
Roger	Voisard	Project Supervisor	1. Finalize and approve all equipment and software selections. 2. Serve on partner coordination team to market and expand use of the Makerspace by school districts and community members. 3. Promote, support, and supervise the implementation of the Makerspace concept. 4. In collaboration with the Treasurer and Project Coordinator/Instructor, ensure the proper expenditure of grant dollars and manage the overall budget. 5. Evaluate Project Coordinator/Instructor.	1. Worked eleven years for Voisard Tool Service, a family-owned manufacturing business. 2. Career and Technical counselor and supervisor for fifteen years. Currently, supervises manufacturing, engineering, and construction programs at Upper Valley Career Center. 3. Social Studies teacher for five years. 4. B.A. and M.S. degrees from University of Dayton, in Social Studies and Counseling, respectively. 5. Licensed as teacher, counselor and principal.	1. Worked for eleven years for Voisard Tool Service, a family-owned manufacturing business. 2. Career and technical counselor and supervisor for fifteen years. Currently supervises manufacturing, engineering and construction programs at Upper Valley Career Center. 2. Social Studies teacher for five years.	B.A. from University of Dayton Comprehensive Social Studies M.S. from University of Dayton Guidance and Counseling Administrative License	10	
Don	Smith	Project Coordinator/Instructor	1. Assist with equipment and software selection, ordering and installation. 2. Maintain equipment and evaluate the need for additional or updated equipment and software. 3. Attend 3-D boot camp training and other professional development activities. 4. Create safety plan and safety training modules. 5. Plan and implement Manufacturing Operations course for manufacturing and engineering students. 6. Coordinate scheduling of courses and open lab times with instructors and administrators. 7. Assist with development and implementation of	1. Associates Degree in Architectural Engineering from ITT Tech Institute in Dayton. 2. Nineteen years with Shaffer Manufacturing Company and Hobart Corporation as Chief Design Engineer, Technical Specialist, Designer, Project Manager, Supervisor, and Drafter. 3. Twenty years as	1. Nineteen years with Shaffer Manufacturing Company and Hobart Corporation as Chief Design Engineer, Technical Specialist, Designer, Project Manager, Supervisor, and Drafter. 2. Twenty years of experience as Career-Tech Instructor of CAD, Exploring Technologies, and	Associate Degree from ITT Tech Institute in Dayton in Architectural Design Ongoing continuing education	100	

marketing plans. 8. Host elementary and middle school tours and activities in the Makerspace. 9. Host sophomores during Explore Careers Day in the Makerspace and work with manufacturing and engineering instructors to develop informational and engaging activities that will promote interest in careers in these areas. 10. Collaborate with on-campus and satellite staff to identify opportunities for ongoing project collaboration using the Makerspace. 11. Create opportunities for special events and programming. 12. Gather, maintain, and analyze data for project evaluations. 12. Attend monthly program evaluation meetings. 13. Work with partners to develop a plan to expand use of the Makerspace by community members and groups during evening and weekend hours.

Career-Tech Instructor of CAD, Exploring Technologies, and Certification courses for Upper Valley Career Center

Certification courses for Upper Valley Career Center.