APPLICATION COVER PAGE
(Please Print or Type — All Fields Must Be Completed)

Project Name: Enterprise High School Industrial Arts and Manufacturing and Engineering Program (IAMEP) Revitalization
Amount Requested: $249,986.00

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	Participating High School or Middle School Name (add additional rows as needed)	Lead Contact Name	Grade Levels	Student Enrollment
1.	Enterprise High School	Stephanie Schofield	9-12	133
2.	Enterprise Jr. High	Blake Carlsen	7-8	61
3.				
4.				
5.				

Please check all that apply:

_X_ This project directly involves Career and Technical Student Organizations
Please note page of proposal that describes this relationship. Page: 29

_X_ This project has a clear connection to STEM
Please note page of proposal that describes this relationship. Page: 7-9, 12, 16

PURPOSE AND SCOPE

Enterprise School District 21, along with our community and statewide partners, support the proposed revitalization of the Industrial Arts and Manufacturing Engineering Program (IAMEP) at Enterprise High School. Our program's goal is to immerse students in the experiences of local businesses and industry while also exposing them to career and technical fields which build on and expand beyond our local economy into statewide, high wage/high demand jobs.

Grant funding will be directly used to create a working construction and fabrication lab and to facilitate enhanced instruction through the use of community partners and staff training. The Enterprise School District and our community partners propose updating and expanding the current industrial arts facility by creating the following:

(a) hands-on workspaces utilizing new equipment and cutting-edge technology
(b) opportunities for students to develop skills and competencies necessary to articulate with community colleges
(c) partnerships with businesses which allow for internships, in-class demonstrations, and expertise provided by industry professionals
(d) increased awareness of community and statewide high wage/ high demand careers
(e) opportunities for middle school students to discover and begin considering post-secondary options
(f) opportunities for other schools and local businesses within the Region 13 CTE Consortium to use our improved and enhanced facility to train students and employees.

The program will be aligned with Oregon diploma requirements and integrate math, business and the necessary skill sets to enable students to work toward post-secondary training, an industrial certificate, two year college degree and ultimately lead to their successful employment in a manufacturing industry career.

SUPPORT FOR OVERALL REVITALIZATION EFFORT

Innovation

The award of this proposal would immediately begin to impact the numbers of students and community members exposed to Engineering and Manufacturing courses and careers. The majority of the equipment and machinery in the current lab has been in place for over 30 years, without updating. The addition of new, more technologically advanced equipment along with the redesign of the CTE curriculum itself will create a more rigorous and relevant learning environment for students.

Although updating facilities, technology and safety equipment will play a large role in the successful implementation of the grant project; the impact on our community and student opportunities is much greater. Upon the completion of our project, the IAMEP will be heavily integrated with local, regional and state business partners who are motivated to enhance student learning by providing in-class supplemental instruction, internships, field experiences, tours, distance learning and joint community projects. Experiences and connections made through these partnerships will directly expose students to local businesses that play a major role in the economy.

With this new **Innovation,** the program will be transformed from a “bare bones” shop program which presently reaches roughly only 50 high school students to an expanded, community-involved education center. The revitalized program will have the ability to educate and involve not only a greater number of high school students, but also middle school students, alternative school students, the general community population through outreach and evening courses, multiple businesses throughout our county, and other schools within the Region 13 ESD consortium.

Integration

The goal of the grant proposal by Enterprise School District is to immerse students into the highly profitable and underserved career areas of engineering, fabrication, and manufacturing trades. Our proposed model has **integrated** several key components that work toward the overall success of the project goals, including:

- Implementation of new equipment, tools, safety systems, and cutting-edge technology into the Enterprise High School IAMEP.
- Opportunities for students to complete internships with local businesses.
- Opportunities for students to learn from trade and business experts both in and beyond the classroom lab setting.
- Opportunities for middle school students to participate in learning activities in the classroom and begin considering post-secondary options.
- Opportunities for the Region 13 consortium, business partners, and community members to utilize the new facility to train both high school students and employees, as well as provide community outreach courses.
- Providing 2+2 dual-credit programs with Blue Mountain Community College (BMCC) and Treasure Valley Community College (TVCC)
- Opportunities for students to travel and explore careers and job sites at county, regional and state levels through partner field experiences.

The proposed Enterprise High School Manufacturing Engineering Program (MEP) will engage contextual learning across a broad range of industry-recognized technology industries and will equip students with the necessary skill sets to fill high demand, high wage careers in manufacturing and engineering.

CTE Expansion and Growth

The intent of our program is to provide an expanded and enhanced student-centered and directed-learning Industrial Arts and Manufacturing Engineering Program (IAMEP) at Enterprise School District. This will include bridging the IAMEP, community, region, and school together to enhance college and career readiness, infuse core curricular skills which support diploma requirements, provide essential skills, and broaden the number of underserved students participating in the program.

Once the needed facilities and equipment are in place, the IAMEP will be expanded to cover several basic skill areas we currently are not able to provide. These include electrical, framing, advanced welding, and plumbing, as well as computer programs and Computer Numerical Control (CNC) machines. Integrating this new instruction into our IAMEP will be accomplished through working with our community partners during in-class presentations, field trips, internships, and job shadows, and in developing a more real-world, industry-based curriculum. There are currently eight principal partners already committed to this project, with plans to increase this number by at least 50% by Year Two. The IAMEP instructor will increase her own professional competencies and skills, in particular by attending the Lincoln Welding Institute, as well as other training opportunities and conferences. We expect to see tremendous **growth** in the enrollment and success of Enterprise students in the IAMEP as a direct result of the project. Students will be drawn to the IAMEP through middle school experiences and will be more aware of the vast opportunities within this career cluster. Our students will be able to gain broad based industry and career knowledge because our partners range from small local businesses to large state companies.

Experiential Learning Opportunities

The redesigned IAMEP program will be based on student-centered, project-based learning. Students will work together in small teams or individually to create projects in the lab that will then be donated or sold to the community or local citizens. These projects will be guided and instructed in part by local industry leaders. Throughout the actual designing, building, manufacturing, and marketing phases students will secure skills in both craftsmanship and business management..

One key component which makes our project distinct is the connections and partners we have made on a regional and statewide level. We will work with two state partners, Oregon State Bridge Construction and Fairline Bridge. These companies recognize the need for skilled workers and are committed to helping foster Oregon's youth into construction trades. These unique and significant partnerships will provide Enterprise High School students with learning experiences and internships which reach beyond our county, including a week-long field experience where students will be taken to bridge and contracting sites throughout the state and exposed to all aspects of planning, designing, and erecting large infrastructure projects. They will experience how to plan, build, wire, and plumb, as well as how to operate technology-based equipment and then see it applied in the field by experts. Students will also have the opportunity to work directly in internship positions which will take place both during the school year and over summer vacations. Ultimately, students will be taught skills in the classroom working with both the regular instructor and trade professionals as well as be exposed to job experiences and work beyond the classroom setting.

PROJECT DESCRIPTION

A. Project Outcomes and Progress Markers

The improvement and revitalization of the Industrial Arts and Manufacturing Engineering Program (IAMEP) is the targeted grant project for the CTE program. The renovation of our laboratory and integration of partners into our student learning model is a perfect fit for our community. The design of the program will also develop students who will be more prepared and competitive for careers in local, regional and state high wage, high demand careers.

The equipment provided through funds made available by the grant will engage students in experiential learning and meaningful projects. For example, the addition of Computer Aided Drafting (CAD) programs, CNC machines, and the Lincoln Simulator will attract students to design and engineering while, concurrently, teaching cutting edge manufacturing and engineering skills. The outcomes and progress markers for each area of our proposal are shown in the table below.

Outcome 1. Improved and sustainable partnerships with business, industry, labor, and educational providers: Enterprise School District's partnerships with STEM industry representatives will serve as a backbone to the development and implementation of the school's revitalized IAMEP. These partnerships will reflect broad-based skill sets, depth, and longevity in commitment.	
Progress Markers	**Success %**
Percentage of students participating in the Oregon Engineering & Construction Partner Tours through Oregon State Bridge Construction and Fairline Bridge Inc. during enrollment in CTE Courses.	70%
Percentage of partners committing to provide job shadow days, internships, field experiences and on-site job training	75%
Increased percentage in local partners within the first year of implementation	50%
Percentage of partners providing at least one identified contact person to serve as a mentor for students within their business or company	100%
Percentage of partners committing to curriculum development through assisting in instructional units where they will serve as in-class	80%

instructors and/or mentors	

Outcome 2. Improved student access to CTE Program of Study: An increased number of students at Enterprise High School will enroll in a CTE Program of Study (POS) course during their high school career. These students will reflect diverse populations (income levels, gender, and first-generation college bound).	
Progress Markers	**Success %**
Percentage of Jr. High students who will participate in an experience day in the IAMEP lab	85%
Percentage of students able to attain Proficiency Credits by providing flexibility in student schedules and allowing students to assist in designing relative, meaningful courses for individualized learning.	100%
Increase percentage of 11th and 12th grade students enrolled in CTE courses during the 2014-2015 school year	25%
Increase in the percentage of non-traditional students, including females, participating in internships, job shadows, and construction trades training	80%
Increase in 9th and 10th grade students expressing interest in enrolling in CTE courses	25%

Outcome 3. Increased rigor in technical and academic content: IAMEP Teachers will have specialized knowledge reflecting current industry standards and include skills in STEM education as related to high demand and high wage careers. Various evaluation measures will be used to measure student success and improvement.	
Progress Markers	**Success %**
Lead IAMEP teacher will complete a one-week internship in an Engineering and Manufacturing workplace (Lincoln Welding School) before the start of the 2014-15 school year	100%
Teachers of STEM courses who will complete CTE training in specialized skill areas such as welding, design (CAD), or other engineering programs.	100%
Percentage of Program of Study completers who will pass the Ag Mechanics portion of the National Occupational Competency Testing Institute NOCTI exam	80+%
Percentage of students who improve their scores from pre-test to post-test scores for CTE courses	90%
Percentage of increase in students' scores from pre-test to post-test for CTE courses	45%

Outcome 4: Increased career opportunities for students which may include access to career and technical student organizations: Skills learned through involvement in STEM and CTE courses will be utilized and practiced during career development events offered through the FFA program.	
Progress Markers	**Success %**
Percentage of IAMEP students competing in the FFA Shop Skills Contests hosted by Treasure Valley Community College TVCC	80%
Increased percentage of students completing Agricultural Experience Tracker records and applying for chapter, district, and/or state awards for Agricultural Design and Repair and Maintenance Proficiency Awards.	90%
Percentage of membership growth in Career Student and Technical Organizations	25%

Outcome 5: Improved ability to meet workforce needs both Region 13 and statewide: Students are exposed to and become proficient in meeting industry standards in welding, construction, manufacturing, design, and/or technical careers.	
Progress Markers	**Success %**
Percentage of CTE courses which will incorporate syllabi and skill sets allowing for dual-credit articulation with TVCC and BMCC, creating an increased number of students to readily transition to college.	95%
Percentage of IAMEP students who will participate in at least one career-related, mentor-lead instruction unit and/or job site experience.	100%
Increased percentage of students completing dual-credit CTE courses.	80%
Percentage of IAMEP students who will achieve an average standard for performance in Critical Engineering Skills for Success (from Career-Related Learning Standards)	75%

B. Career and Technical Education Program of Study Design

The Enterprise School District's proposal to revitalize and transform the current Industrial Arts Manufacturing and Engineering Program and to expand upon the model of our current approved statewide Agricultural Science and Technology curriculum is perfectly aligned with the theme of this grant set forth by the ODE and ultimately the Bureau of Labor and Industry. Nearly each and every one of the six specific skill sets within this core area are addressed in and affected by the approval of this grant.

Updating the current facility and expanding it to include safe and up-to-date facilities will improve student's opportunities to work in hands-on applications with both instructors and partner professionals who will contribute specialized instruction time inside the facility. Improving teacher knowledge and practice will be another component of the grant and will be accomplished by the instructor completing summer internships with program partners and attending specialty courses such as the Lincoln Welding School. This will ensure that students are receiving industry-relevant instruction which is cutting edge and technologically advanced.

Our goal is to immerse students into real world construction, engineering, and manufacturing scenarios within the classroom lab setting and then to allow for specialized transfer of learned skills into internships, field experiences, and job shadows, working with partners at local businesses and throughout the state.

The initial curriculum will include instructor-driven applications in the classroom. Following the implementation of basic skills and safety training, specific trade and career skills will be addressed and instruction provided in part through course sections led by industry partners. We anticipate this taking place in a step-by-step process.

We envision several projects which will ultimately develop technical skills that will lead to post-high school accomplishments in industry, trade programs, community college, and beyond. One example project might include designing and constructing a small shed or building and involve the following program partners and instruction: a general construction contractor covering framing and building skills, followed by a wiring and electrical unit overseen by a local electrician, and a plumbing unit also overseen by a local partner. Throughout the process students will also be working in the information

and communications cluster developing skills in the use of digital media, technical writing, advertising, and telecommunications while performing activities such as ordering materials, reading plans, and ultimately preparing to market or donate the finished product back to the community.

A second possible project could include using welding and machining technology to develop a community enhancement project such as metal hanging basket holders for down town lamp posts. The first step to this project would be providing students with basic instruction on welding and developing skills with a variety of machine set ups and applications. This would be overseen by the instructor, while specific, guided units would be led by local welders and industry trades professionals. Students would utilize cutting edge technology through the use of CNC machines to design and develop art work that would be then fabricated and made into the light post hangers. These are just a few small example projects that ultimately will be expanded upon and lead to a comprehensive program which is totally integrated and aligned with local industry.

Our new IAMEP program will also have ties reaching far beyond our local community. We have developed statewide partnerships with companies such as Oregon State Bridge Construction and Fairline Bridge Inc. These partners have agreed to provide tours, field-days and internships to build on students' skills, providing opportunities which will take place both during and post-high school years. Workforce data provided by Oregon Labor Market Information System indicates that Manufacturing Employment is expected to increase 18% statewide over the next ten years. The ultimate outcome from the revitalization of Enterprise School District's IAMEP program is the fulfillment of our commitment to develop student skills which will enable them

either to directly enter the manufacturing and engineering workforce upon graduation, to advance to a trade program, or to continue on for post-secondary education.

C. Underserved Students

Several specific activities within the proposed grant are designed with the intent to increase and support female, economically disadvantaged, students with disabilities, and First Generation College going students. Many of these same groups are currently lacking representation in the high wage, high demand areas of STEM careers. Data collected from 2009 through 2014 shows an average of 40% of the Enterprise student population being economically disadvantaged on any given year. In addition, each year nearly 28% percent of Enterprise graduates will be First Generation College Bound. Many of these same groups are currently lacking representation in the high-wage, high demand areas of STEM careers.

First, to introduce and recruit these underrepresented groups to the newly designed program, staff and counselors will discuss the program and its design each year during individual parent/student team conferences. During tours and online sessions with distance business partners' students will meet with and witness females in a variety of STEM related careers. These same yearly state-wide experiences will include visits to colleges and trade schools. These partner supported trips will serve as the connection to further education that many students may not otherwise make due to limitations within their family situation. New rigor in math and writing will reinforce core academic subjects through content which more directly engages students and allows them to see connections between careers and essential skills. When local business individuals are working in the classroom directly with students it will create an

atmosphere where special tutoring connections and natural mentoring opportunities occur.

The simple addition of partners in the classroom will provide students with a higher percentage of individualized instruction time. Many of the projects in the lab will also occur in teams. This is tailor-made for developing a peer tutoring program. Both of these situations create an ideal learning environment for students with disabilities or special needs assistance with regards to core academic skills. It has been proven many times over that for many students it is easier to learn these core skills through hands-on applications. Underserved students may well find it easier to connect and build skills through use of the newly renovated, more user friendly program and lab where personal instruction time is more readily available.

Though not specifically identified as an underserved population in the grant criteria, it is of importance to consider the positive learning outcomes that will result for students with alternative learning styles and who do not typically experience success or positive reinforcement in the other classroom settings and core subject areas. For these students, learning valuable hands-on skills in the manufacturing and engineering fields quite often leads to careers in these trades. In addition, CTE programs provide an environment where students learn the values of hard work, task completion, responsibility, and problem solving, while simultaneously receiving positive recognition for their efforts and accomplishments.

D. Diploma Connections

With this critical funding, the IAMEP program will provide valuable connections and applications which will help Enterprise students meet the requirements of the

Oregon Diploma. Through collaboration in the Region 13 Career and Technical Education Consortium, direct lessons for math in CTE have been developed. These lessons will be integrated into the IAMEP. In addition, the instructor will work closely with our high school mathematics instructors to develop cross-curricular assignments directly related to the design and construction of projects. Incorporating lessons in such a way by utilizing the math instructors as partners in the project will allow us to ensure that lesson plans support rigorous and relevant instruction.

Our program will be built for personalization. Students will have the opportunity to choose between job shadows, internships, and projects created and developed with the help of our varied mentor partners. The Enterprise School District also provides students the option of designing their own proficiency credit course. As a result, a student who wished to concentrate, for example, on working toward a career as an electrician could create lab projects and job time with a particular partner and work exclusively on his or her main skill set interest. During job shadowing and internships students would also be able to gain valuable soft skills incorporating personal accountability, teamwork, problem solving, customer relations, and conflict resolution just to name a few. When preparing for and completing internships and job shadows, students will work on literacy skills while researching and writing summaries and evaluations of their experiences. Students will also be able to utilize both writing and job shadows in completing their Education and Career Plan as part of their senior project.

E. Sustainability and Communication

Sustaining & Building Partners

Re-designing and updating the classroom lab and expanding the curriculum is strongly supported within the Enterprise School District and the community itself. Community partners will continue to be maintained as part of the Program of Study. Collaboration with these partners will be a mainstay of the program. The instructor will persist in developing new methods of instruction through integrating long distance media connections with bridge and construction partners located outside our region. This will be a big step toward working across the conventional boundaries of location. The integration of distance instruction and sharing through media and technology resources will let students learn from professionals on work sites while still in the classroom lab. Meetings will be held bi-monthly with local partners and at least twice a year with distance partners. These planning sessions will consist of curriculum development, student involvement and recruiting strategies, and brainstorming to recruit and develop additional partner resources.

Active Communication and Recruiting

Growth in student population and recruiting are also imperative to the sustainability of the project. Involvement of middle school students in projects and work days in the shop will encourage enrollment in the program. It will also serve to jump start their interest in technology and manufacturing careers. Many of the design structures that will be constructed will be team based. Groups of students will work together with supervision by the industry specialists to complete each skill set. Working in a team setting will allow for students to take initiative for their own project and then be

recognized for their work when it is sold to or donated to the city or private individuals. Students will each serve as a team leader during separate sections of construction for every project according to their area of greatest interest. For example, if a shed were being constructed one student would be the framing foreman, while another took over the leadership position during wiring.

Evening community classes will be developed to encourage parents and local citizens to become involved in the program. The implementation of these classes will fulfill many needs. Each class will have a small enrollment charge bringing some additional funding into the program. In addition inviting the public to work in the lab will build support for the program and lead parents to encourage enrollment of their students.

The addition of the AutoCAD and multiple computer workstations allows for students to discover and appreciate the value of math and science through applying knowledge to designing projects. The integration of design into the curriculum will also develop problem solving skills. This ties in directly with promoting STEM curriculum in the classroom. Computers and software will be used to simulate real-world challenges and solve them with student versions of the same tools used by professionals in industry. Math can often be “abstract” to students. Through the IAMEP program students are shown real-life applications of math concepts.

The GoTo Meeting® and Adobe Captivate 7® software, combined with webcam and conferencing phone system will enable the IAMEP to engage in distance learning directly from the labs with other schools in the Region 13 CTE Consortium, as well as

explore other teaching and learning options. This technology will also lend itself to providing and enhancing community outreach and instruction possibilities.

Financial Sustainability

The Enterprise School District will continue to seek new resources to sustain and enhance the IAMEP. In addition, the program itself will be able to provide through the sale of the outdated equipment that is to be replaced, once the School Board declares it as surplus. The surplus equipment dollars will be reinvested in the IAMEP, to provide funding to offset costs for students taking advantage of summer internship opportunities, provide staff and partner training, for purchase of materials and supplies, and possible scholarship funds for students pursuing post-secondary training in the manufacturing and/or engineering trades. Funds will also be raised on a regular basis through proceeds made by selling products designed and constructed in the Manufacturing and Engineering Program.

Students will be directly involved with communication with the community and private individuals regarding projects which can be designed and created in the facility with the guidance and help of industry partners. Projects will then be sold or donated to the community. Dollars earned through the completion of these projects will then be returned to the budged for the purchase of materials and supplies.

Blending the use of the Lincoln Virtual Reality Arc Welder Trainer with traditional training and partner experiences will prove valuable on several levels. The need for costly consumable materials is greatly reduced. Students receive immediate visual and audio feedback from the machine allowing them to adjust and improve through self-guided practice. Team learning and interaction levels will be higher with the virtual

machine because more than one student can be involved at any given time. In addition students will be more likely to value communication from classmates and then use it to adjust their method and improve skills. In a study conducted by Iowa State University which was comparing strictly traditional training with the combined method it was shown that certification rates of students was higher when both systems of instruction were in use.

F. Activities and Timeline

All activities are clearly connected to the vision and goals of the grant program. They are directly related to both the outcome measures and the project will be on schedule for completion by June 30, 2015 as outlined in the chart below.

Project Activities	Rationale	Start Date / End Date
Quarterly Progress Reports	The lead instructor and project coordinator will provide updates to ensure timely progress and implementation of project funds.	January 2014 June 2015
Formation of Partner Advisory and Regular Scheduled Meetings	Partners and the instructor will meet bi-monthly to discuss curriculum development and instruction in both the classroom and during jobsite learning. These sessions will also be used to recruit future partners. (Outcome 1)	January 2014 Ongoing
Ordering and Installation of equipment and Technology	The implementation of new and improved technology including the facilities renovation and addition of virtual trainers, CNC machines, CAD program, and distance learning tools will increase students skill sets and ultimately make them more proficient in meeting industry standards (Outcome 5)	January 2014 June 2015
Development of necessary evaluation measurement tools	Pre and post assessments will be developed. Students will complete pre-tests as a means of establishing a base to measure progress for Outcome 3.	January 2014 March 2014

Project Activities	Rationale	Start Date / End Date
Update Articulation Agreements for college credits with Blue Mountain and Treasure Valley Community Colleges	Alignment of course syllabi to fit course requirements for students to earn college credits through IAMEP courses. (Outcome 5)	January 2014 March 2014
Treasure Valley Community College and Oregon State University Skills Days	Students will attend FFA “Shop Skills” competitions and career days where they will utilize skills gained through participation in the IAMEP program. (Outcome 4)	April 2014 and April 2015
IAMEP Instructor attend Lincoln Welding School	The instructor will attend specialized schools to become proficient and knowledgeable in the use of all new technology to reflect current industry standards (Outcome 3)	March 2014 August 2014
Oregon Engineering & Construction Partners Tour	This off-campus statewide educational experience with partners will allow for students to increase awareness of high wage, high demand jobs. (Outcome 1)	March 2014 June 2014
Female student(s) attend regional and statewide “Connecting Females with Building Trades & Manufacturing Project”	Female students who are considered “nontraditional” in the fields of Building trades and construction will be encouraged to attend this summer program. (Outcome 2)	May 2014 June 2014
Jr. High & Community Member Introductions	Jr. High students will participate in initial activities in the lab through experience days designed to give them a “cruise” through project introducing classes and the facility. An evening introduction will be presented by students to community members. (Outcome 2)	June 2014
Industry/business partner interactions (co-teaching, lunches, job shadows, internships)	Students will work with partners in teams in the classroom and through one-on-one job shadows and internships. Mentorships will be developed between partners and students with specific skill interest areas.(Outcome 1)	September 2014 June 2015

Project Activities	Rationale	Start Date / End Date
All Equipment in place and students fully engaged in the program.	Machinery, equipment and technology are fully in place. Partner activities are fully integrated into the program and students are full participants. (Outcomes 1-5)	June 2015

G. Evaluation

The IAMEP lead instructor, Stephanie Schofield, will also serve as Project Director. She will ensure data collection is completed and provide progress reports to the ODE. An independent consultant and Principal Investigator, Andrea Tyler, will provide up to 5 hours of in-kind services per month for the duration of the grant project, providing assistance with instrument design, data collection and collating, project evaluation, and reporting as needed. Success will be observable over the duration of the measurement of each outcome and progress marker as shown on the table below.

Outcome	Progress Markers	Evaluation
Improved and Increased partnerships with business and industry on local, regional, and state levels (Outcome 1)	• Increased Number of participating partners • Increased Number of job shadows and internships and mentorships provided	• Number of Partnerships • Number of and type of available career related learning opportunities and internships
Improved student access to CTE Program of Study (Outcome 2)	• Increased number of students enrolled in CTE courses • Increased number of students interested in careers related to the IAMEP program	• Number of students enrolled in the program • Student Surveys • Student Engagement in career learning activities • Diversity of students enrolled

Outcome	Progress Markers	Evaluation
Improved Rigor and Content aligned to Oregon Diploma Requirements (Outcome 3)	• Increased participation in teacher job-site internships • Increased knowledge and skill	• Number of partner job shadows completed by the instructor • Pre-Post test assessments • Teacher Surveys • Observations/Reflections
Increased career opportunities for students and access to technical student Organizations (Outcome 4)	• Increased number of students attending shop skills events • Increased membership in the FFA	• Number of students attending Shop skills Contest at TVCC or OSU. • Number of enrolled students on Membership roster for the FFA
Improved ability to meet workforce needs in both region 13 and statewide (Outcome 5)	• Increased number of students earning articulated college credit • Increased number of students participating in partner led activities	• Number of articulated college credits earned by students • Number of students participating in job shadows, internships, and partner related learning activities

H. PARTNERSHIPS

In the beginning steps of developing the proposal, we held meetings with education and industry leaders who advised on recruiting other partners, machines and technology needed to implement new instruction, roles for partners, and an overall vision for the re-designed program.

The backbone of our proposal is truly the relationships we have developed with our initial partners. They have been involved with every step of the planning of our project. They will continue to be key players in the development and design of the new laboratory. However, their involvement goes way beyond consulting and helping re-design our fabrication labs.

Initial partners will play an integral role in helping design and instruct rigorous and relevant curriculum in the classroom. Each local partner will spend a period of time in direct contact with students in the classroom assisting and instructing students in their area of expertise. During meetings held with partners community projects will be planned and the designing, construction, and fabrication will then take place in the lab with students. To truly engage students who are interested in specific careers internships and job shadows will also be set up with partners and their employees. Currently we have a variety of local trades represented including; welders, fabricators, builders, mechanics, machinists, and electricians. The amount of support within the Enterprise community is outstanding and we anticipate the number of local partners will grow each year to include an even wider variety of trades. The grant developers believe strongly in community, however, we also believe in affording students far reaching opportunities. This has led us to one of the most unique pieces of our plan. The Enterprise School District Industrial Arts and Manufacturing Engineering Program have forged several state level partners. These businesses are committed to helping students realize the opportunities which exist in bridge and construction site management and the rebuilding of the state's infrastructure. The first steps of their involvement will include setting up and leading career tours on job sites throughout the state. These field experiences will expose students to a wide variety of careers. In addition students will be offered the availability of internships over summer. Many of these internships will be in prevailing wage jobs. The awarding of this grant will allow for the possibility of technology and distance education to also take place with these partners. It is anticipated that webcam, place based lessons will become part of the curriculum.

The beauty of implementing these grant funds is that it is merely a step toward the overall revitalization plan for the program. The re-designed lab and new technology will allow partners to work with students using up-to-date equipment which models current industry standards. The new facility will allow for a more highly developed curriculum which emphasizes rigor and relevance. It also allows for the partnerships to move seamlessly from classroom to jobsite applications. Bi-monthly meetings will assist in developing the ongoing vision of the partners committee beyond the life of the grant. These meetings will also serve as a time to bring new partners up to speed and to discuss upcoming build and design projects with students.

According to Oregon Work Source Statistics employment in the construction and trades industries is one of the two largest job growth areas with an estimated to growth of 27% by the year 2020. Projections also record growth of more than 16% in these job areas within Region 13 CTE areas. There should be no doubt that the awarding of this grant will lead students to develop skills sets and competencies which would lead to high wage and high demand jobs. Beyond this the strong connections which will be made between students and industry professionals will provide graduates opportunities to sustain mentorships beyond high school. For example, Oregon State Bridge Construction has agreed to work with students post graduation that plan to enter into construction and engineering. Since many of the higher education institutions in Oregon which offer related degrees are located in the Willamette Valley, the opportunity to be employed over summer and have mentors close by will be a big bonus to students.

BONUS SECTIONS

A. Career and Technical Student Organizations

The Enterprise FFA Chapter is the oldest continuous chapter in Oregon. The Enterprise FFA chapter will serve as the main CTSO in connection with the proposal. The chapter will be embedded heavily in the Manufacturing and Engineering program. The first and most obvious connection will be to involve program partners in training teams for local and district agricultural mechanics and welding contests. Secondly, community build and design projects will be led by program partners and will range from electrical to construction work. Students will use leaderships skills developed during involvement in the FFA to attend community meetings and correspond with local individuals to come up with these projects. Completed work will then be donated or sold to the city or private citizens. Students will be able to utilize job-shadow, internship, and project involvement to apply for FFA proficiency awards. These award applications serve as a valuable tool to improve writing and grammar skills because students are invested in and interested in what they are trying to communicate.

B. Middle School Components

Sparking student's interest in the career and technical program at an early age will increase enrollment numbers in the high school program and will encourage students to begin thinking about career options prior to planning their high school course schedules. Middle school students will be exposed to the program several times throughout the year. During these specific days which will occur each quarter students will visit the laboratory and participate in a small project or activity. Projects will be designed and taught by a team of high school students and overseen by the instructor. Planned activities will involve partners in a careers presentation day which will provide insights to careers in Manufacturing, Engineering and Technology fields. The integration of these days into the program supports the goals of the grant in several ways including; improving enrollment in the high school courses, providing high school students with leadership and mentoring skills, opportunities for partners to work with high school students in developing presentations, and exposing students to the program who would be considered "non-traditional" within related careers.

C. Out of School Time Programming

Commitment for job shadows and internships with the addition of possible employment opportunities with some companies immediately following graduation will lead to non-traditional learning time situations. It is the goal of the project committee to continue developing additional partnerships each year and to develop summer internship positions with each.

The Enterprise School District in on a four day school week, this leaves Fridays open for extra lab and learning days. Extra time on Fridays and flexibility in student's schedules to create Proficiency Credit Courses also provides learning time beyond the traditional school day. Proficiency Credits are designed by the student and mentor teacher or partner and allow for students to track skills learned in individualized, self developed class. Ties to FFA as a CTSO also will factor in when considering extended learning times. Students will be encouraged to have placement or entrepreneurship projects outside of school. In our community a tremendous number of farms and ranches serve as summer employers. The youth they employ gain skills in everything from general carpentry to mechanics and irrigation systems which are documented in their Experience Tracker record books. The hours and time spent on these jobs allows for expansion on basic skills taught in the classroom lab and also promotes writing and financial skills when filling out award applications. The instructor will actively participate in monitoring these summer jobs and working with employers to help the student make connections between the work place and the CTE program.

D. Focus on Regional, Statewide or System Changes

The utilization of shared resources will be addressed on a regional level through future planning and development of a partnership with the Eastern Oregon Regional Construction HUB which consists of five school districts within the Region 13 CTE Consortium. Once this partnership is in place students who have developed and mastered necessary skills will be tested utilizing the National Center for Construction Education and Research (NCCER). In addition our CTE program will work to extend our state partnerships and to connect them with other CTE programs in our region. Opportunities for students to connect with these industry companies and professionals will prove to be invaluable in developing both career interests and connections to high wage, high demand jobs.