

APPENDIX B – REQUIRED DOCUMENTATION FORMS

APPLICATION COVER PAGE

(Please Print or Type – All Fields Must Be Completed)

Project Name: Revitalization of Crook County School District Manufacturing Engineering Program
Requested Funding: \$234,900

Project Director: Michelle Jonas, Crook County High School Vice Principal		
District, School or ESD: Crook County School District		
Address: 1100 SE Lynn Blvd.		
City: Prineville	State: OR	Zip: 97754
Phone: 541-416-6900 ext. 3104	Email: michelle.jonas@crookcounty.k12.or.us	

Grant Fiscal Agent Contact: Greg Munn		
District, Charter School or ESD: Crook County School District		
Address: 471 NE Ochoco Plaza Center Dr.		
City: Prineville	State: OR	Zip: 97754
Phone: 541-447-5664	Email: greg.munn@hdesd.org	

Superintendent: Dr. Duane Yecha		
District or ESD: Crook County School District		
Address: 471 NE Ochoco Plaza Center Dr.		
City: Prineville	State: OR	Zip: 97754
Phone: 541-447-5664	Email: duane.yecha@crookcounty.k12.or.us	

	Participating High School or Middle School Name	Lead Contact Name	Grade Levels	Student Enrollment
1.	Crook County High School	Michelle Jonas	9-12	800
2.	Crook County Middle School	Kurt Sloper	6-8	665
3.	Paulina Community School	Kurt Sloper	6-8	10
4.	Pioneer Alternative High School	Rocky Miner	9-12	60
5.				
6.				
7.				
8.				
9.				
10.				

**Crook County School District Manufacturing Engineering Program
CTE Revitalization Grant**

BUSINESS, INDUSTRY, LABOR AND POSTSECONDARY EDUCATION PARTNERS

The following individuals and/or organizations have reviewed, discussed, and agreed to their part in implementing the project proposed in this grant application:

	Name	Title	Organization
1.	Dean Pettyjohn	Owner	Pro-Line Fabrication, Inc.
2.	Keith Eager	Human Resources Mgr.	Contact Industries
3.	Michael Newman	Co-owner/Manager	Dayspring Hardwood & Moulding, Inc.
4.	James Kirkbride	Director, Support Services	Pioneer Memorial Hospital and St. Charles Redmond Medical Center
5.	Michael McCabe	Crook County Judge	Crook County Court
6.	Jason Carr	Manager	Prineville Economic Development
7.	Ray Hasart	CTE Regional Coordinator	High Desert ESD
8.	Jeff Papke	Coordinator	Oregon State University Crook County Open Campus
9.	Jennifer Newby	Instructional Dean	Central Oregon Community College

ABSTRACT

Crook County School District (CCSD) and its community partners support the proposed revitalization of the Manufacturing Engineering Program at Crook County High School. Previously, this program served more than 200 high school students per year. However, the program and two manufacturing instructors were cut in June 2009. If this proposal is successful, the new model will include Crook County and Paulina middle school students, which will mean that roughly 275 students will benefit from these grant funds within the first year. Working from the previously successful program's model, CCSD and its partners propose updating the current facility and expanding it to include: hands-on workspace and design rooms; new equipment with cutting edge technology; opportunities for students to complete internships with local businesses; opportunities for middle school students to visit the high school to view hands-on applications of the curriculum they will be learning in their respective buildings and through video link with CCHS; opportunities for middle school students to discover and begin thinking about post secondary options; and opportunities for regional and state colleges, and businesses to use the high school facility to train students and employees.

The proposed CCSD Manufacturing Engineering program will engage students in contextual learning across a broad range of industry recognized technology disciplines; and, equip students with the personal, mechanical, and professional skills needed for success in high demand, high wage careers. The program will be an approved program of study, aligned with Oregon diploma requirements and Central Oregon Community College (COCC) Manufacturing Standards. Courses will be articulated and high school students will have the opportunity to earn college credit that will lead to further post secondary training and, ultimately, an industrial certificate and two year degree. In turn, the manufacturing industry will be provided with a highly anticipated pool of qualified employees.

II. PROJECT DESCRIPTION

A. Project Outcomes and Progress Markers

To improve student engagement in CTE, Crook County School District (CCSD) has researched and plans to purchase new equipment including a Computer Numeric Control (CNC) lathe and mill, Lazer Engraver and FANUC Robotics, as well as several additional items, such as computers and computer software that will augment the curriculum. The new equipment will enhance student learning while, at the same time, engaging students through experiential and meaningful projects and activities. For example, FANUC Robotics, is specifically designed to attract students to robotic automation while, concurrently, teaching leading edge manufacturing and engineering skills. The Crook County High School (CCHS) instructor will both pre and post test Manufacturing Engineering students, with the goal of 90% of tested students improving their score, by 50% or more, with the post test. Robotics training and design room and hands-on facility based lessons, projects and activities will aid in the fulfillment of this goal.

Manufacturing Engineering Students will also be tested using the WorkSource Oregon National Career Readiness Certificate (NCRC) assessment, which will help improve rigor in technical and/or academic content and alignment of diploma requirements and industry recognized technical standards. The NCRC measures applied skill in three core areas: applied Mathematics, Reading for information and Locating information. According to WorkSource Oregon, "This makes the certificate relevant for people with all levels of experience, for jobs at every point on the skill continuum and nearly any

industry". The objective will be for 75% of tested students to earn their NCRC certification. The NCRC helps employers identify qualified applicants. It also gives students a potential advantage in a competitive job market.

The Manufacturing Engineering instructor will improve partnerships with business, industry, labor and educational providers through regularly scheduled communications and program development meetings with partnership members /advisory committee while continually seeking their advice and feedback. The instructor will also earn and maintain his CTE License in Manufacturing. Program of Study work sessions, summer internships and CTE conferences will assist the instructor in improving his manufacturing engineering knowledge and practice.

B. Career and technical education program of study design

Due to the CCSD budget shortfall in June 2009, 6.5 CTE programs were eliminated at Crook County High School (CCHS), which left only 1.5 operating CTE programs. Until June 2009, CCHS had a strong Manufacturing Engineering Program. The program was an ODE approved Program of Study that met a strict set of criteria and quality assurances including alignment and articulation with Central Oregon Community College (COCC). With the guidance of the High Desert ESD CTE Regional Coordinator, the Prineville Economic Development Manager and workforce data provided by Oregon Labor Market Information System, all indicating that Manufacturing Employment will increase 15% statewide and 21% regionally over the next eight years, CCSD and its partners have identified Manufacturing Engineering as a promising program to return to CCHS.

CCSD and its community partners envision continuing and expanding upon the strong program base established by the previously successful program. The program will align with Oregon diploma requirements and COCC Manufacturing Standards. Courses will be articulated and high school students will have the opportunity to earn college credit that will lead to further post secondary training and, ultimately, an industrial certificate and two year degree. By remaining current with new developments in Program of Study content and industry recognized technical standards, the instructor will consistently work toward improved rigor in technical and/or academic content alignment while also continuing to incorporate practical, applied skill requirements and assessments to measure student retention and success.

In addition to the school cuts that Crook County has faced, according to the Oregon Employment Department, Crook County has consistently incurred the highest unemployment rate in the state since 2008. The Crook County unemployment rate reached its peak at 18.7% in June 2009. It is presently hovering at 14.6%. Given these statistics, combined with the number of CCSD students currently on economically disadvantaged status (59.5% of high school students and 65.7% of middle school students), it is vital that we provide Crook County students the skills they will need to earn high demand, high wage careers in the persistently challenging economy.

C. Innovation

If this proposal is successful, the new model will include Crook County middle school students, which will mean that roughly 275 students will benefit

from these grant funds within the first year. Working from the previously successful program's model, CCSD and its partners propose updating the current facility and expanding it to include:

- a hands-on workspace
- new equipment with cutting edge technology that will promote interest and engage students as they learn new skills
- opportunities for students to complete internships with local businesses
- opportunities for Crook County and Paulina middle school students to engage in robotics manufacturing
- opportunities for middle school students to visit the high school to view hands-on applications of the curriculum they will be learning in their respective buildings and through video link with CCHS
- opportunities for middle school students to discover and begin thinking about post secondary options
- opportunities for COCC, OSU Oregon Open Campus and Business partners to use the new facility to train both high school students and business employees

The proposed CCSD Manufacturing Engineering Program will be open to all CCSD middle and high school students, including middle school students in both Prineville and Paulina, and high school students at both Crook County High School and Pioneer Alternative High School. The program will provide an environment for middle and high school students to work with peers, teams and professionals; engage students in contextual learning across a broad range of industry recognized technology disciplines; and, equip students with the

personal, mechanical, and professional skills needed for success in high demand, high wage careers.

D. Diploma Connections

CCSD students meet core academic credit requirements through the four diploma options currently offered. Each of the CCSD diploma options require between one and three credits of CTE or related classes. Through collaboration with High Desert Education Service District (HDES) and its regional partners, the central Oregon region has implemented both Math in CTE and Literacy in CTE. HDES's advanced math team has also begun developing lesson plans for Advanced Math in CTE. The Manufacturing Engineering program will incorporate lesson plans from each of these areas to support rigorous and relevant instruction, which will aid students in meeting their core academic credit and essential skills requirements.

Technical skills assessments are required as one of many components of the Program of Study. In addition, our community partners have offered to provide career related experiences for our students, which include Manufacturing Engineering internship and job opportunities and soft skill instruction incorporating leadership, customer service, personal accountability, team building, problem solving and conflict resolution training, which will aid students in completing their extended application requirements.

The Crook County School District Seven Year Plan and Profile provides for personalization of the educational experience. Using this document, CCSD middle school and high school students are able to track completion of each element of their personal plan. The Manufacturing Engineering program supports

the completion of student plan and profile elements through contextual learning provided by a combination of academic instruction in direct relationship to the Manufacturing industry, experiential learning through design and hands-on workspace instruction and activities, career related learning experiences, opportunities to earn college credit and post secondary planning. CCSD Manufacturing Engineering students will be well prepared to earn credit for proficiency and meet or exceed Oregon Diploma requirements.

E. Activities and Timeline

Specific activities associated with outcomes in Section A are listed below.

1) In order to improve student engagement in CTE and equip students with personal, mechanical and professional skills needed for success in high demand, high wage occupations, Manufacturing Engineering students will complete design room and hands-on facility based lessons and activities. Students will perform important and focused skill practice which will, in turn, assist them in improving their assessment scores. Instruction and practice will be ongoing throughout the course with pre-assessments in September 2012 and February 2013 and post assessments January 2013 and May 2013.

2) Improved rigor in technical and/or academic content aligned to diploma requirements and industry recognized technical standards will be accomplished by students completing applied skill requirements to earn Oregon's National Career Readiness Certificate (NCRC). The NCRC measures applied skill in Applied Mathematics, reading for information and locating information. The assessment will demonstrate student knowledge of core skills that combine both academic content and technical skill standards. Students will have opportunities

to earn their NCRC certification near the end of each semester – January 2013 and June 2013.

3) Improved partnerships with business, industry, labor and educational providers will be accomplished through the instructor's monthly program development meetings with community partners/advisory committee. Through regular communication and the solicitation of business and industry advice and feedback, and by responding appropriately, the instructor will improve these partnerships. The instructor will provide proof of 80% attendance, through meeting minutes submitted June 2013.

4) Improved teacher knowledge and practice will be accomplished by the instructor attending Program of Study work sessions and summer internships with local businesses. Through regularly learning new developments in Program of Study content and by completing industry internships, the instructor will remain current and be able to provide cutting edge instruction to students. Instructor will provide proof of CTE License in June 2012 and submit verification of completion of Program of Study work sessions and summer internships June 2013.

F. Evaluation

Please refer to the outcomes and project markers in Section A. Progress will be observable over the duration of the grant through data provided by:

- assessment results
- enrollment numbers
- COCC, OSU and Business training participation numbers
- program development meeting minutes

- **equipment training, workshop and internship verification**

In addition, pre and post surveys will be utilized to garner information about how students are responding to the program and to assist in measuring increased engagement. An evaluation team, assembled by CCSD, will be responsible for evaluating program progress. Upon careful consideration of student outcomes, instructor performance and feedback from district staff, students, parents, community and education partners, the evaluation team will provide suggestions and direction for continuous improvement and refinement of the Manufacturing Engineering program.

III. PARTNERSHIPS

CCSD Business, Industry, Labor, and Post Secondary Education Partners. are dedicated to the Manufacturing Engineering program. Through round table discussion and collaboration, each community partner generously pledged support and commitment to the program. Community partners have offered to provide career related experiences to CCSD students, which include: Manufacturing Engineering internship opportunities and job opportunities, and soft skill instruction incorporating leadership, customer service, personal accountability, team building, problem solving and conflict resolution training. They have also offered to contribute to developing and guiding curriculum. After much discussion about high wage and high demand jobs, partners agreed that these positions will be offered as employees gain knowledge and experience in the field.

Community partners came to the table with their “wish lists” for the skills they desire in each and every potential employee. Supervisors request

employees “who can think mechanically and who want to learn”. Partners expressed the importance of employee skill diversity and the ability to perform multiple jobs, especially in the current, challenging economy. Concurring that both hard skills and soft skills are important, community partners would like employees to be able to demonstrate these soft skills: ability to communicate and follow direction, teamwork, flexibility and the ability to absorb training for multiple departments. Employees should be productive, participate in common goals, be contributors, earn their wages, and progress through the company. Community partners are excited about the opportunities students will be provided through revitalization of the Manufacturing Engineering program. They are hopeful that the collaboration of partnerships, formed by this grant opportunity, will lead to more knowledgeable, better skilled and successful students and employees.

CCSD Community Partners have offered to participate as members of the hiring team for the new instructor. They are optimistic about the success of the new CCHS Manufacturing Engineering program and have given every indication of continuing to support the program beyond the grant timeline. Crook County Court has also, generously, committed funds to hire a temporary, full time Manufacturing Engineering instructor for one year, who will work closely with the permanent instructor to offer advanced classes that will give CCSD students a huge boost in their knowledge and skill levels. Crook County School District is grateful for the community partners’ time, input and dedication to Crook County students and the creation of a strong, experienced workforce. CCSD believes that, through continued community partnerships and ongoing education and

practice, students will develop the skills needed and desired by the Manufacturing industry.

IV. BUDGET

C. Sustainability

Crook County School Board resolved to “explore the expansion / improvement of CTE programs” as their foremost 2011-2012 goal. After presentation and discussion regarding the CTE Revitalization Grant during their December 12, 2011 meeting, the School Board voted unanimously to “support the CTE application with a sustainability commitment of at least one year beyond the first year to cover the cost of a fulltime teacher”. Community partnerships will continue to be maintained as part of the Program of Study. Through strong collaboration with community partners, the instructor will persist in developing innovative ideas for recruitment of Manufacturing Engineering program students. Ongoing material and equipment costs will be supported by CCSD and Perkins funding. CCSD and its partners will continue to seek new resources to sustain and enhance the program.