

The 24 CTE Revitalization Grants awarded for the 2013-2015 biennium will benefit 140 schools across Oregon with programs ranging from agricultural sciences to manufacturing, marketing to engineering, building and construction trades to culinary arts. In selecting recipients, priority was given to proposals that demonstrated strong business partnerships, sustainability, and curriculum aligned with both Oregon Diploma requirements and the skills necessary for high-wage and high-demand careers in Oregon. Below are descriptions of each project provided by the awardee.

CTE Excellence through Innovation in the Beaverton School District

Health and Science School (HS2)

Award Amount: \$353,630

Fiscal Agent: Beaverton School District

This award will enable the Beaverton School District and the Health and Science School (HS2) to develop and support CTE programs that will double the number of student internships at HS2, create summer bridge programs for district-wide at-risk students transitioning to high school and college, create industry-quality videos of student profiles in CTE/STEM fields, and allow HS2 to expand CTE programming into the middle and high school levels in both Biomedical Sciences and Engineering. Business and Community Partners include the American Red Cross, Boy Scouts of America STEM Explorers, CMD Marketing, Intel Corporation, Kaiser Permanente Westside Hospital, Oregon Department of Transportation, Oregon Health Occupations Student Association, Portland Metro STEM Partnership, Project Lead the Way, Tualatin Valley Fire and Rescue. HS2 and the Beaverton School District look forward to continued collaborative efforts with these committed partners.

Engineering the Future of Power and Energy

Bend High School, Summit High School, Mountain View High School, Marshall High School, La Pine High School, Sisters High School, High Desert Middle School, Pilot Butte Middle School, High Desert ESD

Award Amount: \$268,045

Anticipated Matching Funds: \$64,000

Fiscal Agent: Bend-La Pine School District

“Engineering the Future of Power and Energy” (EFPE) is a dynamic, new, forward-looking CTE Program of Study designed to introduce and provide skills to 300+ high school students annually in high wage, high skill, high demand occupations related to engineering and/or energy. Courses will be taught at the Bend High School Center of Technology and Design, introducing students to the fundamentals of electricity and power, engineering design, turbines, solar, wind, hydro, geothermal, biomass, biodiesel, automotive, energy efficiency, safety, and the business aspects of energy production. EFPE Partners include many local businesses and 3 higher education institutions: Central Oregon Community College, Columbia Gorge Community College and OSU-Cascades.

**Enterprise High School Industrial Arts, Manufacturing and Engineering Program
(IAMEP) Revitalization**

Enterprise High School, Enterprise Junior High

Award Amount: \$249,986
Fiscal Agent: Enterprise School District

Anticipated Matching Funds: \$ 18,718

This project will restore and improve the Industrial Arts, Manufacturing and Engineering Program at Enterprise High School. The newly renovated program will provide students with the mechanical, technical, professional and personal skills needed for success in postsecondary education and ultimately in related career fields. New equipment and technology including Computer Numeric Control (CNC) machines, CAD programs, VRTEX Welding Simulator, and upgrades to the present infrastructure will lead to more real-world, hands-on training which will both engage and enhance student learning. Program partners ranging from local contractors to large state-wide business corporations will provide student mentoring, project reviews, internships, and job shadows. Partners include Stangel Industries, Ryneerson Inc., Norton Welding, Enterprise Electric, Oregon State Bridge Construction, Farline Bridge, Main Street Motors, and Oxarc.

Eastern Oregon Regional Construction Hub

Baker School District, Elgin School District, Pine Eagle School District, Vale School District, Blue Mountain Community College, Treasure Valley Community College, Northwest College of Construction, Grant Education Service District, Malheur Education Service District

Award Amount: \$487,850
Fiscal Agent: Grant Education Service District

Anticipated Matching Funds: \$213,800

The Eastern Oregon Regional Construction Hub (EORCH) is a virtual interactive hub which coordinates the integration of rigorous construction trades curriculum and resources in four rural Eastern Oregon school districts (Elgin, Baker, Pine Eagle, and Vale). EORCH's purpose is to provide students with contextual, hands-on curriculum supported by industry-approved instruction, job-related experiences, industry certifications and college credit. The hub connects multiple sites, instructors, projects, and resources to make instruction and practical experience available for students across the region. Through the hub, construction trades industry-approved curriculum, instructional resources, cohort support from craft instructors, and industry partner contact information, are accessible to all regional teachers. EORCH also identifies professional development opportunities, provides industry-approved assessments, develops student leadership activities and opportunities, and facilitates the integration of academic and workplace skills.

Grant Union Metal Fabrication and Technology Project

Grant Union Junior/Senior High School

Award Amount: \$194,088

Anticipated Matching Funds: \$6,175

Fiscal Agent: John Day School District #3

The Grant Union Metal Fabrication and Technology Project is a collaborative effort involving five local businesses, one community college and the school. Grant funds will expand and further develop the metal and technology program through upgrades in facility and equipment to industry standards. This will allow for the implementation of cutting edge instructional methods that will prepare students to receive welding certification, college credits and fill employment opportunities in related industries directly after high school graduation. Industry professionals will work directly with the school district instructor to develop instructional methods and procedures so that students are fully prepared to enter the world of work in the field of metal fabrication and technology. Cooperation with industry leaders will allow students direct experiences through job shadows, work experiences, and first person technical expertise while in school. This program is partnering with Boyd Britton Welding, Crown Cattle Company, Doug's Motor Vehicle Repair, Grant County Automotive, Oxarc and Treasure Valley Community College.

Students @ Work: Building Capacity, Building Connections

Center for Advanced Learning, Clear Creek Middle School

Award Amount: \$452,410

Anticipated Matching Funds: \$ 94,132

Fiscal Agent: Gresham-Barlow SD

This project will expand and strengthen the innovative career and technical education (CTE) programs of study offered by the Center for Advanced Learning (CAL). The award will substantially increase sustainable partnerships built around real work problems, mentorships, and projects for CAL's programs: Mechanical Engineering and Manufacturing, Computer Information Systems, Digital Media and Design, and Health Sciences. Aligned with the emerging CTE Core Standards, curriculum will be developed in collaboration with industry partners and teachers that will lead students to specific certifications in addition to college credits earned through Mt. Hood Community College. This project will also develop and implement the pathways to CAL for young women, the economically disadvantaged, culturally diverse, and other underserved student groups in grades 6-10. Equipment upgrades and professional development opportunities will align with cutting-edge advances and standards in the industry. This project will establish a three-tiered partnership model for educators and community businesses. CAL business partners include KCR Manufacturing, Boeing, Connor Manufacturing, Lewis Creative, and the Troutdale Historical Society.

Columbia Basin Homebuilders Program

Hermiston High School, Innovative Learning Center, Armand Larive Middle School, Sandstone Middle School, Umatilla Secondary Schools, Stanfield Secondary Schools

Award Amount: \$371,926

Anticipated Matching Funds: \$225,000

Fiscal Agent: Hermiston School District

Spanning from the classroom to the field, the mission of the Columbia Basin Student Homebuilder Program (CBSHP) is to provide real-world application, exposure, and opportunity to the diverse and economically underserved student populations in the Columbia Basin region. Sponsored by the Northeast Oregon Homebuilders Association (NEOHBA), in partnership with the City of Hermiston, the Hermiston School District, and neighboring districts throughout the region, this project serves as a melding of current programming, private, and public partnership in order to generate a self-sustaining, unique, and essential opportunity for the region's youth. Involving hundreds of pupils across five programs of study, students will become intimately and authentically involved in all facets of the process, design, construction, oversight, and marketing of a residential home. Students, many of whom are considered "at risk," will have the opportunity to work hand in hand with city and local officials, architects, field professionals, and engineers, creating connections, exploring trades, and learning about job skills, work ethic, and career opportunities available to them in the 21st Century.

Hood River CTE Revitalization

Hood River Valley High School

Award Amount: \$437,991

Anticipated Matching Funds: \$22,500

Fiscal Agent: Hood River School District

Hood River Valley High School(HRVHS) is working to bring its CTE programs of study in Engineering and Agriculture Science-Welding into the 21st Century. With this grant, HRVHS will purchase new computers and software; new fabrication equipment (3-D printer, CNC machine, and welding stations); will train teachers/staff; and strengthen relationships with business and post-secondary partners. By enhancing these programs of study, we will better define a CTE pathway for more students and provide them with the skills they need to succeed in higher education and meet the needs of local technology, agriculture, manufacturing, and computer science industries. These new computers, new software and new CNC machinery combined with better trained teachers, more community partners, and more experience-based learning opportunities will enable more Hood River students to pursue these CTE programs of study into the community college or into high-wage, high-demand jobs in the community.

**Manufacturing, Engineering, Construction and STEAM in Junction City:
College and Career Readiness for All Students**

Junction City High School, Oaklea Middle School, Laurel Elementary School

Award Amount: \$495,280

Anticipated Matching Funds: \$ \$229,461

Fiscal Agent: Junction City School District

This project will weave together academics and CTE through interdepartmental collaboration, in the form of a STEAM workgroup. We will bring academic teachers into CTE areas for training and experience, and the CTE department will be brought into closer alignment with academic coursework. A new Manufacturing Technology program of study will be developed through this grant. Additionally, two existing programs of study, Engineering and Construction Technology, will be enhanced and upgraded. Many industry and academic partners will be involved in the program, through project design and implementation, lesson planning, advisory committee participation, site tours, and guest presentations. Program facilities will be greatly expanded and updated with industry and post-secondary oversight to provide an industry standard learning environment. Industry and academic partners include gLAs Architects, Willamette Valley Company, Knudtson Manufacturing, the Cabinet Factory, NW Stamping and Precision, JAS Industrial, Bulk Handling Systems, Lane Community College and Oregon State University.

Regional Healthcare Pathways: Innovation in Education

Willamette High School, West Lane Tech, Cottage Grove High School, Creswell High School Junction City High School, Crow High School, Lowell Junior/Senior High School, Oakridge High School Pleasant Hill High School, Cascade Middle School, Shasta Middle School, Lincoln Middle School, Creswell Middle School, Crow Middle School, Oaklea Middle School, Oakridge Junior High, Pleasant Hill Middle School.

Award Amount: \$455,208

Anticipated Matching Funds: \$ 114,800

Fiscal Agent: Lane Education Service District

This award will enable Lane Education Service District to develop and implement an innovative, regional healthcare pathway of study which includes a two-year healthcare career evidence-based curriculum, extended internships, a hospital based Teen Volunteer Program and a variety of healthcare career education opportunities for middle and high school students in nine Lane County school districts: Bethel, Creswell, Crow-Applegate-Lorane, Junction City, Lowell, Oakridge, Pleasant Hill, South Lane and West Lane Technical Learning Center in Elmira. The broad-based 25-member regional collaborative also includes healthcare industry leaders, Lane Community College educators, Area Health Education Center of Southwest Oregon and other community partners. The program will offer multiple delivery options designed to meet the unique needs of each district and will include regional, local, virtual and on-line classes supported by on-site personnel. One focus of the program is the Lane Community College, Health Records Technology, Basic Health Care Career Pathway Certificate of Completion (BHC). Scholarships are included for the BHC and other healthcare certifications and trainings.

21st Century Skills Project

McMinnville High School, Duniway Middle School, Patton Middle School

Award Amount: \$236,648

Anticipated Matching Funds: \$219,554

Fiscal Agent: McMinnville School District

McMinnville School District's 21st Century Skills Project will be implemented at both district middle schools and at McMinnville High School. The project features STEM-intensive problem- and project-based learning, with emphasis on manufacturing and engineering. Students will have the opportunity to apply their skills through school- and industry-based product design and development, addressing authentic market needs. The project includes a new SkillsUSA chapter, two Tech Challenge teams, and a FIRST Robotics Challenge team. Extended learning opportunities will be provided through the afterschool program and in Saturday Academy. Additionally, the project features a STEM Summer Camp for Girls and middle school STEM coursework exclusively for girls. The 21st Century Skills Project is an innovative approach to engaging underserved students in rigorous and vibrant STEM teaching and learning.

NexGen (Next Generation) Manufacturing

Clackamas Academy of Industrial Sciences (CAIS)

Award Amount: \$315,388

Anticipated Matching Funds: \$185,222

Fiscal Agent: Oregon City School District

CAIS, in collaboration with industry partners, provides students an innovative, contextual learning environment focused on manufacturing technologies. Grant funds enable CAIS, the Oregon City School District and its industry partners to revitalize the former Oregon City High School machine shop as the heart of the new home for CAIS. Funds will be used to purchase advanced manufacturing equipment to significantly increase both breadth and depth of CAIS manufacturing technology courses. In addition to new machining courses, the revitalized advanced manufacturing facility will allow students at CAIS to operate NexGen, a student-run business, in partnership with industry supporters. Relevant experiences at CAIS help prepare students for work in the manufacturing industry as machinists, welders, mechanical & manufacturing engineers, marketers and business leadership positions. The following industry partners provided support for this project; Benchmade Knife Company, Pioneer Pump, Metric Machining (California), Enoch Manufacturing, ESCO Corporation, A dec, Miles Fiberglass and Composites, Warn Industries, Business Education Compact and Clackamas Community College.

Philomath HS's Manufacturing Technology Enhancement

Philomath High School, Philomath Middle School

Award Amount: \$253,467

Anticipated Matching Funds: \$25,000

Fiscal Agent: Philomath School District

The Philomath School District CTE Revitalization grant incorporates two important industry-focused curriculum components. Primarily, this project expands the existing manufacturing program to include Computer Numeric Controlled (CNC) and Computer Assisted Manufacturing (CAM) equipment, software, and instruction for the middle and high school manufacturing programs. In addition, a construction and building trades program will be developed at the high school. Middle school students will learn fundamental CNC/CAM and Computer Aided Drafting (CAD) concepts, thus preparing them for the high school CAD/CAM and CNC Manufacturing program. High school students will be trained on CAD/CAM (Computer Aided Machining) software, CNC machining, Plasma CAM, and 3D printing. After learning design and construction concepts using a self-paced curriculum program, junior and senior manufacturing and construction students will complete their CTE program with a job shadow or internship with one or more local business partners including Legend Homes, Corvallis Tool Company, West Cost Machine Inc., Evans Precision Tooling Inc., Fuel Injection Enterprises, BowTech, and L&M Welding.

CTE and Career Pathways in Portland Public Schools

Portland Public Schools

Award Amount: \$343,357

Anticipated Matching Funds: \$43,922

Fiscal Agent: Portland Public School District

*CTE and Career Pathways in Portland Public Schools will serve as a catalyst to jumpstart the district's efforts to establish a 7-12 system for career pathways and CTE in all schools. The project will significantly alter the *status quo* and expand the percent of students participating in career learning and CTE classes by 1) developing system-wide frameworks, protocols and procedures, 2) growing career electives, pathways, and Programs of Study, 3) expanding partnerships with industry, labor, and postsecondary education, and 4) increasing opportunities for students to participate in relevant experiences. Grant funds will also support an increased emphasis on experiential learning, provide targeted career learning supports for ESL and other underserved students, facilitate hands-on opportunities both in the classroom and on construction sites related to the district's \$482 million dollar school construction bond, and leverage industry and postsecondary partnerships through shadowing opportunities for school teams (administrator, counselor, career coordinator, core and elective teachers). Partners include the Portland Workforce Alliance, Worksystems, Inc., Women in Trades, and The Portland Metro STEM Partnership.*

Manufacturing the Future of Redmond

Redmond High School, Elton Gregory Middle School, Terrebonne Community School

Award Amount: \$474,955

Anticipated Matching Funds: \$116,260

Fiscal Agent: Redmond School District

Redmond High School is bringing manufacturing instruction back to the local community. This project will create three paths for students, mirroring the state's 40-40-20 goal, through which students can enter a career in manufacturing. RHS will develop a Redmond Certificate of Manufacturing Proficiency (R-COMP), guaranteeing students are proficient in industry-required skill sets and have completed a successful workplace experience. This process will be guided through a dedicated Career Counselor responsible for tracking and advising students in the program and also serves as the point person for industry partners. The project will attract and support students through a manufacturing 'summer camp,' open to incoming 9th graders through 12th graders, and through a SkillsUSA student group. A STEM math and science course will be embedded into the program, allowing student to experience real world applications of math and science as they learn manufacturing processes. Partners include: Redmond Economic Development Inc., CR Fabrication, Jodeco Inc., Lancair International, LMH Industries, PCC-Schlosser, RDD Enterprises, Smith Brothers Pushrods, Central Oregon Community College, Oregon Institute of Technology, Central Oregon WorkSource Employment Department, and High Desert Educational Service District.

Junior Apprenticeship

Reedsport Community Charter School

Award Amount: \$250,000

Anticipated Matching Funds: \$23,390

Fiscal Agent: Reedsport School District

Reedsport Community Charter School and its community partners support the proposed transformation of the existing CTE shop curriculum into a state approved apprenticeship program. By completing the first 1000 hours of an adult apprenticeship during the junior and senior years of high school, the student will be prepared for college, adult apprenticeships or entry into the workforce directly upon graduation. The Junior Apprenticeship will initially focus on marine welding, marine machining and fabrication, and general welding certification at the completion of the program. The marine fabrication partner hopes to become the site of an adult apprenticeship center, creating an employment pathway for graduating seniors. An apprenticeship in road construction will be added toward the end of the grant cycle. Business partners include Reedsport Marine and Fabrication, MI Inspection and Laskey-Clifton Corporation.

Getting Ready for Oregon's Workforce:
Construction/Design and Restaurant Management

McKay High School, North Salem High School, South Salem High School, Waldo Middle School, Judson Middle School, Leslie Middle School, Houck Middle School, Parrish Middle School, Crossler Middle School, Stevens Middle School

Award Amount: \$495,222

Anticipated Matching Funds: \$359,080

Fiscal Agent: Salem Keizer School District

Building on existing programs of study, Salem-Keizer Public Schools' project advances student technical skill development through authentic projects constructing a residential home and operating a bistro. *Residential Construction* and *Architecture/Interior Design* programs from McKay High School partner with a newly developed *Construction Technology* program at South Salem High School to design and build a house, developing skills in the major phases of construction from design to foundation through turnkey. A coalition of construction partners is invested in the project, committing time, talent and resources to raise \$200,000 in construction costs. Similarly, students in the *Restaurant Management* program at North Salem High School acquire advanced skills operating a bistro, experiencing a variety of roles in the restaurant industry. Partners are engaged in curriculum development, redesign of the kitchen and lending their expertise in the classroom. Through the advanced skill training, students in both programs earn industry credentials from NCCER (Construction) or ACF (Restaurant Management), preparing students for a seamless transition into postsecondary training or workforce entry. The project adds courses, establishes SkillsUSA chapters, increases internships, and integrates STEM into curriculum.

Steps to Oregon and America Revitalization:
Public Safety and Restaurant Management

McNary High School, West Salem High School, Straub Middle School, Walker Middle School, Whiteaker Middle School, Claggett Creek Middle School

Award Amount: \$475,518

Anticipated Matching Funds: \$173,160

Fiscal Agent: Salem Keizer School District

Through this proposal, Salem-Keizer Public Schools significantly expands the Fire Science program of study at *West Salem High School* and augments the Culinary Arts program at *McNary High School* to develop a Restaurant Management focus area of study. The project adds new courses, creating opportunities for Fire Science students to participate in hospital and ambulance clinical experiences and Restaurant Management students to operate a bistro. Advanced skill training leads to industry certification, with Fire Science students earning three industry credentials, including EMT, Firefighter 1 and Wildland Fire. Restaurant Management students earn national certification through American Culinary Federation, the largest professional chef organization in North America. The project creates a pathway from middle school through postsecondary education and incorporates SkillsUSA Balanced Program of Work into the programs of study. Partners are engaged in program design, including collaboration on curriculum by local fire districts, donation of a fire truck by Chemeketa Community College, local chefs assisting in the classroom, and restaurants sponsoring internships.

Digital Design and Fabrication:
Collaborative FabLab Training Facility with a Mobile STEM FabLab
Sherwood High School, Laurel Ridge Middle School, Sherwood Middle School

Award Amount: \$494,510
Fiscal Agent: Sherwood School District

Anticipated Matching Funds: \$ 27,700

The CTE Revitalization Grant will provide nearly half a million dollars toward the creation of a mobile digital design and fabrication lab. Developed at Sherwood High School, the “FabLab” will travel around the state of Oregon, visiting 30 different schools over the 2014 - 2015 academic year. The FabLab, its corresponding curriculum and professional development will create strong partnerships between education and employers to build a revitalized CTE ecosystem in Oregon. Students engage in shared creative projects, using industry-standard equipment and processes including distance collaboration, to gain academic, STEM, dual credit opportunities and technical skills. This opportunity allows Oregon students to participate in fabrication and design as globally-interconnected ventures to better enhance students’ technical abilities, stretch their creativity and build their entrepreneurial spirit.

Industry Partners + 21st Century Facilities = Student Success
Sutherlin High School, Sutherlin Middle School

Award Amount: \$309,533
Fiscal Agent: Sutherlin School District

Anticipated Matching Funds: \$ 71,220

Through the CTE Revitalization project, Sutherlin High School will significantly increase opportunities for students to be prepared and placed in post-secondary education and careers in 21st century manufacturing and fabrication. This project is based upon partnerships with local industry members that will provide two critical components to students: 1) innovative instruction in relevant advanced-technology fabrication skills, and 2) opportunities for experiential learning through internship and placement. Instruction will be done through enhanced curriculum, using relevant technologies. Internship and placement will be a critical component of this project, with qualifying students gaining valuable experience and preparation for their future careers. Local industry experts have identified advanced fabrication with modern equipment and processes, and experience in computer-numerical-controlled (CNC) processes as two focus areas for this project. The CTE Revitalization grant will be utilized to acquire the equipment necessary to successfully instruct students in these areas.

Vernonia HS Career and Technical Education Program

Vernonia High School, Vernonia Middle School

Award Amount: \$249,905

Anticipated Matching Funds: \$162,944

Fiscal Agent: Vernonia School District

The CTE Revitalization Grant will enable the Vernonia School District (VSD) to build an industry grade Construction area. Through the project CTE programs in Forestry/Natural Resources and Engineering will be added to current VHS programs in Digital Arts and Construction. This will double the number of CTE programs available to students. Additionally the project will provide six summer internships through Stub Stewart State Park, the Upper Nehalem Watershed Council and the VSD, increasing local job opportunities and career training for students, and providing much needed human resources for local partners. These programs and internships are key additions to the VSD's overall effort to work with local business partners to provide a well-rounded menu of academic programs that allow students to develop the skills they will need to prepare for their future in college, trade school and/or the work force.

Connecting Agriculture to Industry Careers

Wallowa High School

Award Amount: \$480,328

Anticipated Matching Funds: \$ 10,119

Fiscal Agent: Wallowa Education Service District

Wallowa School District's Connecting Agriculture to Industry Careers (CATIC) project is designed to expand the current Agricultural Education program by increasing student access to industry-based learning experiences and industry-standard equipment. By expanding technology, welding, and other industrial practices within the program, students will be exposed to a variety of learning opportunities both in the classroom, and through industry internships. With a specific and committed interest in STEM, Wallowa Agriculture Department will utilize the grant funds to find innovative ways to connect students, to industry partners, to industry learning, and to Agricultural Education that emphasizes STEM. Along with nineteen committed and involved community partners, CATIC expands rural learning opportunities for students.