Grants to revitalize engineering education

With the state’s NexGen (Next Generation) Manufacturing grant of $315,388 announced last week, the Oregon City School District plans to train local machinists and engineers as Clackamas Academy of Industrial Science revitalizes OCSD’s industrial-based programs discontinued in 2005.

Oregon City Superintendent Larry Didway was “very excited” to have this opportunity to support and expand the district’s efforts to develop a competitive and highly skilled workforce in Clackamas County. “This is a perfect match for our charter high school,” he said. “It aligns with the school’s mission and vision, and will serve our students by deepening industry partnerships in advanced manufacturing, technology and engineering.”

For the first time starting this fall, Oregon City High School, Oregon City Service Learning Academy, Alliance Charter School, Ogden and Gardiner middle schools, will be able to send students to CAIS for Basic Tools and Machine Shop courses.

OCSD will refurbish shop facilities at the former OCHS campus to provide an advanced manufacturing area and a robotics lab. With the opportunity provided by the grant, business partners and the district’s commitment, CAIS will buy industrial technology for machine shop courses and senior-year manufacturing projects, ultimately leading to the design, production and manufacture of products for sale to sustain the program.

Students who have completed prerequisite courses in machining, engineering and marketing will work as machinists, engineers, marketers and company leaders in the NexGen business. NexGen will design, manufacture and sell products to the community and local industry partners.

“NexGen will give students real-world experience working in manufacturing while helping them to build relationships with manufacturers and enhancing the local economy,” said CAIS Principal Kyle Laier. “Revenue created by the NexGen business will be used to help support the program for years to come.”

To support implementation of this grant, CAIS has received commitments from Benchmade Knife Co., Pioneer Pump, Miles Fiberglass, Enoch Manufacturing, ESCO Corp., Metric Machining of California, Warn Industries, the Business Education Compact and Clackamas Community College.

During the 2013 legislative session, a bipartisan coalition sponsored and passed legislation (Senate Bill 498) that quadrupled the initial investment to extend hands-on learning to more Oregon students.

The Oregon City Community Education program will also be enhanced due to this grant. OCCE will partner with CAIS to provide students access to the new equipment and provide science, technology, engineering and mathematics (STEM) enrichment activities to students across the district.

“Oregon City has another gem to add to its high school programs,” said Ginger Redlinger, OCCE and STEM program administrator. “CAIS is revitalizing the machine shop, adding a fourth year of STEM courses, and preparing students for engineering degrees while providing business expertise.”

Other local grants

Clackamas Education Service District received $324,281 to expand manufacturing-education programs countywide. Clackamas Career & Technical Education Consortium, with Clackamas Education Service District as fiscal agent will use the funding in part to hire a full-time manufacturing program manager to serve as a liaison between local manufacturers and high school programs. That person will also instruct high school manufacturing teachers on the Manufacturing Skills Standards Council Certified Production Technician curriculum and certification.

High school programs that will be direct recipients of the grant funds include Colton, Estacada, Molalla and Sandy high schools. Canby High School and the Sabin-Schellenberg Center, are indirect recipients of the grant activities. Their teachers will participate in mentoring activities and alignment to the standards, but will not be funded directly by the grant.

Clackamas Community College is considered a “key partner” in the ESD grant by offering manufacturing courses at Molalla High School and ensuring that the high school programs are leading to industry and postsecondary credentials that “lead to high-wage, high-demand careers.” CCC provides opportunities for high school students to earn college credits and begin a career pathway early.
Estacada, Sandy and Molalla High Schools currently have manufacturing programs of study that are part-time, which limits student access, program content and scope. Grant funds will support the expansion of these three programs by increasing the part-time staffing to full-time at Estacada and Sandy high schools.

Molalla High School’s manufacturing teacher is already full-time but teaches another subject part-time. Grant funds will expand MHS’s manufacturing program by bringing CCC faculty to campus to offer two manufacturing courses.