
Education Committee

HB 2159

Brief Description: Regarding grant opportunities for STEM career courses.

Sponsors: Representatives Maxwell, Pettigrew, Sells, Seaquist, Orwall, Hansen, Probst, Carlyle, Jinkins, Billig, Lytton and Dahlquist; by request of Governor Gregoire.

Brief Summary of Bill

- Establishes three competitive grant programs to be administered by the Office of the Superintendent of Public Instruction, each subject to funds appropriated for their purpose.
- Provides that one program is grants for high schools to prepare students for employment as entry-level aerospace assemblers, one is for skill centers to implement enhanced manufacturing skills programs, and one is for high schools to implement specialized courses in science, technology, engineering, and mathematics through Project Lead-the-Way.
- Provides that the grants are one-time and may be used for curriculum, equipment and materials, and professional development for course teachers.
- Directs the Education Data Center to collect student participation and completion data, and to follow students to employment or further training in the two years following high school.

Hearing Date: 12/13/11

Staff: Barbara McLain (786-7383).

Background:

Workforce Education Centers of Excellence. The community and technical college system has designated certain colleges as Centers of Excellence for workforce education in particular targeted industries that are strategic to the economic growth of a region or the state. Each Center of Excellence works with employers in the targeted industry, other colleges, career and technical

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education (CTE) programs in regional high schools and skill centers, and labor representatives to develop curriculum and training programs and promote best practices in education and training to support the targeted industry.

One example is the Center of Excellence for Aerospace and Advanced Materials Manufacturing (Center for Aerospace) located at Everett Community College. The Center for Aerospace has been working with other colleges to map courses in aerospace and manufacturing to entry-level jobs, and has worked with the Office of the Superintendent of Public Instruction (OSPI) to develop secondary CTE programs that allow students to begin a progression of courses in high school, continue seamlessly in college, and complete an industry-recognized certificate or degree in advanced manufacturing. This type of course progression is called a program of study.

The Washington Aerospace Training and Research Center, affiliated with the Edmonds Community College, has collaborated with The Boeing Company to develop a 12-week training and certification program for entry-level jobs in aerospace assembly.

Project Lead-the-Way. Project Lead-the-Way (PLTW) is a national curriculum in science, technology, engineering, and mathematics (STEM) for middle and high school students. Students learn principles of STEM through hands-on, project based learning. The curriculum includes modeling software, engineering kits, and other activities. For high school students, the Pathway to Engineering curriculum includes foundation courses, specialized courses, and a capstone course. The specialized courses also offer end-of-course assessments. Some colleges and universities offer college credit for the PLTW courses.

To teach a PLTW course, a teacher must receive two weeks of intensive training by an approved PLTW affiliate university. Ongoing inservice and supplemental professional development opportunities are also available.

High schools must be approved by the PLTW organization to offer the curriculum. Currently there are 56 high schools offering Pathway to Engineering courses.

Education Data Center. The Education Data Center (EDC) is housed within the Office of Financial Management and acts as a data warehouse with the capacity to link data across the K-12, postsecondary, and workforce systems. This capacity enables the EDC to examine postsecondary and workforce outcomes for K-12 students, including those in particular high schools or programs.

Summary of Bill:

Three grant programs are established to be administered by the OSPI, with each grant subject to funds appropriated for their purpose. The first program is grants to high schools to implement a training program to prepare students for employment as entry-level aerospace assemblers. The second program is grants to skill centers to implement enhanced manufacturing skills programs. The third program is grants to high schools to implement specialized courses in STEM as provided by the PLTW.

All grant funds are allocated on a one-time basis through a competitive process and may be used for curriculum, course equipment and materials, and professional development for program

teachers. In the case of the aerospace assembler program and the enhanced manufacturing skills program, the OSPI must work with the Center for Aerospace to develop a program of study that meets industry needs.

Applicants for the grants must demonstrate:

- engaged and committed faculty and leadership;
- capacity to offer the program and maximize the use of grant resources;
- linkages to programs at community and technical colleges and private technical schools;
- a history of successful partnerships within the community and support for implementing the program including through apprenticeships, materials, instructional support, internships, and other program components;
- a plan that includes a start-date for classes and recruitment and retention of students; and
- capacity to continue the program after the initial grant year.

Applicants for the PLTW grants must also demonstrate implementation of foundational PLTW courses, current or planned training of course teachers, and a plan to promote end-of-course assessments so that students have the opportunity earn college credit.

The Education Data Center (EDC) must collect student participation and completion data for each of the three grant programs and follow students to employment or further training and education in the two years following high school. For the PLTW students, the EDC must also examine mathematics and science course-taking patterns to determine the extent that participation in the PLTW reduces mathematics remediation. Study findings must be reported annually beginning January 2014 through January 2018.

Appropriation: None.

Fiscal Note: Requested on December 8, 2011.

Effective Date: The bill takes effect 90 days after adjournment of the session in which the bill is passed.