Advanced manufacturing is an important economic force in the state of Washington, accounting for 9 percent of the state’s total employment. Aerospace manufacturing alone employs more than 93,000 people in companies located in 35 counties across the state. Engineers are also needed for advanced manufacturing jobs in energy, electronics, medical technologies, maritime, food processing, and robotics industries. At the same time that these industries are expanding employment opportunities, many current employees are at retirement age.

In an ongoing effort to address workforce needs, Washington State University requests $5 million in the 2017-19 operating budget to increase production of ready-to-work engineers, help maintain the state’s dominance in advanced manufacturing and foster ongoing sector growth.

With state investment of the Center for Engineering and Science in Advanced Materials Manufacturing, WSU will:

- Increase WSU mechanical, electrical and software engineering enrollments in Everett by over 90 total students annually at full capacity;
- Increase capacity of software engineering enrollments at WSU Vancouver by 26 at full capacity to support the advanced manufacturing/high technology sectors in Southwest Washington;
- Establish five additional maritime industry electives through WSU’s engineering program at Olympic College with instruction beamed to other WSU campus locations;
- Establish undergraduate instructional capacity and new programs to infuse supply chain and logistics expertise into engineering curriculum through adding minor degree opportunities and professional certificate programs at WSU Vancouver and WSU North Puget Sound at Everett;
- Provide funding to acquire an advanced manufacturing research and a hands-on student project space;
- Enact an important recommendation of the Washington State Aerospace Industry Strategy.

MEETING THE NEED FOR A SPECIALIZED, HIGHLY EDUCATED WORKFORCE

WSU has already worked side-by-side with the state to increase undergraduate engineering and computer science enrollments by one-third across the WSU system since 2012. WSU has a proven track record in producing highly sought after engineering graduates and understands that engineers thrive best in today’s technical workplace based on academic programs that offer effective multidisciplinary and interdisciplinary instruction, blending engineering disciplines and at the interface between disciplines.

INDUSTRY COLLABORATION TO FOSTER EDUCATION AND INNOVATION

To create improved educational and applied research opportunities, the proposed Center for Engineering and Science in Advanced Materials Manufacturing will work in collaboration with aerospace and advanced manufacturers from across the state to produce engineering graduates with the advanced engineering skills and capabilities to make significant contributions to this thriving sector of the economy. The center will foster basic and applied research that is relevant to the needs and interests of industry. The center will also enhance the strong educational ties WSU has established with local community colleges, particularly Everett and Edmonds Community Colleges and Olympic College, to help optimize the delivery of a high-quality education.

The center will be designed to encourage translational research and explore commercialization opportunities. Given the center’s location, it will also provide the opportunity to explore the integrating of local talent to enhance WSU’s academic program delivery, including leveraging skilled retirees and/or civic-minded experts from various companies to provide mentoring for multidisciplinary, engineering-related projects.

For more information, contact

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