

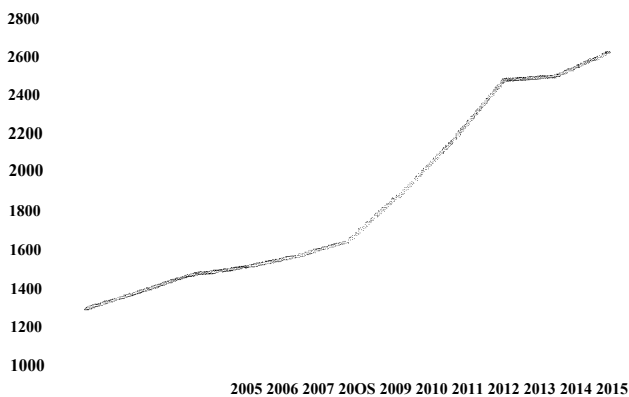
WESTERN WASHINGTON UNIVERSITY

Increase in Capacity: \$2.7 million

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Significant increases in student demand and limited resources have forced Western to cap all but one major within the College of Science and Engineering, limiting students' ability to pursue STEM majors without increasing their overall time to degree. This decision package will address bottlenecks in STEM degree programs by increasing capacity in entry-level Math, Physics and Chemistry courses that are required for STEM majors—and reduce time to degree by an average of two academic quarters, saving students and families thousands in tuition costs.

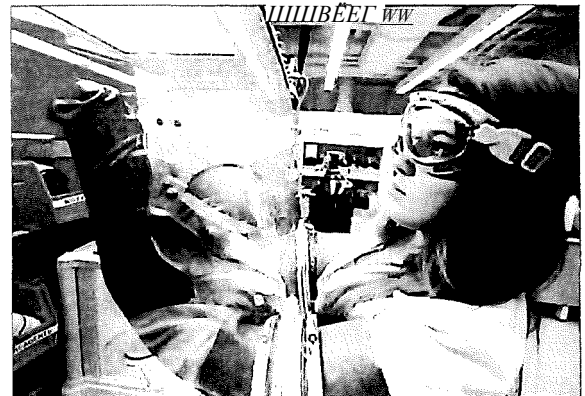
WWU STEM Majors



STEM majors at Western have more than doubled since 2005.

This proposal will alleviate capacity constraints in entry-level STEM courses, which are critical support courses for programs that are under the most significant demand, including Computer Science, Engineering and Pre-Health Sciences. Increasing capacity in foundational STEM courses will allow cohorts of students to move through academic sequences together, streamlining registration, enrollment and advising while improving student retention.

The number of Computer Science majors at Western has increased by 400 percent since 2010, with the number of Computer Science graduates nearly tripling and the overall number of STEM graduates increasing by nearly 60 percent. This investment will allow Western to produce an additional 100 STEM graduates each year who are career-ready in the State of Washington—strengthening the economy by helping to meet employer demand and preparing graduates for jobs of the future.



Washington has one of the highest concentrations of STEM industries: Approximately 80 percent of unfilled jobs in the state are in highly skilled STEM! fields, according to the Washington Roundtable.

1-6-17

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Active Minds Changing Lives

WE5" EiRh' WASHäMGTQin|üNJYS^SiT' . . . Marine, Coastal and Watershed Sciences Degree

~~\$7.1 million and \$1.2 million in one-time costs~~
JT-I- 6 million (\$808k / yr)

Western requests funding to establish a hands-on, interdisciplinary STEM degree program designed to meet student and employer demand and help address Washington's emerging challenges associated with climate change, resource management, and the growing fields of coastal science and policy.

The focus of the Marine, Coastal, and Watershed Sciences Program would be distinctive in its coastal "sea-and-land" emphasis and its multidisciplinary approach to solving problems on our coasts and in our estuaries, such as pollution, erosion, flooding, sustainable fisheries and aquaculture, ocean acidification, sustainable energy, and changing hydrologic cycles.

The new degree program would leverage Western's areas of expertise in oceanographic, aquatic, and environmental sciences, and expand student access to Western's Shannon Point Marine Center in Anacortes.

Coastal sustainability jobs are projected to nearly double by 2022, from about 170,000 to 330,000, with the vast majority of job openings expected to be located in coastal states.

The new program would produce at least 40 graduates per year—and STEM faculty would teach hundreds of students per year—with an emphasis on computing and data analysis, predictive modeling and spatial analysis, as well as training in policy and economics.



1-13-17

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