

2017-19 Biennium Budget Decision Package

Agency: 376 The Evergreen State College
Decision Package Code/Title: N4 STEM High Demand Career Pathways
Budget Period: 2017-19
Budget Level: PL - Performance Level

Agency Recommendation Summary Text: This request seeks funding to enhance services to students who are pursuing studies in science, technology, engineering or mathematics (STEM) programs. The proposal includes funding to provide scholarships for students who pursue studies in biology and chemistry and funding to provide enhanced academic counseling and programming designed to ensure that students have sufficient math skills to successfully pursue studies in math-dependent programs or courses.

Fiscal Summary: Decision package total dollar and FTE cost/savings by year, by fund, for 4 years. Additional fiscal details are required below.

Operating Expenditures	FY 2018	FY 2019	FY 2020	FY 2021
General Fund State 001-01	718,435	715,235	715,235	715,235
Total Cost	718,435	715,235	715,235	715,235
Staffing	FY 2018	FY 2019	FY 2020	FY 2021
FTEs	7.0	7.0	7.0	7.0
Object of Expenditure	FY 2018	FY 2019	FY 2020	FY 2021
A-Salaries	427,905	427,905	427,905	427,905
B-Employee Benefits	128,330	128,330	128,330	128,330
E-Goods and Services	17,200	14,000	14,000	14,000
G-Travel	10,000	10,000	10,000	10,000
N-Grants	135,000	135,000	135,000	135,000

Package Description

- **Background:** Evergreen is committed to recruiting and retaining students in its mathematics program and its laboratory-based biology and chemistry programs, particularly students who have been traditionally underrepresented in science, technology, engineering, and mathematics (STEM) programs. This proposal responds directly to the goal set by

Results Washington to increase the number of STEM students in Washington’s public colleges. In order to better serve these students, Evergreen seeks funding for two projects designed to improve recruitment and retention in these fields of study.

- **Current situation:** Grant-funded scholarships for STEM students that were previously available expired at the end of the 2015–16 academic year and were not renewed. In May 2015, a disappearing task force was tasked with “examining the academic preparedness of incoming students with respect to writing, mathematics, and reading.” The group who focused their efforts on math preparedness developed a comprehensive proposal to address the needs of our incoming students based on a thorough examination of available data.

- **Proposed solution:**

1. **Scholarships for students participating in laboratory-based biology and chemistry programs:** This component of the proposal is based on our proven success with grants from the National Science Foundation (NSF). Evergreen received grants in 2006 and 2011 from NSF to provide students with scholarships and services. Grant funds provided critical support services to students who demonstrated both financial need and academic potential by implementing effective learning communities with strong faculty mentorship. In addition to the grants provided to students, support services included faculty advising; scientific and career mentoring; participation in scientific seminars, research projects, internships, and professional conferences; and, graduate school and career workshops. The grant programs were highly successful in recruiting students of color and students of low income as well as first-generation and female students. The retention, persistence and graduation rates for these students greatly exceeded the rates for students in similar academic programs who did not receive scholarships. The overall success metrics are presented in the following table.

	Biochemistry Success	STEM Success	Evergreen Success
	% persisting in Biochemistry or having completed Bachelor of Science degree	% persisting in ANY STEM field or having completed a Bachelor of Science degree	% persisting at Evergreen or having completed a Bachelor Science or Bachelor of Arts degree
NSF Scholarship Recipients	84%	88%	92%
Comparison Cohorts	48%	54%	73%

1. **College Readiness – Math:** This component of our request seeks funding to ensure that students who are interested in pursuing studies in math-dependent fields, particularly the sciences, have sufficient math skills to be successful in their studies. This proposal was developed by a faculty committee that was tasked with making recommendations to improve student success. Specifically, the task force was charged with investigating the need for assessment of students’ skills prior to registration and the need for targeted attention once they are enrolled. The task force developed recommendations that resulted in the implementation of a pilot project. Students who expressed an interest in pursuing studies in medicine, biology, chemistry, veterinary

medicine, and physics make up the pool of approximately 200 students in the pilot project. Science faculty reviewed the transcripts of these students and then contacted them prior to registration to help them select their first courses. Students were provided an opportunity to take an assessment to help them choose courses appropriate to their level of preparation, though they are not required to do so. While the pilot program is currently being provided to a limited number of students, this proposal seeks funding support that would be necessary to continue and expand the program to more students who are pursuing math-dependent studies.

In addition to providing early, targeted academic advising, the task force also made recommendations to enhance math learning across the curriculum. The task force examined usage statistics of the Quantitative and Symbolic Reasoning Center (QuaSR), the existing math tutoring lab. Demand for the center's services has intensified over time. This proposal seeks funding to expand curricular offerings in math and to expand the services currently available through QuaSR. New foundational programs and coursework in mathematics would also be developed and delivered in both the daytime and evening/weekend programs. Additional staff resources would be dedicated to strengthening the math curriculum, providing in-program workshops, and providing individual and small group tutoring for students with special needs. Finally, additional staff support would be provided for expanded summer school programs, student-faculty research projects, and technical support in the field and laboratories to accommodate increased enrollment in STEM fields.

Base Budget: If the proposal is an expansion or alteration of a current program or service, provide information on the resources now devoted to the program or service. Please include annual expenditures and FTEs by fund and activity (or provide working models or backup materials containing this information).

The last of the NSF grants expired in 2015–16, and no additional funding has been provided. The costs to pilot the academic advising project on a limited basis are being absorbed by the college using one-time funding during the 2016–17 academic year. Additional funds will be needed to sustain and grow the program.

Decision Package expenditure, FTE and revenue assumptions, calculations and details: Agencies must clearly articulate the workload or policy assumptions used in calculating expenditure and revenue changes proposed.

1. **Scholarships and support for students participating in laboratory-based biology and chemistry programs:** This component of the request seeks \$153,964 to provide 20 scholarships of \$6,750 each to students based on their financial need and academic potential. One faculty salary would be increased by one-half a month in the summer at the cost of \$4,964. Additional funding for goods and services and travel to professional conferences would total \$14,000.
2. **College Readiness – Math:** This component of the request seeks funding for the faculty and staff support needed to provide enhanced academic advising and expanded curricular offerings. The duties of the current associate director of QuaSR would be increased to provide summer advising, on-line tutoring support, assessment administration, and a

presence on the Tacoma campus. This expansion of duties would increase this assignment from 0.875 to 1.0 FTE. A new math education specialist would be assigned for 10 months (0.83 FTE) to strengthen the math curriculum, provide in-program workshops, provide individual and small group tutoring for students with special needs, and out-of-program college-readiness math workshops. An administrative faculty member would be assigned for nine months as a math advisor (0.75 FTE) to review student transcripts and lower-division math courses. An additional 2.5 faculty FTEs would deliver new foundational programs and coursework in both the daytime and evening/weekend programs. An additional \$20,000 is requested to increase the number of students who are employed as math tutors at QuaSR. In order to provide increased staff support of the STEM curriculum, some part-time positions would need to be expanded to full time positions to cover summer school and summer student-faculty research projects. One new staff FTE would be needed to provide technical support laboratories and the field to support the increased enrollment of students in STEM courses.

Decision Package Justification and Impacts

What specific performance outcomes does the agency expect?

Describe and quantify the specific performance outcomes the agency expects as a result of this funding change.

This proposal is keenly focused on recruiting, retaining, and graduating more students in STEM fields. Our prior experience with the NSF grant indicates that the model we propose to replicate is highly effective at accomplishing those goals. While the math advising pilot is still too new to assess, it is based on a thorough understanding of the needs of our students and a commitment from our science faculty and QuaSR staff to provide the academic counseling, advising, and support services students need to be successful in math and science studies.

Performance Measure detail:

Fully describe and quantify expected impacts on state residents and specific populations served.

What are other important connections or impacts related to this proposal? Please complete the following table and provide detailed explanations or information below:

Impact(s) To:		Identify / Explanation
Regional/County impacts?	No	Identify:
Other local gov't impacts?	No	Identify:
Tribal gov't impacts?	No	Identify:
Other state agency impacts?	No	Identify:

Impact(s) To:		Identify / Explanation
Responds to specific task force, report, mandate or exec order?	Yes	Identify: This request responds to the goal of Results Washington to increase the number of students pursuing STEM and other high demand fields in Washington's public colleges.
Does request contain a compensation change?	No	Identify:
Does request require a change to a collective bargaining agreement?	No	Identify:
Facility/workplace needs or impacts?	No	Identify:
Capital Budget Impacts?	No	Identify:
Is change required to existing statutes, rules or contracts?	No	Identify:
Is the request related to or a result of litigation?	No	Identify lawsuit (please consult with Attorney General's Office):
Is the request related to Puget Sound recovery?	No	If yes, see budget instructions Section 14.4 for additional instructions
Identify other important connections		

Please provide a detailed discussion of connections/impacts identified above.

What alternatives were explored by the agency and why was this option chosen?

In developing this proposal, we reviewed our prior efforts to expand STEM education, and we selected the options that had a proven track record in recruiting, retaining, and graduating students in STEM fields. Our experience with the NSF grants indicated that direct support by means of scholarships coupled with the expanded academic advising and career counseling support to be among the most successful programs we have delivered at Evergreen. The proposal aimed at improving college readiness for studies in mathematics was informed by the work of a disappearing task force that was charged with examining the reasons for student success or failure when it comes to pursuing science studies.

What are the consequences of not funding this request?

If this request is not funded, student demand for STEM and other high demand fields will continue to go unmet. As a result, students may drop out of college or abandon STEM studies in order to complete their degrees. Neither option results in delivering more STEM graduates into the workforce where they are needed.

How has or can the agency address the issue or need in its current appropriation level?


Current appropriation levels are not sufficient to provide the enhanced support services or scholarships that are proposed in this funding request.

Other supporting materials: Please attach or reference any other supporting materials or information that will help analysts and policymakers understand and prioritize your request.

The scholarship component of this proposal is modeled on our highly successful NSF grants. Assessments of those grant projects can be found on our website at:
http://www.evergreen.edu/institutionalresearch/pdf/nsfbiochem_finaloutcomes_grant1_2012.pdf.
http://www.evergreen.edu/institutionalresearch/pdf/nsfbiochem_finaloutcomes_grant2_2016.pdf.

College Readiness (Student Success) DTF Proposal – 2016 (Attached)

Information technology: Does this Decision Package include funding for any IT-related costs, including hardware, software, services (including cloud-based services), contracts or IT staff?

☒ No 

☐ Yes Continue to IT Addendum below and follow the directions on the bottom of the addendum to meet requirements for OCIO review.)