



Student Technology Fee Committee (STFC) Annual Allocation Request

ALLOCATION REQUEST DATE INFORMATION

Date Created: 2021-02-18 08:19:55

Date Due: 2021-02-19 23:59:00

Date Submitted: 2021-02-18 19:15:57

ALLOCATION REQUEST TITLE/DESCRIPTION

Request Title: Laptops for Physics

Request Description: The division of Sciences & Mathematics is looking to replace the 11 laptops we currently use for all physics courses at UWT. These laptops are used by students by students in STEM all academic year.

ALLOCATION REQUEST INFORMATION

Department Name: School of Interdisciplinary Arts & Sciences - Science & Mathematics Division

Request Code: 21A0275

Contact Names: Michelle Miller

UW Tacoma Affiliation: Staff

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Title of Request: 11 Physics Laptop Request

Type of Request: One Time

Department Head Approval: Department Head: Joyce Dinglasan-Panlilio

Annual Request Information

1. Background: Review and discuss the context of the proposed technology in detail. Explain how this proposal will be used in conjunction with an original proposal or existing technology. If applicable, how is the current technology disabled or inadequate?

The Division of Sciences and Mathematics provides several physics courses per year including TPHY 121 Physics-Mechanics, TPHY 122 Physics-Electromagnetism and Oscillatory Motion, and TPHY 123 Physics-Waves. These courses include laboratory components that enhance the students learning experience allowing them to incorporate theoretical concepts learned in lecture and applying them to hands-on experiments that are designed to prove or disprove certain truths of physical theory. To successfully run these labs, students require the use of laptops. These laptops are needed to connect with laboratory equipment (Vernier lab quests, sensors, carts, etc.) that are used to collect data and provide graphical analysis. Currently, physics students have 11 laptops available for use with these labs. Five of these laptops are 10+ years old, five range from 5-8 years old, and one is 2 years old. The issues with the current laptops are: the operating system on all eleven laptops is extremely slow, several of the laptops have issues loading software (which is needed for the physics equipment), a few will no longer connect to the Vernier lab equipment, and due to the age of the laptops most software is no longer compatible.

To successfully run a full physics lab course, 12 working laptops are required. Sciences and Mathematics is requesting funds to purchase 11 new laptops. If approved, these 11 new laptops will be used in conjunction with the 1 laptop that is two years old for a total of 12 laptops.

2. Benefit to Students: Discuss how students have benefited from the original proposal, if applicable. How will additional funding of the technology benefit students? If this was an unforeseen technology need, discuss how students will benefit from this new proposal and why the need cannot wait for annual allocation funding.

The current physics laptops provide support to our students in three ways ways:

1. Students across campus utilize these laptops in physics courses to make predictions, create graphical representations, and to run statistics, measurements, and calculations in order to analyze data that will help emphasize theoretical concepts being covered.
2. Students across campus have the option to borrow these laptops to process data and other calculations.
3. These laptops are utilized at outreach events that help support our students and community learn more about STEM (Science, Technology, Engineering, and Mathematics).

The additional funding from this request will provide 11 new laptops, replacing 11 old and out-of-date laptops, that students across campus will have access too. The benefit of utilizing these laptops for physics and data processing for students is as follows:

- Provides experimental foundation for theoretical concepts introduced and learned in lecture.
- Provides students with an environment where they can familiarize themselves with experimental apparatus, the scientific method, and data analysis.
- Assists students in learning and understanding new concepts, scientific equipment, and techniques.
- Assists with introducing new methods and concepts with experimental uncertainties.

This request is being submitted for STF funding due to the current status of the laptops and the current and projected student enrollment for physics. The 11 laptops currently in use by the physics courses, will no longer be able to support the physics courses and UW Tacoma students due to the out dated software and diminished operating systems.

3. Access: Describe who will be using or will have access to the resources being proposed. If the access has changed since an original proposal, be sure to note that here. In addition, all previous requestors, please provide historic data highlighting the usage and accessibility of technology. All new requestors, please provide user need data.

The main student population that will be utilizing these laptops are students enrolled in a physics course on the UW Tacoma campus. These laptops are also available for any UW Tacoma student to check-out for use for assistance with data processing for other laboratory needs outside of physics. The need for the replacement of these 11 laptops is critical to the success of the University of Washington Tacoma campus. Currently, all students enrolled in a physics course utilize these laptops and potentially any student on campus with the need for a science laboratory course may require these laptops for use. The current enrollment capacity per quarter for TPHY 121 is 96 students, TPHY 122 is 48 students, and TPHY 123 is 48 students. These numbers will increase as the new engineering degrees come online in autumn 2021.

There is already a high usage rate for these laptops from those groups of students. With the new engineering degrees coming online at UW Tacoma, there will be a significant increase in the amount of students enrolled in the physics courses. Therefore, the usage of these 11 laptops will be significantly increased. With the current status of the 11 laptops, the Sciences and Mathematics division will not be able to support the needs of the university.

4. Timeline: Provide a timeline showing how the proposed technology can be completed during the requested period. Describe when you would like to see this proposal initiated and completed, and why.

The Sciences and Mathematics division recently received a quote from the UW Tacoma Information Technology Department for the purchase of these 11 laptops. If STF funding is approved for this request, the Sciences and Mathematics division will be purchasing these 11 laptops immediately with the estimated student usage start date of spring quarter 2021.

5. Resources/Budget: Discuss available financial, personnel and space resources devoted to the proposed technology and level of support. Proposal must detail all the items/resources requested to be purchased. This includes filling out the Item Detail in next section.

This STF funding request is for the purchase of 11 Dell Latitude 3410 laptops. The unit price of one laptop is \$1,194.55 for a subtotal of \$13,140.05. The laptops also require the basic software package (Absolute DDS Premium Education/State & Local Gov't. - 5 Yr. Term) priced at \$95.47 per laptop with a subtotal of \$1,050.17. The subtotal for the 11 laptops and basic software is \$14,190.22. With estimated tax and shipping, the total amount requested for this STF proposal is \$15,700.00. For more detailed information, please see the Item Detail section of this proposal.

UW Tacoma Information Technology department will be supporting these laptops for implementation of software and upgrades. Any financial responsibility for software and upgrades will fall to the Sciences and Mathematics division for funding. These laptops will be stored in a locked cabinet within the Science Building on the UW Tacoma campus and will only be accessed and logged by Sciences and Mathematics staff.

Funding Request Items

Item	QTY	Cost Per Item	Shipping Fee	Tax Per Item	Subtotal
Dell Latitude 3410	11	\$1,194.55	\$62.40	\$121.84	\$14,542.69
Absolute DDS Premium Education/State & Local Gov't. - 5 Yr. Term	11	\$95.47	\$0.00	\$9.74	\$1,157.31
OVERALL TOTAL:					\$15,700.00