



Student Technology Fee Committee (STFC) Annual Allocation Request

ALLOCATION REQUEST DATE INFORMATION

Date Created: 2020-02-28 13:03:42

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ALLOCATION REQUEST TITLE/DESCRIPTION

Request Title: Laser Cutter - Library

Request Description: A request to fund a Dremel LC-40 laser cutter for students

ALLOCATION REQUEST INFORMATION

Department Name: Library

Request Code: 20A0251

Contact Names: Timothy Bostelle

UW Tacoma Affiliation: Staff

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Phone Number: 2536924650

Title of Request: Laser Cutter - Library

Type of Request: One Time

Department Head Approval: Department Head: Justin Wadland

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?

Last year, the STFC funded a 3D printer for self-directed student use in the UW Tacoma Library and so far it has been a huge success! 37 students have been trained to use the 3D printer and they have printed 82 jobs using nearly 4kg of PLA filament.

Students have explored 3D design not just for fun but also for coursework. One student spent several weeks refining a scan of motor neurons for her capstone project. She then 3D printed the final objects and created a stunning presentation.

<https://sites.uw.edu/uwtacomalibrary/2020/01/08/students-learn-3d-printing-in-the-library/>

The library would like to expand maker capabilities for students on campus to include a Dremel LC-40 laser cutter with attached BOFA filtration unit. Drawing on the 3D self-directed student use model, the Library will train and supervise student use of this device.

In addition, these technologies could be used together to create some pretty incredible projects. The Library offers instruction on 3D printing and other maker technologies, including the Raspberry Pi. One could create a robot using the Raspberry Pi and then laser cut the body for that robot. Or students could create some incredible art projects and cut them out and etch them in literally just a few minutes.

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 laser cutter teaches students rapid prototyping, 3D design, and allows students from any campus unit to quickly and easily engrave, cut out parts to assemble into 3 dimensional objects, copy drawings, and cut them out to make nearly any object they can think of.

To give some idea of the nearly limitless possibilities here is a tutorial on how to make topographical maps:
<https://makezine.com/2016/01/06/laser-cut-topographical-map/>

A desktop laser cutter will add fun, new, technology to campus while also supporting the campus goals of learning and modern demands for people to be able to design and make things from scratch. It can foster creativity and learning simultaneously.

It is particularly notable that this technology will have appeal to STEM and art/humanities focused students, and perhaps lead to interdisciplinary collaboration.

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 laser cutter is intended for UW Tacoma student use only. As described above, 37 students so far have completed the safety course for 3D printing and are able to print on their own. Those students have kept the printer busy for 58 days 22 hours and 10 minutes of total print time and used 1399.77 meters of filament so far.

Of those students, four of them have enthusiastically endorsed this new laser cutter program. This spring, the Library is also launching a "Maker Club" which will increase campus awareness of maker technology and focus on building an interdisciplinary maker community on campus.

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 Library will purchase the laser cutter as soon as funds are available. Over the summer, the Library will design an instruction course and safety procedures for using the laser cutter and by fall quarter will begin teaching students how to use the laser cutter.

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.

The Library pays for student employees to cover the service desks to check out equipment and for student employees to help service this equipment. In addition, the library pays for one full-time head of Library IT who oversees the IT department and a Head of access services who hires and trains a huge cadre of student employees.

The library is asking the STFC to purchase a Dremel LC 40 Laser Cutter, a separate BOFA air filtration system - necessary to clean the smoke from the laser cutter, and a small supply of birch plywood to get students started on some projects.

Funding Request Items

Item	QTY	Cost Per Item	Shipping Fee	Tax Per Item	Subtotal
Dremel LC-40	1	\$6,499.00	\$0.00	\$663.00	\$7,162.00
BOFA AD350 Filtration Unit for LC40	1	\$2,000.00	\$0.00	\$204.00	\$2,204.00
Birch plywood 5pk	10	\$40.00	\$0.00	\$4.08	\$440.80
OVERALL TOTAL:					\$9,806.80