



Student Technology Fee Committee (STFC) Annual Allocation Request

ALLOCATION REQUEST DATE INFORMATION

Date Created: 2026-01-06 11:59:39

Date Due: 2026-01-09 11:59:00

Date Submitted: 2026-01-06 12:53:43

ALLOCATION REQUEST TITLE/DESCRIPTION

Request Title: Replace the Makerspace laser cutter and add 3D printing capability

Request Description: A request to replace the Makerspace laser cutter and add a 3D printer

ALLOCATION REQUEST INFORMATION

Department Name: UW Tacoma Library

Request Code: 26A0533

Contact Names: Tim Bostelle

UW Tacoma Affiliation: Staff

UWT Email Address: tbostell@uw.edu

Phone Number: 2-4650

Title of Request: Replace the Makerspace laser cutter and add a 3D printer

Type of Request: One Time

Department Head Approval: Department Head: Kaijsa Calkins

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?

Founded in 2021, the UW Tacoma Library Makerspace is a peer-to-peer learning environment where students, staff, and faculty collaborate using a variety of tools to create interdisciplinary academic and fun projects. The Library Makerspace has the goal of lowering the bar to entry for folks to use Makerspace technologies and which operates on a "no-mistakes" philosophy that encourages play and exploration. This is a hands-on, interdisciplinary, Makerspace, students need to come in and use the tools to create projects. Makerspace staff do not make things for students, the students make them themselves. What Makerspace staff do is teach students how to use the equipment, create models and art, and then help them bring their projects to fruition.

In 2021 the STFC awarded the Library \$12,976 to purchase a laser cutter and various supplies. This was a huge investment in the new LibraryMakerspace and helped launch the modern Makerspace that we have now! That laser cutter was more than a "gee wiz" piece of equipment, it was hugely useful for cutting out wooden models, creating art for family and friends, and practical uses like making stamps, creating stencils, and other projects.

The problem is that the Laser cutter was purchased used and has become less and less functional over the last few months culminating in a repair call that we simply cannot afford to make. The last we asked the technician for a repair, they quoted us a price of "at least \$500".

That is 1/9th of the Makerspace total supplies budget and I think it's a poor investment. Because sadly, I think that this will not be the last time we will pay to repair this device. It's fairly old (we got it used so that we could afford it) and has been breaking down more often.

Additionally, Makerspace 3D printing has exploded in popularity and currently, all of the Makerspace 3D printers are printing almost all day, every day. We need something that will do both 3D printing and laser cutting. 3D printing usage has increased from 180 hours used in Fall 2024 to 656 hours used in Fall 2025.

Enter the Bambu H2D. For \$5106.32 the STFC can replace the current laser cutter with a new laser cutter (and supplies) which will also do 3D printing. And the H2D also has a true dual head, so unlike the older Bambu printers, this one creates a lot less waste since it doesn't need to purge and change colors every time it switches.

The laser cutter has been very popular over the years. Student use it quite often to burn projects, create sculptures, and make tools. The laser cutter has been used 381 times over the last four years. That number might seem low but that is part of the reason why we would like to expand its functionality by including a 3D printer. The 3D printers in the Makerspace have been going non-stop all day every day and we actually need a third one just to keep up with demand.

2. Benefit to Students: Discuss how students have (for returning applicants) or will (for new applicants) benefit from this technology. How will additional funding of the technology benefit students?

When we initially asked STFC to fund a laser cutter, this is what we wrote: "The laser cutter teaches students rapid prototyping, 3D design, and allows students 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. 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."

All of those things have happened! The laser cutter is used by students to create interdisciplinary projects and several examples of those projects are in the Makerspace currently. One student created a 3D model out of wood which she used to hold her earrings. Other students created a dice tower. Staff in the makerspace used the laser cutter to create stencils for a card-making event for students! Students used the laser cutter to create stamps. It has been a hugely useful and fun object to have in the makerspace for all of our users.

3. Access: Describe who will be using or will have access to the resources being proposed. In addition, all previous requestors, please provide historic data highlighting the usage and accessibility of technology. All new requestors, please provide user need data.

UW Tacoma students are the only folks allowed to use the laser cutter.

The laser cutter itself has been used just 381 times by students since its purchase in 2021 (Makerspace staff have used the laser cutter almost as many times as the students). However, we believe that combining laser cutting with 3D printing will allow us to maximize the use of the machine. When it's not being used for laser cutting, it can do 3D printing, and vice-versa.

And the 3D printers have been incredibly popular this fall.

3D printer use:

Fall 2024 # of bookings: 56

Fall 2024 # of hours used: 180

Fall 2025 # of bookings: 200

Fall 2025 # of hours used: 656

Adding an additional 3D printer will allow us to increase usage by 33%

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.

Adding a new laser cutter can be a bit of a problem:

In order to buy a new laser we will need to get permission from UW EHS (Environmental Health and Safety). After that permission is granted, we can purchase the laser and install it. I expect that to take a few weeks over the summer.

Additionally, we will need to create training and safety protocols for the new laser/3D printer. Getting the laser cutter online is actually going to be a several month process. I expect the laser to be fully operational by start of Fall 2026

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 provides a head of Library IT and Makerspace and a Sr. Computer Specialist at the cost of 2 FTE permanent staff. The Head of Library IT oversees all IT duties for the Library while also providing training and support for the Makerspace. The Library also funds IT student employment to the tune of 39.5 hours of desk time per week. The Head of Library IT and Sr. Computer Specialist both oversee the work of the Library IT student employees and provide training and supervision for the STFC funded student employees in the Makerspace.

The campus also invested a great deal of money renovating the Tioga Library Building, creating a consolidated Makerspace. The Library invests money in purchasing certain supplies for these spaces and training materials for students (for example, fabric so student employees can learn how to make a pillow case). Campus is also investing money in safety and other infrastructure needs for the Makerspace.

Funding Request Items

Item	QTY	Cost Per Item	Shipping Fee	Tax Per Item	Subtotal
Bambu Labs H2D with AMS and 40W laser - additional supplies will be purchased at the same time	1	\$5,106.32	\$0.00	\$526.00	\$5,632.32
OVERALL TOTAL:					\$5,632.32