

Building a 3D Printing Service: Collecting, Collaborating, & Creating

Jessica Thorlakson, MLIS
Public Services Librarian



Why 3D printing, and why in the library?

3D printers are an important research tool. They allow researchers to put theory into practice—to create prototypes, design specific tools for data collection, resize models for analysis, and more.

As a neutral space on campus, libraries provide more equitable access to this new, hands-on tool for knowledge creation.



Google Spreadsheets

All requests go into a regularly monitored Google Spreadsheet.

View a sample version of it here:

<http://bit.ly/3dqueue>

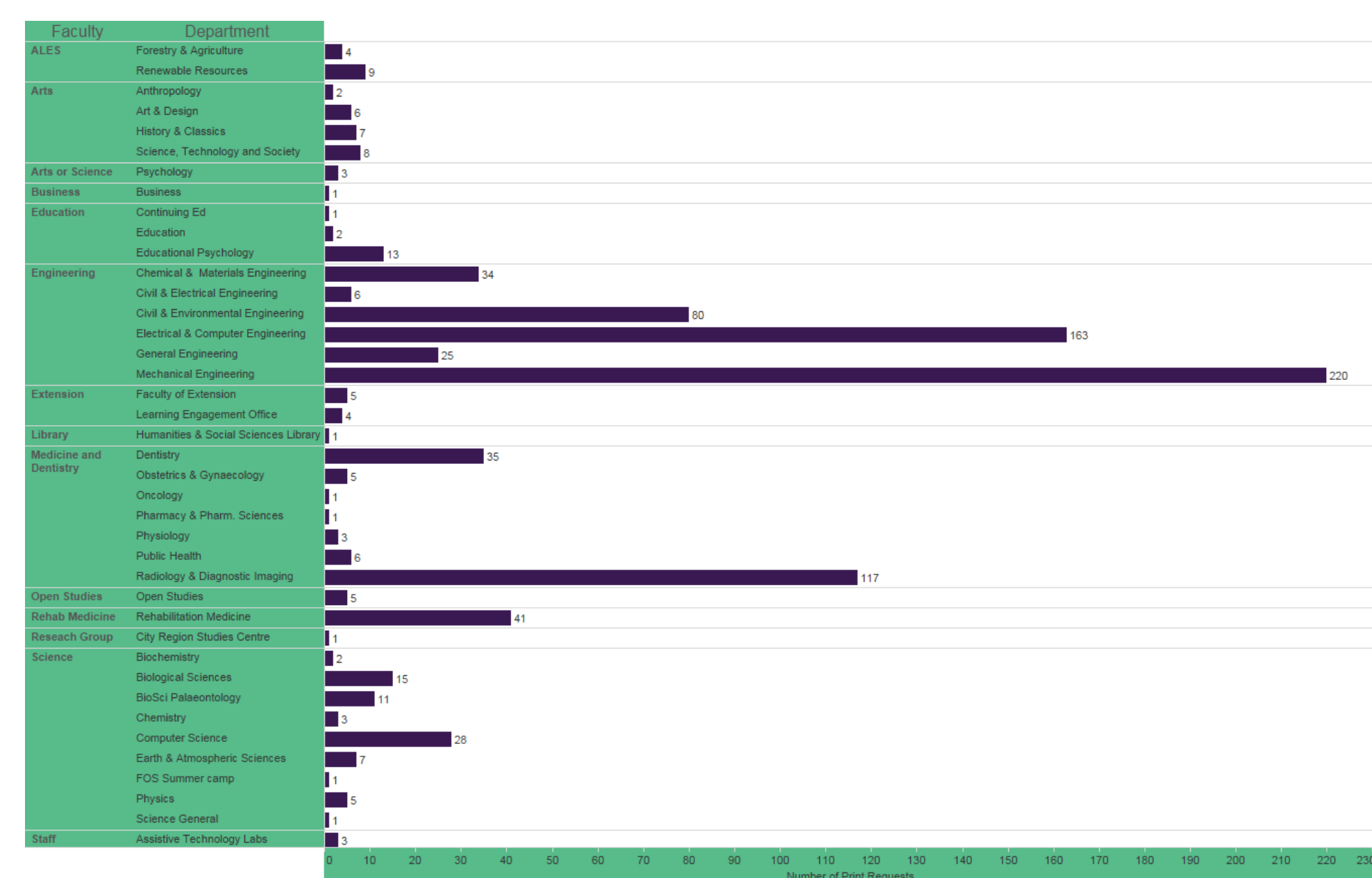
Form ID	Picked Up?	Staff Notes (please initial)	Printer	Estimated Time (minutes)	CCID	Name	Department
613		printing one first without supports top	Bob	0:43:00			Mechanical
614							Mechanical
615	ML						Civil or me
612		Wrong file type, model resubmitted, form ID 613 - FC					Civil or me
611	ML						Fashion
610							Mechanical
609	ET			1:00:51			First year
608				3:33:00			Computer
607							Computer

Lessons Learned

- Consider a maintenance package for your 3D printers
- Do what you can to get the word out across all disciplines
- Let your staff play a little—they will learn a lot and your service will be better for it [ie. Many cat-themed items were 3D printed in our library]

Print Requests by Faculty & Department Jan 2016-17

<http://tabsoft.co/2klcu88>



References

Free, D. (2012). University of Nevada-Reno library offers 3-D printing. *College & Research Libraries News*, 73(8), 455.

Moorefield-Lang, H. (2014). Makers in the library: case studies of 3D printers and maker spaces in library settings (English). *Library Hi Tech*, 32(4), 583-593.

Nowlan, G. A. (2015). Developing and implementing 3D printing services in an academic library. *Library Hi Tech*, 33(4), 472-479. doi:10.1108/LHT-05-2015-0049

Pryor, S. s. (2014). Implementing a 3D Printing Service in an Academic Library. *Journal Of Library Administration*, 54(1), 1-10.

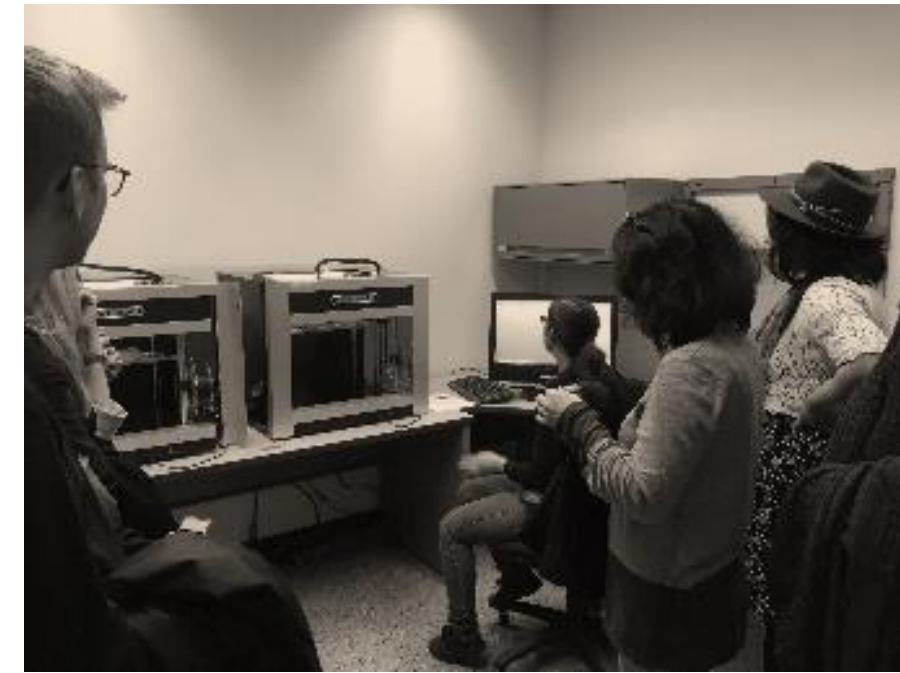
Groenendyk, M., Gallant, R. (2014). 3D printing and scanning at the Dalhousie University Libraries: a pilot project (English). *Library Hi Tech*, 31(1), 34-41

Though 3D printing has been around for over 30 years (Nowlan, 2015), they predominately surfaced in academic libraries in 2012 with the University of Nevada in the United States (Free, 2012), and Dalhousie University in Canada (Groenendyk, 2013).

The University of Alberta Libraries (UAL) started this pilot project in January 2016.

What we have

- Five Machina Mk2 x20 3D printers
- 15 different filament colours
- 100% biodegradable, plant-based filament: PLA



Our Service

- Open to students, faculty, and, staff
- Used for academic/research purposes
- Mediated by staff
- Free

Most 3D printing is done by our **Public Service Assistants** (library technicians), who also help train staff and teach outreach sessions.

Future Steps

- Less mediated service model; have users print on their own
- Offer training and orientation for 3D printing and 3D model creation
- Experiment with different kinds of 3D printers

“Creating maker spaces for patrons and students confirms the understanding that libraries exist to support the creation of knowledge and learning.”

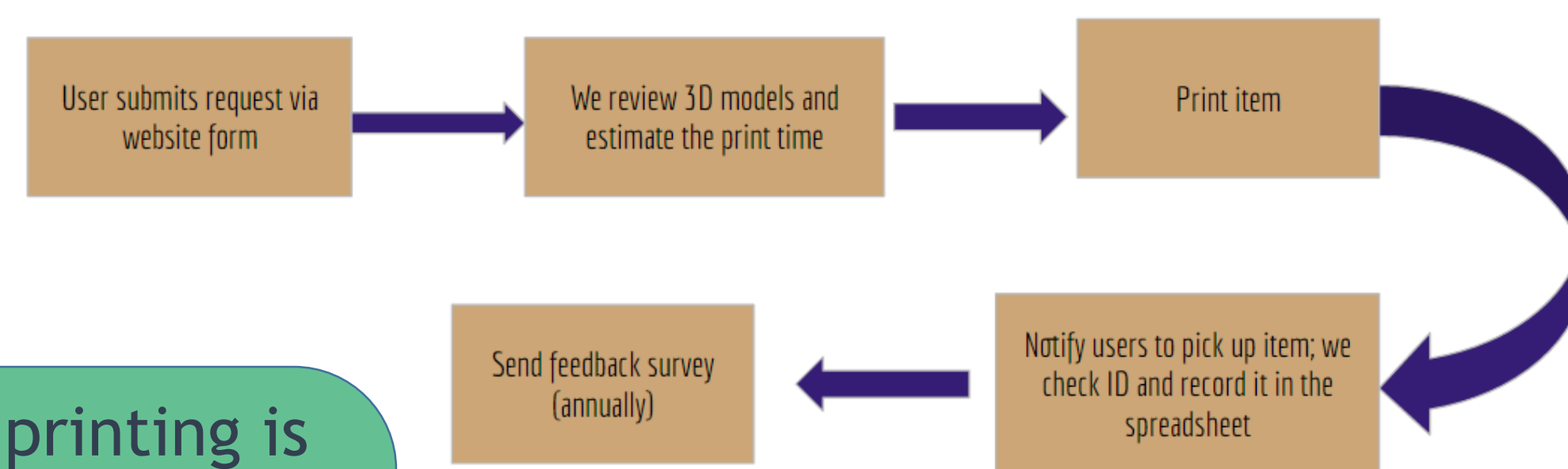
(Moorefield-Lang, p. 592, 2014)

How?

We saw the University of Alberta (UA) Physics Department's Science Hardware Space: *The Shack*, and asked if we could be a part of it.

The UA Faculty of Science agreed to buy 3D printers for the UAL to run with *The Shack* providing technical assistance.

A service was born.

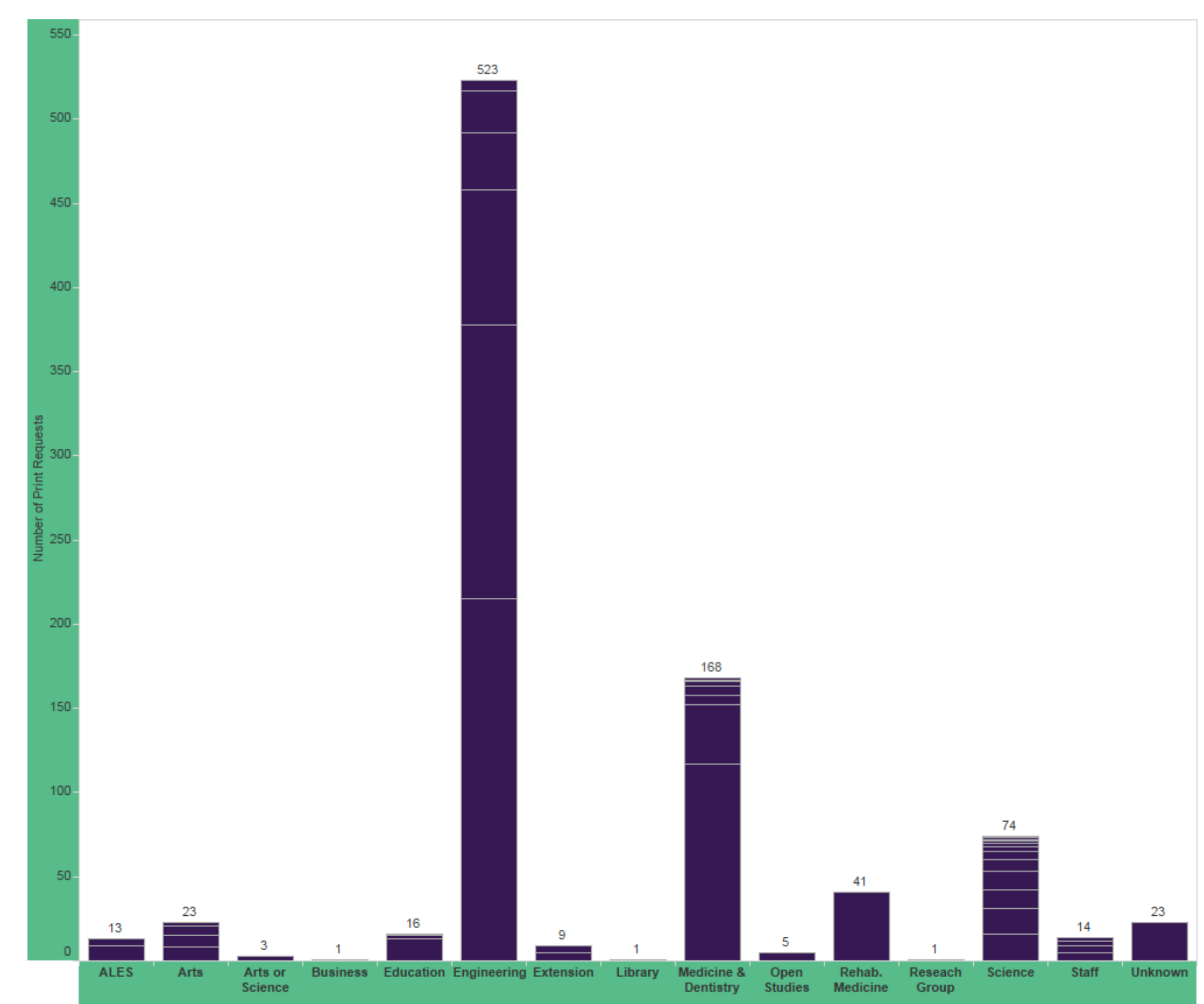


Feedback- March 2016



Print Requests by Department Jan. 2016-17

<http://tabsoft.co/2kl8Rix>



Visit our website:

<https://library.ualberta.ca/services/3dprinting>