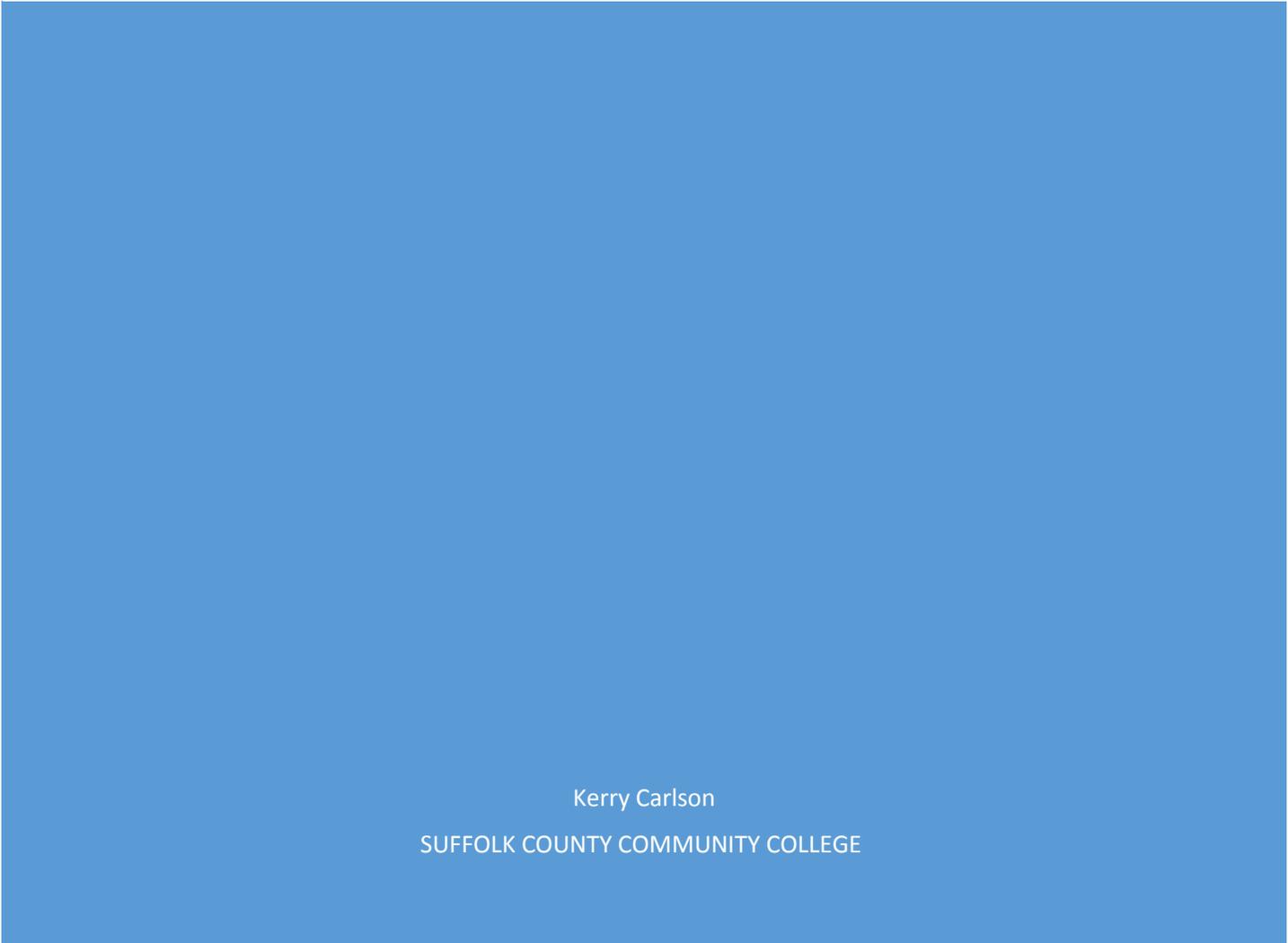




EXPANDING MOBILE MAKERSPACES TO  
ENHANCE ACTIVE LEARNING  
THROUGHOUT SUFFOLK COUNTY  
COMMUNITY COLLEGE



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SUFFOLK COUNTY COMMUNITY COLLEGE

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## Makerspaces at Suffolk County Community College

The IIT Grant funded the purchase of a 3D printer and One Button Studio for the SCCC libraries located at the Grant and Ammerman Campuses to enhance student engagement in learning in various disciplines. These makerspaces are marketed as mobile, however, the makerspaces are not wheeled around campus. Their mobility is more related to moving the equipment to provide demonstrations within the library. The mobility of the units allows you to set them up in the best place for your situation and when a change to configuration is necessary – it can be done.

## Space Concerns

All libraries are facing space concerns. Spaces are configured for multiple uses and in the academic arena, many times the library serves as a place for studying and research as well as a the home of the academic skills center, writing centers and media centers. Due to the different purposes of the equipment each had different requirements. The 3D printer needed to be seen while a job was printing – serving as ongoing advertising for the equipment - so it was placed behind the circulation desk. In contrast, the One Button Studio required a separate quiet room – a video studio – to be able to record a performance.

## Policies and Procedures

The incorporation of these new technologies required that we involve the legal department in establishing the policies and procedures regarding the use of the 3D printer and the One Button Studio. Within these policies we addressed intellectual property concerns that makerspaces can raise. Decisions revolved around who would have access, the department that would manage the technology, what could be printed or recorded, etc. We consulted various policies set forth by other institutions, then adapted them for our situation. Additionally, we tracked all usage and assess the user's experience.

## The World of 3D Printing

There are many different 3D printers available. At SCCC, we decided to purchase the Ultimaker 2+ Extended 3D printer ([www.ultimaker.com](http://www.ultimaker.com)). The 3D printing software will dictate the types of files that you will require, i.e., .stl, .obj, .scad, etc. The Ultimaker printer uses the Cura program available from the Ultimaker website.

Designs can be found on various websites:

- Thingiverse.com
- YouMagine.com
- Pinshape.com

Students can also design items themselves using a Computer Aided Design (CAD) program, like Tinkercad ([www.tinkercad.com](http://www.tinkercad.com)), SketchUp Make ([www.sketchup.com](http://www.sketchup.com)) or 3D Slash ([www.3dslash.net](http://www.3dslash.net)).



## One Button Studio (OBS)

The OBS was developed by Penn State, see <http://onebutton.psu.edu/> for tutorials, set-up and equipment lists. Additionally an OBS How to Video was created by Dawn Wing, Assistant Professor of Library Services/Media Library, Suffolk County Community College, Ammerman Campus. View the video here: <https://tinyurl.com/ltus66n>



## Marketing your Makerspaces

After the equipment has been set-up and the staff trained, it's time to advertise the new acquisitions. First, the library and computer center staff investigated different 3D objects to print. 3D objects that were printed were useful in various courses, had a practical application or just good display items. For example, we printed a DNA helix, a coffee scoop and a cute dragon, among other things. Then we placed them in display case in the library with a sign announcing the printer and asking "what will you create?"

Presentations were given at the academic department meetings and for faculty members in the areas that could most obviously benefit from the makerspaces: Science, Communication and Theater. We also hosted various makerspace events demonstrating and highlighting them (see the addendum for the flyers announcing the events).



The makerspaces were also announced in the State of New York University Librarians' Association (SUNYLA) February 2017 Newsletter (<http://sunyla.org/newsletters/>) and the Spring 2017 edition of the newsletters for the Grant and Ammerman Campus Libraries (<https://www.sunysuffolk.edu/Libraries/3502.asp>.)

## Future Makerspace Projects

The success of the makerspaces is evidenced by the future projects that are already planned. The projects range from microscope slide holders for the science labs to monologue practice for the theater students – engaging students in multiple disciplines. Some examples are:

- 3D Printing
  - Microscope Slide holders for the labs
  - Printing "bones" for anatomy classes
  - Pin Hole Cameras for the Photography Club
- One Button Studio
  - Communications classes will use the studio to practice their speeches and receive critiques from their professor.

- Theater classes will record their required monologues to share and receive feedback.
- Library Research class will be utilizing the equipment to prepare book reviews and book talks for the class.

## In conclusion

Regardless of the space restrictions, these technologies will fit into your library or classroom. Active Learning entices students into becoming student and teacher – curiosities are piqued and the desire to learn grows - since these technologies are creative by their nature. These technologies also foster an atmosphere of educational collaboration, are beneficial to various subjects and can be easily integrated into the curriculum without decreasing class time.

## Addendum – Examples of Marketing/Events

### Library Makerspace: Media Equipment and Events



- STEM Month@Library- March 19, 2017  
3-D Printed Microscopes
- OBS Demo: Teaching and Learning Center @ Ammerman (April 26, 2017)
- OBS Ammerman Virtual Tour on SCCC Library YouTube

<https://tinyurl.com/ltus66n>

**GRANT CAMPUS LIBRARY  
SUFFOLK COUNTY COMMUNITY COLLEGE**

**Mobile Makerspaces — *Come Create!***

Ready for some technological creativity? Come to the Library's "Mobile Makerspaces" Open House and check out our new user-friendly production stations.



The One-Button Studio allows students to record video segments to be used for class assignments and other projects.

With the 3-D printer, students can create items ranging from models of molecules to miniature dinosaur replicas.



**Mobile Makerspaces  
Open House**

May 10, 2017 11 a.m.—12:15 p.m.  
Sagtikos Lobby

# MakerSpace Innovations at Ammerman Library



The Library's got some fun, new technology...  
Come play with what we've got!



3D Printer!



Movie Maker!



What



Rope-Making



When

**WED., February 8th, 11am-12:15pm**

Snow date: WED., February 15th, 11am-12:15pm

Where

**Ammerman Library  
(Huntington Building, Room 104)**

*This event is sponsored by the Office of Campus Activities and Student Leadership Development*

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