

## Summary

**Spring 2024 saw 8,759 students, faculty, and staff** use the Media Commons, Maker Commons, and Immersive Experiences Lab initiatives across the Commonwealth. Much of this use was focused in **277 classes** in nearly every discipline offered at Penn State. To facilitate these interactions outside of University Park, traveling consultants provided **29 in-person sessions** and **31 remote sessions** for instruction, consultations and support.

One Button Studio 2.0 helped students and faculty create **4,517 academic videos**, comprising over **116 hours of video**. In addition, students from across the Commonwealth created **5,412 3D prints** in pursuit of their course work and their own curiosity.

The **Interactive Experiences** team facilitated experiences across 5 colleges. The team currently offers four main experiences: virtual reality, augmented reality, a cooperative, discussion-based card game called IMPACT that focuses on empathy, diversity, and technology as well as generative AI tools.

The report that follows breaks down our interactions with students and faculty and examines engagement levels with services offered, locations, and by individual colleges. Throughout the report we'll draw attention to exciting assignments, surprising class partnerships, and interesting observations from the semester - stories that tell the ways in which Penn State faculty and students are pushing the boundaries of education into the future. We also point out usage and technology trends that draw from the Creative Learning Initiatives group's proven history in supporting multimedia and emerging technology as well as reflect on challenges and opportunities in the coming semesters.

## MAKEiT AI

The fourth iteration of TLT's [MAKEiT](#) experience was held as a pre-conference event for the TLT Symposium on Friday, March 22. MAKEiT began in 2015 as a hands-on emerging technology-focused active learning experience event intended for faculty and staff that support faculty. MAKEiT is not typically an annual event; instead, the format is reserved for moments in time when there is an opportunity for a significant confluence of important emerging technologies. The 2024 version focused exclusively on creative generative artificial intelligence tools.

Three brand new learning experiences were designed for the event with a focus on using a variety of generative AI tools in different creative workflows. The main question we asked participants to explore was around if and how these AI tools could be used as collaborative partners and aid the creative process. What challenges arose? What ethical dilemmas were discovered? How could these ideas, concepts, and experiences translate to the classroom?

The three learning experiences were:

- **Can AI Play?** – a session focused on using ChatGPT as a creative partner to invent a new board game while also physically prototyping the board game using whiteboards and game pieces;
- **Paws & Prints** – a session focused on exploring text-to-print prompts and combining the results with maker workflows;
- **From Paper to Premier** – a session focused on exploring text-to-video tools as well as AI’s capacity for storytelling. All three of these experiences may see continued use for classes as Dreamery experiences or Media Commons workshops.

MAKEiT events are planned with 100 participants in mind. Of 115 registrants this year, 88 actually attended. Of those 88, **40 were faculty, 42 were staff, and 6 were students.** 55 attendees were from University Park, 28 were from the Commonwealth campuses, and 5 from World Campus. Results from a post-MAKEiT satisfaction survey were overwhelmingly positive: 60% reported that this was their first MAKEiT and 95% reported they would attend MAKEiT again. The remaining 5% were ‘maybes.’

Select quotes from attendees provided in the survey:

- “It was amazing. I love the collaborative process with people and AI, from idea to reality.”
- “Great session! The tools used were fun and produced some humorous results. The team activity was well thought out. I will be bringing a few video examples that were made in that session into my class in a few weeks.”
- “The activity was brilliantly conceived. Directions were clear. Teamwork was awesome. Support in the room was great. Can’t believe how much we accomplished in such a brief time. What a great way to explore new technologies!”
- “This opened my mind to what the average person can do with Gen AI. Given how accessible it is, I will consider weaving this into my teaching.”

A short recap highlights video can be viewed here:

[https://youtu.be/KREhLQ6sR-8?si=pHymdutPDFQX8\\_AH](https://youtu.be/KREhLQ6sR-8?si=pHymdutPDFQX8_AH)

## People Helped

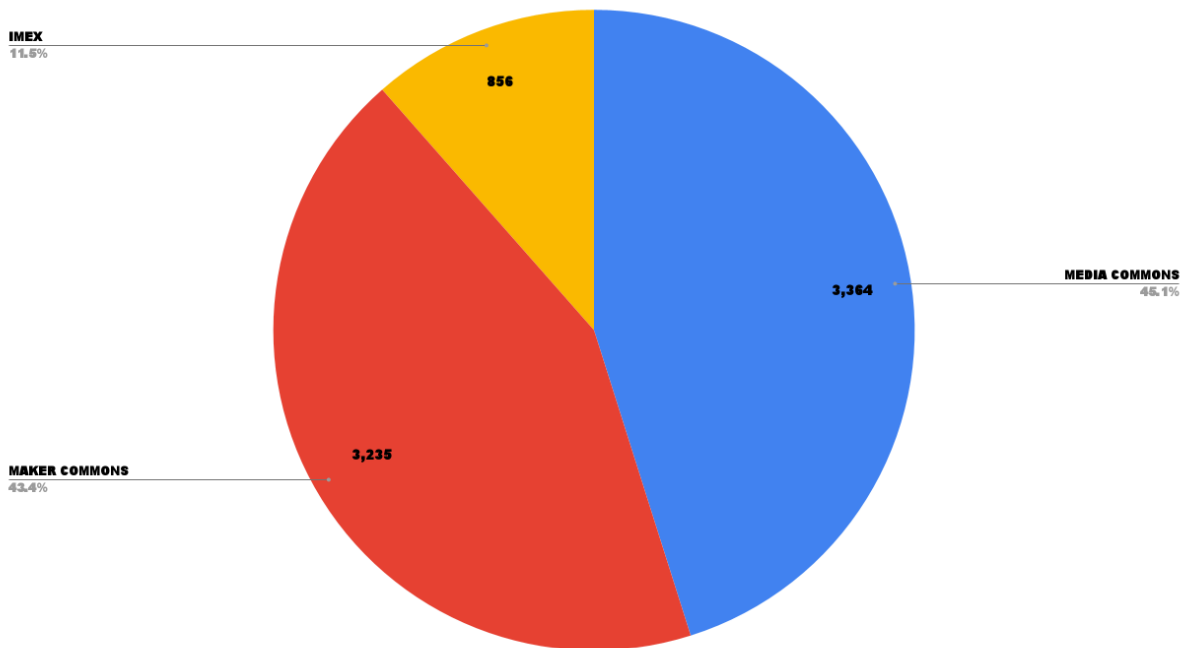
Faculty and students used Media Commons, Immersive Experiences Lab and Maker Commons services in a variety of ways in all of our locations over the course of the semester. These charts count how many people were aided by our consultants in either 1-on-1 consultations or in-class workshops.

Media Commons @ University Park	# of People Helped
Pattee Library Knowledge Commons	1,262
Pollock Building Computer Lab	CLOSED FOR MOVE TO SHIELDS BUILDING

PAMS Library, Davey Lab	3
Immersive Experiences Lab, Agricultural Sciences & Industries Building	130
Media Commons Workshops	2,696
Maker Commons Workshops and 3D Printing Users	2,646
Immersive Experiences (IMEX) Workshops	718
Media Commons Events	70
<b>University Park Total</b>	<b>7,525</b>

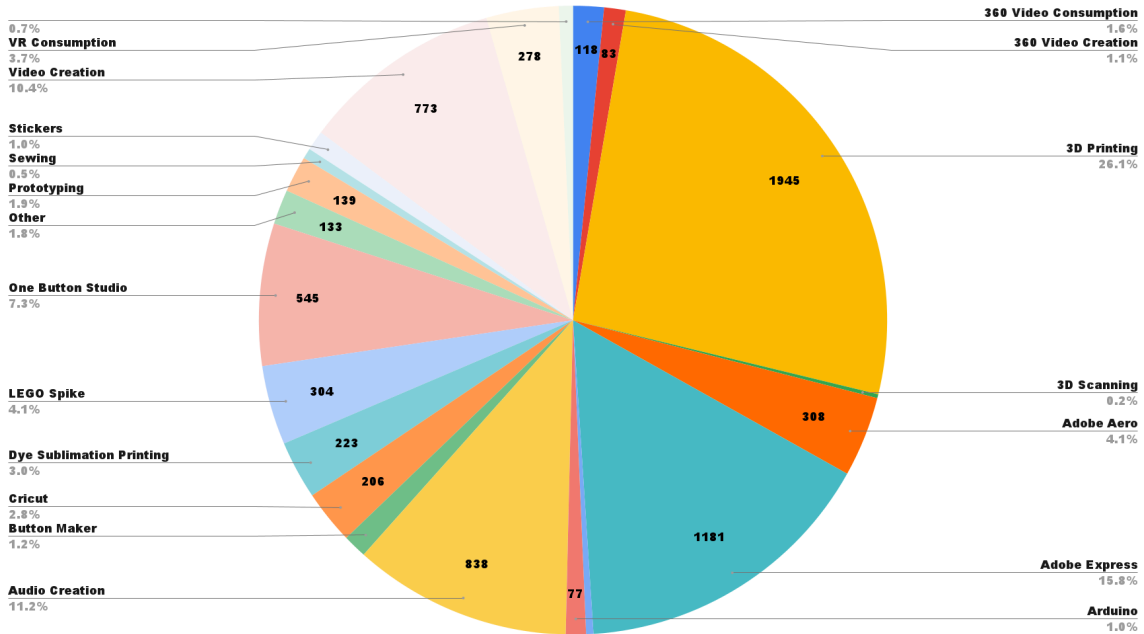
### University Park Breakdown by Service

**UP PEOPLE HELPED BY MC SERVICE SPRING 2024**



## University Park Technology Breakdown (Excluding Events)

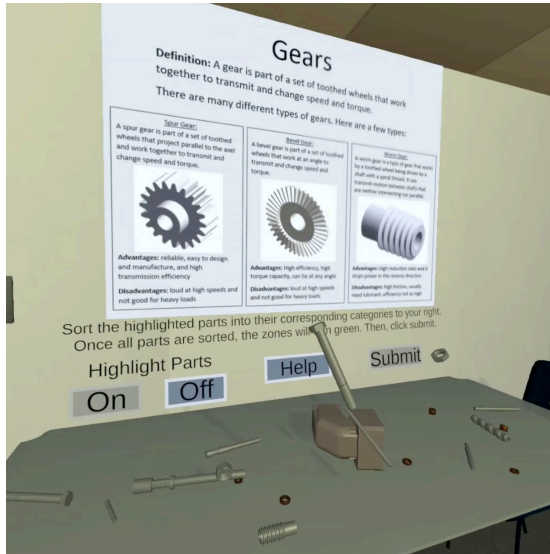
**UP TOTAL PEOPLE ASSISTED BY TECHNOLOGY SPRING 2024**



Technology Name	# of People Helped	Technology Name	# of People Helped
360 Video Consumption	118	Cricut	206
360 Video Creation	83	Dye Sublimation Printing	223
3D Printing	1,945	LEGO Spike	304
3D Scanning	15	One Button Studio	545
Adobe Aero	308	Other	133
Adobe Express	1,181	Prototyping	139
Adobe InDesign	28	Sewing	40
Arduino	77	Stickers	76
Audio Creation	838	Video Creation	773
Button Maker	91	VR Consumption	278
		VR Creation	54
		<b>TOTAL</b>	<b>7,455</b>

## Featured Stories

- In **Daniel Cortes's ME 360 at University Park**, a continuation of a project from the Fall of 2023, IMEX Lab facilitated the implementation of a custom built application to a large enrollment mechanical engineering class. Building on the content from the Fall, this semester saw the second iteration of the application that introduced new elements to the experience – such as a story element – and 3 new levels for students to use. The levels focused on understanding different machine parts and how they worked together. From March 14th-March 28th we had 87 students use the application.



## Campus Engagement

Campuses often don't have their own local Media Commons support and so rely on our consultants to visit campus to work with faculty and provide workshops for students. We host several tailored faculty events each semester to discuss opportunities and visit campuses as often as possible to support class partnerships.

### Western Campuses

Campus	# of Penn Staters Helped	# of Classes	Events	In-Person Visits*	Remote Sessions†
Altoona	150	8	1	4	4
Beaver	85	5	1	1	3
Behrend	10	1	2	-	2
DuBois	8	1	1	-	1
Fayette	23	1	1	2	-
Greater Allegheny	64	5	2	7	-
Harrisburg	210	-	1	-	-
Mont Alto	6	2	1	-	2
New Kensington	38	2	2	3	1
Pittsburgh Center	-	-	1	-	-
Shenango	18	1	1	-	1
<b>Totals</b>	<b>612</b>	<b>26</b>	<b>14</b>	<b>17</b>	<b>14</b>

\* In-Person Visits include travel to campus for teaching workshops, faculty consultations, meeting with students, hosting events, equipment and computer service and/or One Button Studio tune-ups.

† Remote Sessions denote online teaching workshops, faculty consultations, meeting with students, critiques of project materials uploaded to Canvas, OneDrive, etc

### Featured Stories

- At Greater Allegheny, Chris Robinson began experimenting with immersive tours to create community strength/threat assessments with his **6 students in SOCW 303**. Students captured 360° images of locations like [churches](#), [housing](#), [schools](#) and [family](#)

[centers](#) in Duquesne and marked them up using ThingLink. This is a cornerstone program for the campus and holds a lot of potential for community improvement.

- **Kelly Munly's HDFS 445** participated in the Immersive Tour Pilot, partnering with an Altoona area senior care center to offer VR-based enrichment activities. **15 students** took part in this project, developing [tour playlists](#) based on residents' feedback and facilitating the activity after learning best practices from IMEX Lab consultants.

## Eastern Campuses

Campus	# of Penn Staters Helped	# of Classes	Events	In-Person Visits*	Remote Sessions†
Abington	5	1	1	1	1
Berks	359	8	1	1	8
Brandywine	140	6	1	5	2
Great Valley	-	-	1	1	-
Hazleton	17	2	1	1	1
Lehigh Valley	-	-	1	-	-
Schuylkill	46	2	1	-	4
Scranton	-	-	1	-	-
Wilkes-Barre	21	2	1	1	1
York	34	1	1	1	1
<b>Totals</b>	<b>622</b>	<b>22</b>	<b>10</b>	<b>12</b>	<b>17</b>

\* In-Person Visits include travel to campus for teaching workshops, faculty consultations, meeting with students, hosting events, equipment and computer service and/or One Button Studio tune-ups.

† Remote Sessions denote online teaching workshops, faculty consultations, meeting with students, critiques of project materials uploaded to Canvas, OneDrive, etc

## Featured Stories

- In Holly Ryan's **ENGL 202 at Berks**, students created an immersive video experience for [one location](#) on campus related to their major. The goals for these immersive videos were to highlight the materials in the space, to give students an introduction for how to use the space and what to expect in the space. **18 students worked in small groups** to create tours using 360° cameras and ThingLink, part of the Immersive Tours Pilot.
- This spring Media Commons hosted a statewide **Immersive Technology Day**. The day took place in February at Penn State York, Penn State Greater Allegheny, Penn State

University Park and over Zoom. Participation from all campuses across the Commonwealth was welcomed and encouraged. Presentations were provided on immersive technologies, best practices for using those technologies and incorporating them into meaningful classroom activities. Additionally, a faculty panel was conducted with faculty members from an eastern campus, western campus, and University Park. This day was well received and we hope to hold more of these types of events in the future.

## Class Partnerships Across Colleges

Media Commons consultants partner with faculty from every college at Penn State to help design multimedia and making assignments, provide workshops for students, and 1-on-1 consultations as the students complete their work. This table represents how many classes were worked with in which colleges during the semester.

*Partnered Service Key: Media Commons = MeC, Maker Commons = MaC, Immersive Experiences Lab = IMEX*

Colleges	University Park				Western Campuses				Eastern Campuses				Grand Totals
	MeC	MaC	IMEX	Total	MeC	MaC	IMEX	Total	MeC	MaC	IMEX	Total	
Agricultural Sciences	1	-	2	3	-	-	-	-	-	-	-	-	3
Arts & Architecture	4	4	5	13	-	-	-	-	-	2	-	2	15
Business	3	-	2	5	1	-	1	2	6	-	1	7	14
Communications	2	1	-	3	4	-	1	5	6	-	-	6	14
Earth & Mineral Sciences	6	2	-	8	-	-	-	-	-	-	-	-	8
Education	-	20	7	27	-	-	-	-	-	-	-	-	27
Engineering	1	26	1	28	-	-	-	-	1	-	-	1	29
Health & Human Development	13	-	-	13	2	-	2	4	2	-	1	3	20
Information Sciences & Technology	2	-	-	2	2	1	4	7	1	-	1	2	11
Liberal Arts	89	20	11	120	3	1	3	7	2	-	1	3	130
Medicine	-	-	-	-	-	-	-	-	-	-	-	-	-
Nursing	-	-	-	-	-	-	-	-	-	-	-	-	-
Sciences	-	-	-	-	-	-	3	3	-	-	-	-	3
Graduate	-	-	-	-	-	-	-	-	-	-	-	-	-
Penn State IT	-	-	-	-	-	-	-	-	-	-	-	-	-
Teaching and Learning with Technology	1	-	-	1	-	-	-	-	-	-	-	-	1
World Campus	-	-	-	-	-	-	-	-	-	-	-	-	-
University Libraries	2	-	-	2	-	-	-	-	-	-	-	-	2
<b>Totals</b>	<b>124</b>	<b>73</b>	<b>28</b>	<b>225</b>	<b>12</b>	<b>2</b>	<b>14</b>	<b>28</b>	<b>18</b>	<b>2</b>	<b>4</b>	<b>24</b>	<b>277</b>



## Featured Stories

- At University Park, students in **WMNST 106N** (Aparna Parikh) made and curated a feminist 'toolkit.' As part of that project, 40 students individually created different objects over the course of the semester - such as buttons, zines and others. As a culmination of the project, students developed a curator's note to help bring these together. This note introduced a culminating infographic assembled using Adobe Express.
- Ken Henrie worked with his research partners to offer students immersive tours of market spaces around the world in his **MKTG 330 course at Greater Allegheny**. 13 students used pre-recorded traditional video to tour a Christmas market in the UK, pre-recorded 360° video and headsets to view [three markets in Italy](#) and live-streaming 360° video to [walk around a market in Quebec](#), Canada while asking questions of the guide in real-time.

## Interactive Experiences

### Dreamery Experiences

The **Interactive Experiences** team facilitated 30 experiences across 5 colleges. The team currently offers four main experiences: Virtual Reality (VR), Augmented Reality (AR), a cooperative, discussion-based card game called IMPACT (IMP) that focuses on empathy, diversity, and technology as well as Generative AI (AI) tools.

*Experience Key: Virtual Reality = VR, Augmented Reality = AR, IMPACT Deck = IMP, WTD = What The Deck*

Colleges	Dreamery Experiences				
	VR	AR	IMP	AI	Total
Agricultural Sciences	-	-	-	-	-
Arts & Architecture	1	1	1	1	4
Business	2	-	-	2	4
Communications	1	1	1	0	3
Earth & Mineral Sciences	-	-	-	-	-
Education	3	3	-	1	7
Engineering	-	-	-	-	-
Health & Human Development	-	-	-	-	-
Information Sciences & Technology	-	-	-	-	-
Liberal Arts	5	3	1	3	12
Medicine	-	-	-	-	-
Nursing	-	-	-	-	-
Sciences	-	-	-	-	-

Events	-	-	-	-	-
<b>Totals</b>	<b>12</b>	<b>8</b>	<b>3</b>	<b>7</b>	<b>30</b>

## Featured Stories

The screenshot displays the CCEDIR application interface. On the left is a grid for tracking classroom engagement, divided into 'Instructor' and 'Student' columns. The grid contains 12 icons representing various activities such as 'Lecture', 'Discussion', 'Using Classroom Tech', 'Presentation', 'Group Work', 'Individual Work', 'Summative Assessment', 'Instructor Asked', 'Prompted Explanation', 'Content Question Asked', 'Student Asked', 'High Level Question Asked', 'Instructor Answered', 'Logic Explained / Feedback', 'Student Answered', 'Group Answer', 'Formative Assessment', 'Explains Reasoning', 'Logistics, Planning, Recap', 'Feedback / Reflection', and 'Student Wellness Check'. The 'Discussion' icon in the top-left of the grid is highlighted with a green border. On the right is the 'Activity Log' panel, which shows a list of events with timestamps and descriptions. The events include a comment at 1:04 PM, a discussion at 1:02 PM, and a student question at 1:01 PM. At the bottom right, there are buttons for 'General Comment' and 'End Session'.

- The CCEDIR (Capturing Classroom Engagement Data for Instructor Reflection) project, led by Jackie Bortiatynski, PhD, as part of Penn State's Faculty Fellows program, offers a structured yet flexible approach for faculty to privately capture and analyze classroom engagement data with the goal of self-reflection (not evaluation.) The Interactive Experiences team was involved in the design and development of the CCEDIR application, a critical tool used in the Observation portion of the project. Built with Microsoft PowerApps, the application integrates with Penn State's enterprise solutions, ensuring scalability and adaptability across various educational contexts. The tool's design is intentionally simple, clean, and responsive, enabling observers to focus on classroom activity rather than a tedious interface. The process involves three phases: Pre-Observation, where instructors and observers set goals; Observation, where real-time data on classroom engagement is captured; and Post-Observation, where data is reviewed for reflective discussions. With the design, development, and testing phases complete, the CCEDIR program is rolling out in the summer and fall of 2024, aligning with Penn State's mission to foster excellence in teaching and learning and promoting continuous improvement.



In Fall 2023, CLI's Interactive Experiences team was asked to assist with Penn State's exploration into remote synchronous classes by creating a "Remote Sync Studio" that faculty could use to give instruction. The solution that was created is a versatile instructional desktop studio that, while originally designed for remote synchronous classes, has evolved to be able to support hybrid classes, webinars, general meetings, and recording sessions. The studio emphasizes simplicity and affordability, with all components priced at approximately \$5,000. However, thanks to its modular design, the final price can be significantly lower. The team continues to explore enhancements and best practices for effective instruction. The Interactive Experiences team is available for consultation with anyone interested in deploying a similar solution in their department.

## One Button Studio: On Campus + At Home

Media Commons supports the One Button Studio project across campuses and students in remote locations. The One Button Studio allows students and faculty to simply create quality academic videos,

often for recording presentations, lectures, and demonstrations, or completing class assignments - both in-person and via best practices to apply at home via Zoom.

## In-Person

<b>Location</b>	<b># of Videos Created</b>	<b>Total Duration of Videos</b> Hours:Minutes:Seconds
Pattee Library Knowledge Commons (2 studios)	2,255	63:11:28
Pollock Building Computer Lab (2 studios)	DECOMMISSIONED	DECOMMISSIONED
PAMS Library, Davey Lab	18	2:20:32
<b>University Park Total</b>	<b>2,273</b>	<b>65:32:00</b>
Abington	110	4:43:00
Altoona	168	4:13:00
Beaver	210	2:45:00
Behrend	93	1:48:00
Berks	129	1:59:00
Brandywine	143	5:50:00
DuBois	94	1:43:00
Fayette	Closed for Renovation	Closed for Renovation
Great Valley	6	0:01:42:
Greater Allegheny	71	1:00:02
Harrisburg	187	1:32:00
Hazleton	4	0:10:00
Lehigh Valley	95	2:11:00
Mont Alto	43	1:04:00
New Kensington	469	9:11:00
Penn State Center	No report	No report
Schuylkill	59	1:27:00

Scranton	218	4:58:00
Shenango	3	0:00:20
York	142	6:32:00
<b>Commonwealth Total</b>	<b>2,244</b>	<b>51:08:04</b>
<b>Total One Button Studio Use</b>	<b>4,517</b>	<b>116:40:04</b>

## OBS Online Resources

Page	# Unique Visits	Views per User
Using Your One Button Studio (faculty)	319	1.4
One Button Studio at Home	162	1.5
One Button Studio Best Practices	85	1.3

## Featured Stories

- Students from **ARTH 260: Museum Marketing** completed a podcasting assignment in which they recorded, produced, and edited a 5-7 minute podcast about artistic inspiration and creativity using AI for their script development and audience demographic building. Many of the 17 students chose to create video podcasts using the One Button Studios, instead of an audio podcast format, to make their content more visually appealing and engaging.
- **All 23 One Button Studios** are in the process of receiving upgrades to the video camera, microphone and audio mixer. Not only are we upgrading the equipment but we are also resetting the One Button Studio to its original state when installed and ensuring our staff onsite are fully up to speed about any changes to the studio. If there are any questions about the One Button Studio and its changes/upgrades please contact [mediacommons@psu.edu](mailto:mediacommons@psu.edu).

## Maker Technologies

The Maker Commons offers students at University Park, the Commonwealth Campuses, and World Campus access to 30 3D printers through an online submission process. The printers are located at University Park but, through a partnership with University Libraries, are able to ship prints to any student for easy pick-up.

<b>Registered 3D Printing Projects</b>	<b>37</b>
<b>Registered 3D Printing Project Students</b>	<b>1,525</b>
<b>Hours of Print Time</b> <i>Registered and Personal 3D Printing</i>	<b>15,818</b>
<b>Successful Prints</b>	<b>5,412</b>
<b>Filament Used</b>	<b>161 kg (353 LBS) 35 miles</b>

### Featured Stories

- Joe Bueter's **ENGL 050 Introduction to Creative Writing** class visited Maker Commons for 3 workshops: A tech tour and service overview, an Adobe Express workshop and a Tech Deep Dive workshop. The technologies included in the deep dive were Cricut Maker, dye sublimation printers, sticker printing and button making. Materials for this project was funded by a Gen Ed Micro Grant. 24 students created a physical artifact that showcases an excerpt of a writing project completed earlier in the semester.

## Websites and Social Media

Notably, almost every single percentage in this section is the same as in the Fall report, continuing a trend for this full academic year very neatly. Site traffic is down across the board, though for Media Commons and Maker Commons sites, the per visit views are marginally higher semester over semester. This could point to more reliance on in-person assistance and just-in-time hotline-based support (phone, chat, email). There is also evidence of a drop in search engine traffic from outside the University. A continued trend towards support for physical resources is present, as evidenced by the popularity of tutorials centered on 360° cameras and 3D printed objects. The nearly equal (year over year) viewership of PSA and Free Media Library content on the Media Commons site also points to a return to traditional, complex video assignments in many classes that had shifted to lighter, online-friendly tools like Adobe Express. Illustrator tutorials being at the top of the heap also point in this direction.

- The number of unique visitors was **69,989 across all three services**:
  - 40,602 via Media Commons (-48%)
  - 4,627 via IMEX Lab (-42%)
  - 7,926 via Maker Commons (-25%)
- The pageviews for Media Commons reached **72,578, representing 1.8 pages per visit**. Popular content included:
  - **Free Media Library** (8% total views)
  - **Using the Line Tool and Applying Stroke in Illustrator** (7%)
  - **Public Service Announcement** (6%)
- The pageviews for IMEX Lab reached **7,702, representing 1.7 pages per visit**. Popular content included:
  - **National Civil Rights Museum VR Tour** (5% total views)
  - **Multibrush** (5%)
  - **Using the GoPro MAX to Manually Shoot Photos** (3%)
- The pageviews for Maker Commons reached **60,028 representing 7.6 pages per visit**. Popular content included:
  - **3D Printing** (16% total views)
  - **Information to 3D Print** (13%)
  - **University 3D Printing Policy** (11%)

A renewed effort to engage with our various audiences through social media channels continues. Notable trends from Spring semester include:

- Instagram **reach is up 9.4%** this semester and **profile visits are up 31.6%**
- Facebook **content interaction is up 8.7%** since March 1
- LinkedIn **reactions are up 10.3%** this semester and our **organic engagement rate is 16.45%** (in general 1-3.5% is a sought after rate)

## Challenges, Opportunities & Notable Trends

Looking at some of our key performance indicators when compared to 1, 2, 5 and 10 years ago will help us identify areas of growth and change. There is an ebb and flow to each semester, but by analyzing in this way we will be better able to identify trends worthy of further investment or of reassigning resources.

KPI	1 Year Ago	2 Years Ago	5 Years Ago	10 Years Ago
Overall People Helped	+7%	+6%	-25%	+25%
University Park Partnered Courses	+36%	+41%	+15%	+341%
Commonwealth Campuses Partnered Courses	-5%	+2%	-17%	+30%
One Button Studio Videos	+3%	+61%	-59%	+23%
Successful 3D Prints	+2%	-6%	+90%	N/A
Partnered Courses Using Immersive Tech	+12%	+283%	+254%	N/A