Center for Creative Technology

A Service of IT at Ithaca College



ANNUAL REPORT 2020-21



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Students embody avatars in a virtual classroom to complete a lesson on figurative language as a part of the VR in Education



FROM THE TEAM

The '20/'21 term was a year of challenges and accomplishments for us at the Center for Creative Technology (CCT). Despite the complexities posed by pandemic-related restrictions, we were able to successfully unveil two unique additions, the MakerSpace and StoryLab. The MakerSpace is a hands-on workplace developed through careful spending and creative repurposing and offers creative expression through high-end laser cutting, 3D printing, hand tools, and more. Our StoryLab is where the IC community can explore audio/video production using professional-grade equipment and workstations. We've also expanded IC Immersive, our AR/VR lab dedicated to integrating immersive technologies into teaching and learning with the new VR Cart, a 10-unit, always ready, virtual reality station where anyone can check out a VR headset to experience virtual reality on their own or with a group.

We're proud of our accomplishments and are pleased to share our process and progress with you in this report. We also convey our 2021-2022 plans, including the launch of the CredX Learning Lab, where IC community members pursue learning via online resources such as LinkedIn Learning as they build community and networks. Lastly, we reveal our vision for expanding the Center for Creative Technology to contribute to higher learning and creative development beyond traditional and physical campus learning.

The Center for Creative Technology is poised to be a vital component in the Ithaca College experience and our team is ready to welcome a new year filled with discovery, sharing, camaraderie, and creating. Thank you for joining us.

Dr. Becky Lane Founder of the Center for Creative Technology Associate Director, Learning & Innovative Technology





Jay Williamson '18 Innovative Technology Specialist



An unprecedented year...

Despite the global pandemic halting the return to campus in the fall, the Center for Creative Technology officially opened in person during the Spring 2021 semester.

- The Center for Creative Technology had a soft launch, rebranding the Instructional Media Lab and introducing the Makerspace to the campus community
- The "Lenovo Project" begins a collaborative partnership with the Deptartment of Education, Associate Professor Christine Havens-Hafer, Lenovo, and a handful of virtual reality software applications (Uptale, Veative, Mozilla Hubs)
- Pivot from remote services to hybrid & inperson operations
- Four new hires and five returning students received comprehensive training on all the new equipment
- No positive COVID-19 cases within the CCT staff!
- A successful collaboration between the CCT and the Cornell Cooperative Extension of Oswego County Amboy 4H Environmental Education Center



20

new virtual reality headsets given to the CCT as part of the Lenovo Project 90+

equipment reservations logged from soft launch to end of the semester (2/24 - 5/13)

Coming up next...

- Physical Therapy Anatomy & Physiology in VR
- Fall '21 workshop series in development

virtual classrooms created for the VR in Education final assignment, a collaboration with IC's Ed Dept.

What is the Center for Creative Technology?

A unit within the Learning & Innovative Technology group of IT @ IC, The Ithaca College Center for Creative Technology is an open and collaborative resource where any student, staff or faculty member from any school can come together to:

- 1. Create innovative digital content that transcends traditional disciplines.
- 2. Create materials and projects in concert with academic courses.
- 3. Design and prototype new assets, applications and materials.
- 4. Supplement knowledge and skills with industry certifications.
- 5. Explore market potential of their creative work (Tech to Transfer).
- 6. Receive mentorship and guidance from subject matter experts.



Makerspace

Friends Hall 102

The Makerspace is a collaborative work space used for making, learning, exploring and sharing while utilizing a range of high tech to no tech tools. The space is equipped with a 3D printer and laser cutter, which lends itself to projects related to a variety of disciplines including art, computer science, graphic design, animation, game design, robotics, and more.

Digital Story Lab

Job Hall 102

The Digital Story Lab is the main hub of the Center for Creative Technology. The space is outfitted with 3 VR-ready Alienware desktop computers equipped with the processing power and licenses for media production with the Adobe Creative Cloud suite, a podcast studio and a multipurpose media production/ VR studio.

CredX Learning Lab

Job Hall 103

The Learning Lab is a collaborative learning space for earning micro-credentials. Services such as LinkedIn Learning and Badgr provide the content and learning modules to work towards certifications and mastery of skills. The space is outfitted with a large monitor, video conferencing equipment, and a converted charging cart with virtual reality headsets pre-loaded with a mix of educational and fun experiences.



MISSION

To foster an inclusive, multidisciplinary, and welcoming space for the IC community to collaboratively learn, explore and create with innovative technologies and to provide hands-on experience and guidance to bring creative projects to fruition.

VISION

To be recognized within the community as a knowledgeable, respectful, and supporting environment that is accessible for all, while also creating a space for ambitious personal exploration and innovation.

VALUES

- Diversity, Equity And Inclusion
 The purpose of these spaces is to share knowledge and cutting edge innovative technology with all of the campus community, which includes recognizing the opportunity gaps that have held affected certain communities from previously accessing such technology.
- Environmentally Conscious & Community Driven
 Recognizing the state of the world and the need for
 innovative solutions to address systemic problems that affect
 us all.
- Respectful & Supportive
 Failing is part of the process. We care about fostering a space that feels supportive enough to take chances where failure is likely and assist with adapting your efforts to achieve success.
- Fun
 "Creativity is intelligence having fun" Albert Einstein



Staff

Our staff of Creative Technology Specialists bring a range of passions and skills to their positions in the CCT and are available to provide instruction on equipment and aid in project development. The CCT fosters a co-learning environment where learners share a common purpose, depend upon each other and be accountable to each other for their success.

Staff members consist of students from Park School of Communications, including areas of strategic communications, production and journalism. At the start of the Spring '21 semester, 4 new hires brough the team a total of 11 student employees. Below is the current team:





Aidan Fennessy
Class of 2022
Communication Management and
Design, minors in IMC, Sociology
and WGST



Gabrielle Topping
Class of 2022
Journalism, minors in Honors
Interdisciplinary Studies,
Photography and Graphic Design



Hallie ArbitalJacoby
Class of 2022
Communication Management and
Design, minors in Graphic Design
and IMC



Madeline Thomas Class of 2022 Communication Management and Design, minor in Graphic Design



Brianna Mutsindashyaka Class of 2022 Cinema & Photography and Computer Science double major



Rowan Buck Class of 2023 Cinema & Photography



Autumn Stevens
Class of 2021
Cinema & Photography, minors in
Art and Graphic Design



Amanda Andujar
Class of 2022
Emerging Media, minors in Game
Development and Writing for Film,
TV, and Emerging Media



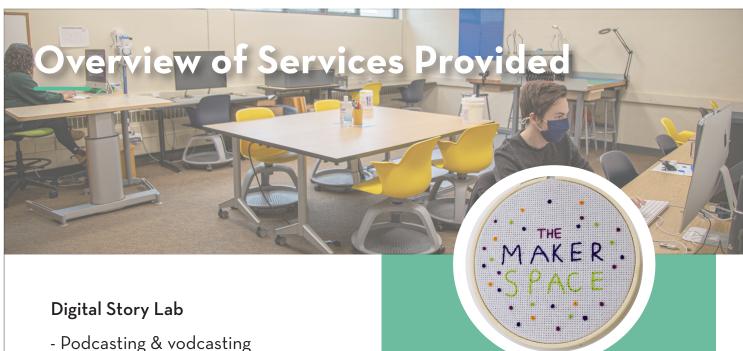
Sean Fiske Class of 2022 Integrated Marketing Communications



Catherine Fiore
Class of 2021
Emerging Media, minors in
Interdisciplinary Honors studies and
Computer Science



Tony Smith Class of 2021 Television-Radio



- Graphic design
- Video production
- Adobe Creative Cloud instruction
- Digitization & media conversion
- Equipment rental & training
- IC Immersive

CredX Learning Lab

- VR headset cart
- Microcredentialing
- LinkedIn Learning Courses
- Video conferencing equipment

Makerspace

- Dremel Digilab Laser Cutter
- Dremel Digilab 3D Printer
- Cricut
- Arduino & electronic circuitry
- Soldering
- Metal stamping
- Wire wrap jewelry
- Wood working
- Fabric arts
- Stickers
- and more!

Training

Train the Trainer Model

Most employees began their positions with little or no knowledge of or experience with the equipment in the CCT. During their orientation, staff received comprehensive training on how to safely operate the equipment and effectively teach others, especially with COVID safety protocols. We think that this is a great way to empower our student staff to take charge of their learning and professional development within the CCT.



Timeline: Review and Forecast

Year One (Fall 2109 - Spring 2020)



Initial CCT development/reconfiguration of current IT facilities and equipment

- Evaluate and enhance the role of student employees
- Departmental collaborations and partnerships
- Survey campus community
- Reallocate current rooms and configure existing spaces



Launch Microsoft Creative Tech Innovation Coproduction

- Determine participants for ideation process
- Align with strategic plan
- Launch, implement and promote end product



Hire full stack/Unity programmer consultant

- Develop two IC Creative Tech Projects though faculty CFP
- Offer an initial list of credential opportunities
- Extend faculty outreach efforts to advance teaching, learning, and research



Explore revenue generation models

- Original media and application production
- Certifications
- Tech to transfer LLC feeder



Develop plan for IC Makerspace

- Consult/coordinate with schools
- Determine equipment and staffing
- Develop procedures and guidelines
- Provide expertise in the CCT



Year Two (Summer 2020 - Spring 2021)



Analyze year one and calibrate growth trajectory

- Evaluate usage data and survey results
- Determine equipment and staffing
- Refine procedures and guidelines
- Refine/modify year one offerings



Expand partnerships and collaborations

- Interna
- Faculty satellite office hours
- External



Reimagine space and equipment

- Examine evolution of student-centered technology spaces
- Make recommendations for future development/facilities
- Evaluate and recommend equipment needs
- Commence faculty site visits of exemplary peers

Year Three (Summer 2021 - Spring 2021)



Streamline operational processes

- Evaluate usage statistics
- Conduct user survey
- Optimize hours and operation
- Modify offerings to support user interest
- Evaluate emerging technology



Develop CredX Learning Lab

- Explore campus partnerships
- Evaluate campus community needs and interest
- Identify potential course offerings
- Launch initial learning group

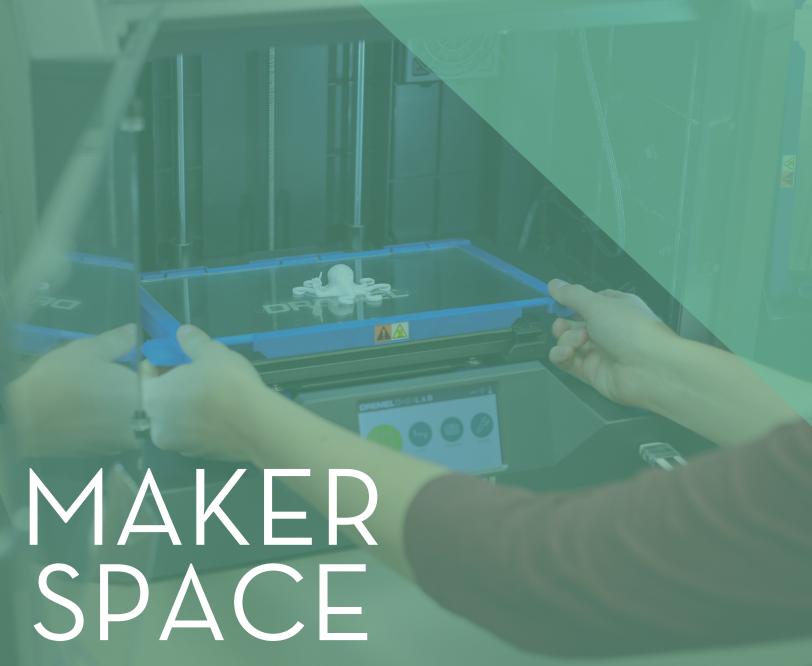


Explore expansion opportunities

- Corporate partnerships
- Grant opportunities
- External/off campus locations
- Production opportunities

STAGE 2

STAGE 3





MAKERSPACE

Equipment Purchases

- Dremel Digilab 3D Printer
- Dremel Digilab Laser Cutter
- Dremel Cordless Rotary Tool
- Dremel Mini Welder
- Dremel Drill Press stand attachment
- 2 Cricut Smart Cutting Machines
- Cricut HeatPress & HeatPress Mini
- Cricut MugPress
- 2 Butcher Block Workbenches
- Table Vise
- 2 Lighted magnifying glass arms
- 2 Cordless glue guns
- Origami paper
- Boondoggle
- Assorted jewelry wire & pliers
- Metal handstamping kit
- Coping saw
- Wood carving kit
- Black and Decker 20V Multi-tool
- Mynt 3D Printing pen & Filament
- 12 x 20 Acrylic sheets of various colors
- 12 x 20 Baltic Birch Plywood
- 12 x 12 Baltic Birch Plywood
- Cross stiching kit with embroidery thread
- Assorted safety equipment & first aid kit
- and more!

Equipment Donations from Campus Partners

- 2 Bernina Sewing Machines
- 2 Soldering Irons
- Arduino Circuitry Kits
- Rolls of 3D Printer filament
- Scrap Fabric
- Scrap Wood
- Hammers
- Measuring Tapes
- Assorted colors of Spray Paint
- Assorted sizes of Screwdrivers
- Staple gun



As a part of their training, CCT employees completed a number of test projects using the equipment to fill out the hallway display case with ideas for passerby.



The Topping sisters, Gabrielle ('22) and Isabella ('22), work together in the makerspace to sew a custom shirt for their mother that will accomodate an arm cast after surgery



DIGITAL STORY LAB

Existing Equipment Inventory

- Insta 360 One X
- Vuze+ Stereoscopic 360 Camera
- Yi 360 Camera
- Zoom Ambisonic Audio Recorder
- Sony Wireless Lavalier Kit
- Canon 5D Mark III
- Canon 7D
- 14 Oculus Quest Headsets
- 4 Oculus Go Headsets
- 2 Oculus Rift Headsets
- 1 HTC Vive Headset
- 4 Alienware Desktop Computers
- Yeti Blue Podcaster Mic



One of 3 workstations in the Digital Story Lab outfitted with Alienware desktop computers

Equipment Purchases

- DJI Pocket 2 & Accessories
- DJI OM4 Smartphone gimbal
- iPad Pro 12.9 in space gray
- Insta₃60 One X
- Zhiyun Crane 3 Lab Gimbal
- Rodecaster Pro Production Console
- Podcast Condenser microphones
- 4 Lenovo Mirage Solo headsets
- 10 Oculus Quest headsets
- 3 Oculus Quest 2 headsets
- 3 Lenovo Mirage VR s3 headsets
- DJI Mavic Mini Drone

Potential Future Purchases

Mirrorless semi-pro video camera for in-unit production VR Software/Subscriptions Next iteration of the Lenovo headset

Example Projects/Reservations

- A Communication Studies lecturer, visited the CCT 9 times for various media productions such as narrating an audio book and filming monologues of personal and academic works
- A Business student taking a digital marketing class reserved an Alienware Desktop computer station 5 times throughout the semester for staff-assisted Photoshop work
- Collaboration with the Amboy 4H Environmental Education Center

AMBOY PROJECT

A collaborative project with the Amboy 4H Environmental Education Center to create an interactive immersive experience for elementary school students to learn about the center and its native flora and fauna.

This project was a test of a potential CCT Production unit as a source of revenue generation and content creation.





IC IMMERSIVE

IC Immersive is a community of practice focused on educating others about the potential impacts of immersive technology.

Collaborations

Handwerker Gallery

Using the new Insta360 OneX camera, the IC Immersive Team captured 360 photos of points around the gallery's exhibits to then create a digital tour in Google Tour Creator. Having already established the connection with Mara Baldwin, Director of the Handwerker Gallery, prior to the pandemic, creating another digital tour of the Fall exhibit was an obvious choice once the decision was made to go remote. In the Spring semester, we were contacted again to create a digital tour of the graduating seniors' art show for their supporters to experience from home.

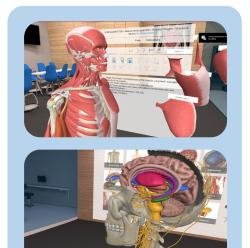




A 360 photo from Handwerker Gallery exhibit

Physical Therapy Anatomy and Physiology Faculty

IC Immersive presented applications and potential use cases for using virtual reality in Physical Therapy. Sanghee Moon and Eber Beck, Assistant Professors in Physical Therapy, came in for a demo of 3D Organon, a multi-user application that allows educators to give detailed 3D anatomy lessons where students can interact and follow instruction in real-time. Moon and Beck applied for and received an IDF grant and department support to purchase licenses to use the software in the Fall 2021 semester. Beck will complete the Fall 2021 semester remotely in Brazil using 3D Organon to embody a virtual avatar to interact with his students and use an expansive library of detailed anatomy models to teach course content. IC Immersive will provide equipment, space for the students to use the headsets, training, and technical support.



Screenshots from 3D Organon, a VR Anatomy program

Past Collaborations:

Ed Tech Day Immersive Court Microsoft Handwerker Gallery Gannett Library

Developing & Potential Collaborations:

Physician's Assistant Program Occupational Therapy Program Career Services Exploratory Program



CREDX LEARNING LAB



CREDX LEARNING LAB

Co-Learning & Credentialing

"As workforce needs continue to evolve due to changes in technology infrastructure and the resulting upskilling and re-skilling of the workforce, microcredentials will have a key role to play...Current predictions state that the market will double in the next 3-5 years."

- 2021 EDUCAUSE Horizon Report



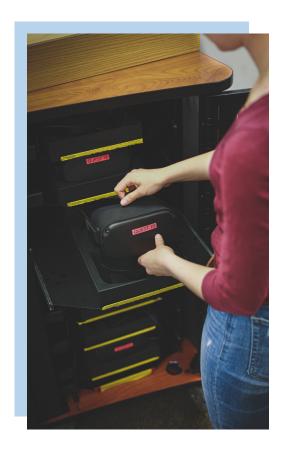


Virtual Reality Headset Cart

Housed in a converted laptop charging cart, 15 virtual reality headsets are ready for drop-in or scheduled class use.

Examples of applications available:

- Mission ISS
- Beat Saber
- Anne Frank House
- Traveling While Black
- RecRoom
- AltspaceVR
- 3D Organon VR Anatomy
- Sports Scramble
- Notes on Blindness
- Gravity Sketch





ACHIEVEMENTS

As the global pandemic derailed the majority of capital projects in higher education, we remained diligent to our inital timeline and accomplished the work needed to fully launch the Center for Creative Technology.



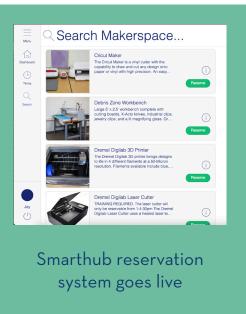
Center for Creative Technology Achievements

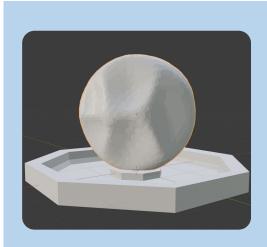




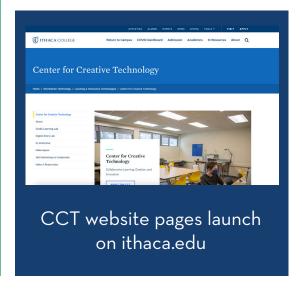








3D Model of IC's Textor Ball for AltspaceVR virtual classroom





Collaborations & Partnerships

Physical Therapy Anatomy & Physiology faculty Lenovo & Education Department IC Marketing & Communications Handwerker Gallery 360 Photo Tours

(IN PROGRESS)

Occupational Therapy faculty
Exploratory Program & Career Services
Physicians Assistant Program



Presentations & Conferences

Infinity presentation IC News Article iLRN Conference ELI at EDUCAUSE Cornell guest lecture ICTV Game Over segment IT-All Staff Meetings



Remote Workshops Hosted

Beginnner's Guide to Photoshop Create a Canva Holiday Card Beginner's Guide to Illustrator Sound Design and Storytelling with Soundtrap Beginner's Guide to Premiere Pro Podcasting 101 CCT Digital Discovery Series



Completed Projects

CCT Drupal pages published on ithaca.edu
Smarthub reservation system configured and live
Summer 2020 P&P course VR lesson plans
CCT Brand development
Lenovo VR in Education Pilot Program
Makerspace soft launch
Amboy Education Center 360 Experience

The Lenovo VR in EDU Pilot Program

Immersive technologies like VR and Augmented Reality (AR) have a bright future in higher education. The academic world is seeing powerful examples in every discipline, every major, and every profession. Whether you are working in the humanities, social sciences, arts, physical sciences, health sciences, or professional schools, VR can make a real difference in attaining mastery of the material.

"One of the important takeaways from this pilot program was to have an open mind about where people are and where they want to go with the technology," Becky Lane said. "There's an assumption that the younger generation is very tech savvy, but that's not always the case....One of the most interesting things we've seen is how students applied VR learning in ways we hadn't thought of."





Lenovo

In the Spring of 2021, Dr. Havens-Hafer faced a challenge. Her group of student teachers needed to teach in front of their peers, but because of campus restrictions on assembling students during the pandemic, it made more sense and was more equitable to teach the class online. The challenge presented an opportunity to use immersive technology for teaching and learning.

Lenovo partnered with Ithaca College's Teacher Education program to implement its VR Classroom solution to train students how to teach with VR. Headsets were mailed to the student teachers and they met online in a virtual classroom to prepare and deliver lessons. The results were impressive.

"The goal is to figure out ways we can make VR technology more user friendly for not only our future teachers, but for the students they'll be teaching. We're also focusing attention on differentiating instruction that meets the needs of all learners, whether that's at a higher-ed level or K-12," said Dr. Havens-Hafer. "I believe immersive technology allows for different learning styles to be met because you have kinesthetic, visual and auditory learners in a classroom and VR brings all those fields together into one."





Catherine Fiore '21 meeting 1:1 with a student remotely and in VR



Graduate students in the Teacher Education program try on VR headsets for the first time in their Pedagogy and Practice course



Brand Development

Our internal communications team is currently comprised of two student employees, Hallie ArbitalJacoby and Madeline Thomas, who worked to develop the Center for Creative technologies brand standards. After various iterations, a logo was developed as well as a communication and social media plan. Below is the final edit of the CCT logo:

Center for Creative Technology A Service of IT at Ithaca College

Each aspect of the logo was created in groups of three to represent the three spaces of the Center for Creative Technology.

Squares

The three rounded squares within the logo represent each aspect of the Center for Creative Technology. The overlapping of the squares shows how the Makerspace, Digital Story Lab, and Learning Lab are all connected but are still their own separate space too.

Colors

We have chosen three of the IC colors, light blue, dark blue, and green, to represent the Center for Creative Technology. Taking inspiration from Ithaca College's brand standards, these hues reflect the values of Ithaca College, in addition to the unique values of each area within the CCT. The spaces of the CCT (Makerspace, Digital Story Lab, and Learning Lab) all have unique attributes, yet they are all connected to one another and to the college.



Words

Going along with the theme of threes, we have chosen three words to represent the Center for Creative Technology. The words "Create", "Innovate", and "Educate" describe what the Center for Creative Technology is all about. We encourage creation, innovation, and education in all three areas of the Center for Creative Technology.

Makerspace

The Makerspace is represented primarily by the color green. The Makerspace is the newest and most exciting addition to the CCT. The color green is associated with energy, ambition, and growth. As a space for innovation, it makes sense to use a color that represents its forward thinking, learning, and technology.

Digital Story Lab

Light blue is the primary color to represent the Digital Story Lab. Blue represents serenity, wisdom, inspiration, and reliability. The light blue icon that connects all aspects of the Center for Creative Technology in the logo. The Digital Story Lab has the most overlap between all of the services we provide. At our core, the Center for Creative Technology is a place for the Ithaca College community to discover new and innovative ways to communicate and learn.

Learning Lab

The shade of IC blue is the primary color to represent the Learning Lab. Similar to the light blue for the Digital story lab, the blue reflects the exploration and dependability that occurs in the space. The IC blue specifically represents the core values for education at Ithaca College. The Learning Lab is a place for collaboration and expanding knowledge that extends beyond traditional classroom learning.

2020-21 BY THE NUMBERS

90+
EQUIPMENT RESERVATIONS

ACROSS THE THREE SPACES

 239,612

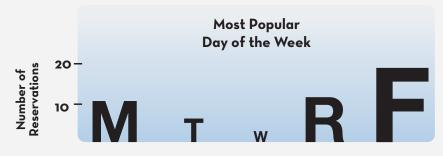
CLASSROOMS CREATED

Polygons in the 3D model of our South Hill campus

908 minutes 10 of laser cutting

MAPLE LEAVES LASER CUT FOR THE NON-TIMBER FOREST PRODUCTS CLASS

STUDENT EMPLOYEE
HOURS WORKED IN
THE CCT



Day of the week



Print Project:

10 sessions of

3hr+ prints

Smallest 3D Print Project: 5 minutes

Analysis and Actions

Hours of Operation

Usage statistics point to heavier attendance on Monday, Thursday, and Friday afternoons. For 21/22, we will experiment with late opening and expanded hours on these days.

Equipment Loans

Currently, we have an informal equipment usage policy. With the addition of more expensive gear, and the expected increase in demand, we will institute and require: (1) a formal tracking system; (2) official lending policies; and (3) signed user agreement forms.



A student uses virtual reality for the first time

Equipment and User Experience

Currently, we have not experienced overcrowding or lengthy queues for equipment and workstation reservations. However, with the full IC community on campus in the fall, we will closely monitor usage and reservation times to optimize the user experience and adjust offerings as needed.

Safety

The Makerspace had no major incidents relating to injury or equipment damage. We attribute this to our safety protocols and staff/user education. We will closely monitor this situation as the campus population and CCT usage increases.

Staffing

The CCT has 4 large components: Makerspace, IC Immersive, Digital StoryLab, and for 21/22, CredX Learning Lab. Currently, one student monitors the Makerspace, and one student monitors the Digital StoryLab. With the addition of large projects in IC Immersive and the development of the CredX Learning Lab, we will closely monitor area performance and user experience and adjust offerings accordingly.

Future Possibilities

At the CCT, we love to dream big. Here are ways in which the CCT might make an impact in the future:

Center for Creative Technology Incubator

An extension of the work done by the IC incubator group as part of the Ithaca Forever plan, the CCT Incubator is a centralized, transdisciplinary space where emerging IC-based businesses and inventors can explore technology, prototype inventions, and get advice from faculty mentors on entrepreneurial endeavors.

Center for Creative Technology Production Company

Provides professional video production, including 360/immersive video, to the local Ithaca area. Students, under the supervision of a CCT staff member, will act as producers, directors, videographers, and assistants.

Center for Creative Technology London Center

CCT London would serve as a creative hub for faculty and students who wish to incorporate digital media and create making into their coursework at The London Center. The London Center provides students with summer, semester, or academic year study abroad experience in the U.K. with courses in Business Management and Legal Studies, Communications, Fine Arts, and Humanities.

Center for Creative Technology Fellowship and Visiting Artist

The CCT would support a visiting creative technologist, from inside or outside of the Ithaca College community, to teach workshops, mentor students, and give periodic lectures as they develop a personal project during their tenure.



Sean Fiske '22 practices using the different stitch settings on one of the two Bernina sewing machines donated to the Makerspace by the Theater Dept.











