

**CENTER *for***  
**LEARNING**  
**EXCELLENCE**



# MSHC 302 IMMERSIVE LEARNING AND COLLABORATIVE CLASSROOM MANUAL

**Cuyahoga  
Community  
College**



CUYAHOGA COMMUNITY COLLEGE



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## About the Classroom

This manual was compiled as a resource to assist faculty in the evaluation and selection of technology available in the Immersive Learning and Collaborative Classroom; MSHC room 302. This manual will review the products currently available in the room, provide instructions on setting up the technology, and suggested best practices. Currently, the MSHC Immersive Learning and Collaborative Classroom is outfitted with the following products:

- PTZ Rear-Mounted Wall Camera
- OneLink Bridge Ceiling Mounted Document Camera
- Hovercam Document Camera
- Solstice Pod Screen Mirroring Hardware
- OBS Studio Software
- Collaborative Workstations
- Movable Whiteboard
- Dry-Erase Walls

The products listed were chosen because they offer advanced lecture capture, video conferencing, or enhanced collaborative teaching capabilities. Note, that not all products possess all of the aforementioned abilities. Faculty who would like to explore a particular product in more detail are encouraged to contact the Technology Learning Center (TLC) who will arrange a demo and/trial access. The Center for Learning Excellence (CLE) is available for consultation on teaching applications for each of the tools and will work with faculty on course designs or revisions for those who would like to redesign course activities utilizing the tools available in the classroom.

## Resources

Further information about the products listed in this manual can be obtained from the manufacturer’s websites below:

- [PTZ Rear-Mounted Wall Camera](#)
- [OneLink Bridge Ceiling Mounted Document Camera](#)
- [Hovercam Document Camera](#)
- [Mersive](#)
- [OBS Studio](#)

## Faculty Considerations

When preparing to use the products available in the Immersive Learning and Collaborative Classroom, faculty should begin by reflecting on how they might utilize the technology available in the room to enhance their course. We recommend faculty schedule a consultation with an instructional technologist in order to gain a complete understanding of how to best use the technology when teaching.

### Lesson Planning

When creating a lesson plan, be sure to consider what type of learning style would best fit your classroom needs. Two of the most popular group learning styles are cooperative and collaborative learning. Cooperative and collaborative learning share many similarities but also have some key differences that you may want to consider if using them in the classroom. Promethean (2017), a leader in educational technology solutions discusses the similarities and differences of these popular pedagogical methods:

The similarities between cooperative and collaborative learning:

- Rely on active student participation rather than passive, lecture-based teaching
- Students assume a degree of responsibility for their own learning
- Teachers act as facilitators to learning
- Require pupils to complete a task/project
- Instill team building skills and encourage social interaction
- Help to prepare students for the world of work
- Enhance deeper cognitive skills
- Create shared learning experiences
- Increase levels of information retention
- Embrace student diversity

The differences between cooperative and collaborative learning:

### Collaborative learning

Students' progress personally, while collectively working towards a common goal. Students are accountable to one another and, with appropriate direction, will self-manage this. Pupils learn to better understand and anticipate difference, recognize it in themselves and others, and use it to their advantage. A typical collaborative learning process:

- Students organize their efforts between themselves (group-structured)
- Students source material to help them complete the activity
- The activity is not monitored by the teacher (although they can help when assistance is requested by the group)
- Students assess their own individual and group performance
- Success depends on individual strengths

### Cooperative learning

Like the cast and crew of a theatre production, co-operation involves interdependence. Roles and responsibilities are clearly defined but are open for negotiation. This method of collaboration brings with it a strong sense of accountability. In contrast to collaborative learning, a cooperative learning structure takes the following form:

- Activities are structured with each student assigned a specific role (teacher-structured)
- Teachers supply information for students to read and analyze (or let pupils know where this info can be found)
- Teachers observe, listen and intervene where necessary
- Students submit work at the end of lesson for evaluation/assessment
- The success of the group depends upon the efforts of everyone involved

In addition to pedagogical considerations for group activities, special attention should be paid to the following best practices for designing group work (Waterloo, 20\*\*):

- Identifying the instructional objectives that will be met with this activity
- Deciding on the group size and how you will divide students into groups
- Providing sufficient time for group work to be accomplished
- Sharing your rationale for assigning group work
- Having students form groups before providing instruction
- Explain the task clearly
- Let students ask questions
- Ask students to reflect on the group work process

The Immersive Learning and Collaborative Classroom provides both high-tech and low-tech options to help you enhance your classroom experience. In addition to the high-tech and low-tech options in the room, the classroom is outfitted with mobile furniture for a flexible classroom layout. Your campus instructional designer can help you with creating in-class or hybrid activities that promote collaboration and engagement through the use of these tools.

## Instructional Modalities

Course modality refers to the instructional delivery method used by a course. Cuyahoga Community College currently offers the following modalities for course instruction:

- **Traditional** - In a traditional/enhanced course all of the instruction is provided in a face-to-face classroom setting.
- **Hybrid** - A hybrid course is a combination of face-to-face classroom instruction and online instruction. A portion of the instruction is provided online, but some regular face-to-face instruction is still required. Face-to-face time requirements will vary between hybrid courses and sections.
- **Online with Set Meetings** - Online courses with set meeting times provide synchronous online instruction at set times through the use of virtual conferencing software. There is no in person face-to-face classroom instruction.

- **Online with No Set Meeting** – Online courses with no set meeting times provide asynchronous instruction through the College’s Learning Management System. There is no face-to-face instruction.

Depending on the type of course you are teaching you might use more or less of the features/tools offered. When considering your goals for this course, examine each of these tools in regards to how they can increase student engagement and understanding of the course concepts.

### When to Use Features

The table below outlines possible uses for the available products in the Immersive Learning and Collaborative Classroom. This list is not comprehensive but is provided as suggestions. If you have additional ideas for how you want to use the technology in your course but are not sure if the technology currently available can accomplish your desired learning goals; please reach out the Center for Learning Excellence for further discussion.

**Table 1.1 Suggested Feature Use**

<b>PTZ Rear-Mounted Wall Camera</b>	<b>OneLink Bridge Ceiling Mounted Document Camera</b>	<b>Hovercam Document Camera</b>	<b>Solstice Pod Screen Mirroring Hardware</b>
Video Conferencing Course Lecturing Student Presentations	Enhanced display of learning objects including textbook pages, paper, documents, and manipulatives.	display learning objects including textbook pages, paper documents, and manipulatives.	Share work wirelessly from a portable device to room displays.
<b>OBS Studio Software</b>	<b>Collaborative Work Stations</b>	<b>Moveable White Boards</b>	<b>Dry-Erase Walls</b>
Enhanced Video Conferencing Enhanced Course Lecturing Hyflex Teaching*	Formal Cooperative Learning Groups Enhanced Peer Instruction Group Presentations Student Presentations	Informal Cooperative Learning Groups Peer Instruction Student Presentations Room Divider	Informal Cooperative Learning Groups

\* indicates the required use of additional products in the room.

## Getting Started

Getting started in the room is easy! The next sections will provide advice for preparing the room for class use, step-by-step instructions on using each of the products, and best practices for powering down the equipment and exiting the room. Following these instructions and guidelines will ensure that you and your students will have a positive experience using the technology in the space. Remember, if you do experience any technical issues while using the space, technical support can be obtained by calling the Metropolitan Technology Learning Center at 216-987-3679.

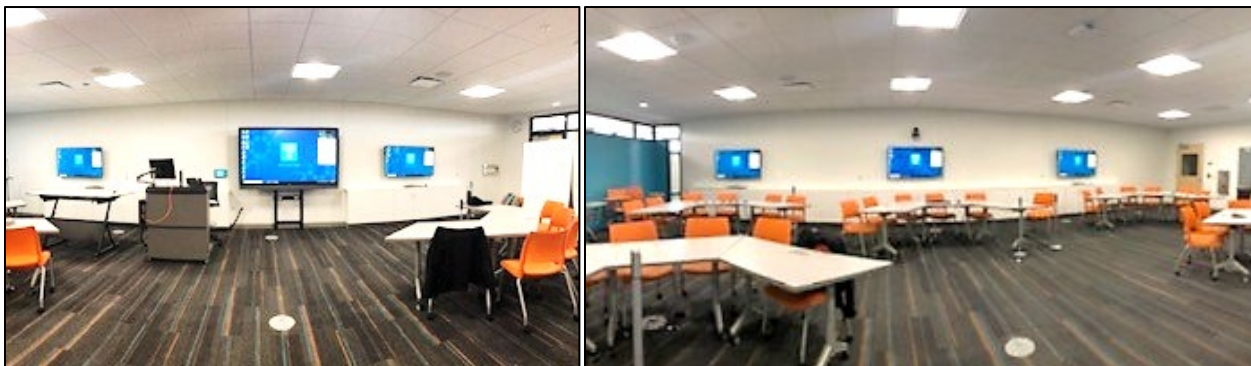
## Onboarding

In order to streamline the process and reduce the learning curve for some the products, pre-sets for certain devices and for OBS Studio software have been created. Once assigned to the classroom, faculty should be aware that in order to use OBS Studio pre-sets they will need to schedule a time to visit the classroom and log into the workstation and launch the program software. Once launched, ITS or other designated personnel can then load the software pre-sets on their account. OBS Studio pre-sets have been created to enhance video conferencing or course lecturing. This is not a required step but strongly recommended for those interested in enhanced video capture. For more information, you may contact the following individuals:

- Erik Kelley: Erik.Kelley@tri-c.edu
- Aimee Pearce: Aimee.Pearce@tri-c.edu
- Pam Regrut: Pamela.Regrut@tri-c.edu
- Frank Roman: Frank.Roman@tri-c.edu
- Raj Subramanian: Rajendiran.Subramanian@tri-c.edu
- Ariel Powell: Ariel.Powell@tri-c.edu
- Shaun Willis: Shaun.Willis@tri-c.edu

## Preparing the Room

While it is strongly encouraged that all users power-off the devices and return the room to its original state, this may not always be the case when first entering the room.



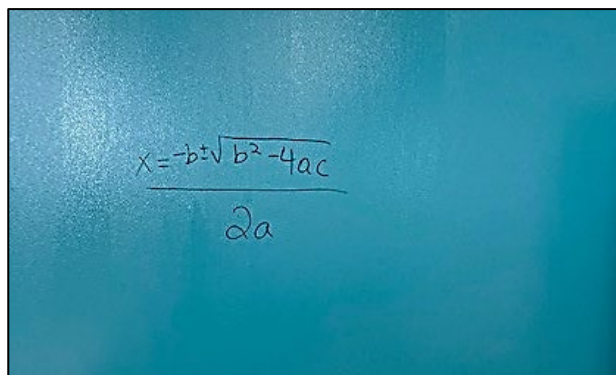
As a best practice, faculty are encouraged to arrive to the room 10 minutes prior to the start of class and complete the following checklist:

1. Turn on the desktop on the instructor workstation or ensure the desktop on the workstation is logged off from the previous user.
2. Confirm the BenQ screen is powered to off before logging onto the instructor workstation\*
3. Log into the instructor workstation using your Tri-C credentials.
4. If using the PTZ Rear-Mounted Wall Camera or OneLink Bridge Ceiling mounted camera, verify cameras are turned on. If cameras are off, locate Vaddio remote control and turn on devices.
5. Ensure individual workstations have their input is set to “PC” and powered off.

\*To ensure private information is not accidentally displayed on the main classroom screen, it is strongly suggested that the instructor ensure the display is turned off before logging into the computer.

## Idea Walls

The Immersive Learning and Collaborative Classroom is furnished with “idea walls.” Idea walls are covered in a specialized teal paint that transform walls into a dry-erase board like surface. The designated “idea walls” provide a smooth glossy finish that enable instructors or students to write and share ideas on a more expansive surface in the room. Dry-erase markers are available throughout the room to encourage creativity, collaboration, and engagement. When finished, walls can be cleaned by wiping with a board eraser or moistened wipe.





## Movable Easel Boards

Moveable easel boards are available for use and serve a dual purpose in the classroom. The easel boards offer a whiteboard finish for easy writing and spontaneous collaborative activities without the need of turning on equipment or hooking them up to any of the advanced technology available in the classroom.

The easel boards can be transported around the room for individual small group use and can also be connected to form a room divider; making it a versatile tool when forming large groups or separating the class for special activities.

Each easel board provides a middle storage area for markers and board erasers. The curved design maximizes the writing surface and the wheels are outfitted with locking casters to lock the boards in place.

Instructors who wish to utilize the easel boards as a space divider can connect the boards with the locking mechanism located at the top of the boards.



Before connecting the easel boards together and as a best practice, it is suggested to reposition the individual easel boards to the desired location in the room.

Once in the desired location, follow the steps below to connect the easel boards:

1. Reposition the metal connector located at the top corner of the board by flipping the connector backwards and gently laying the metal connector on top of the easel board.



2. Position the boards side-by-side.



3. Once the easel boards are lined up, grab the metal connector located at the top of the board and flip forward, the metal connector should lay on top of the adjacent easel board



4. Firmly press down on the metal connector until it lay flat against both easel boards



Once metal connectors are locked into place, the easel boards will function as a room divider and students on either side of the divider can continue to use the easel boards as normal. The increased length of the board increases the number of people who can use the board at any given time, multiplying responses and participation during class.

When finished, it is strongly encouraged to disconnect the boards and return the individual boards to their original location. It is not recommended to move nested boards unless two or more people are available to assist in transportation.

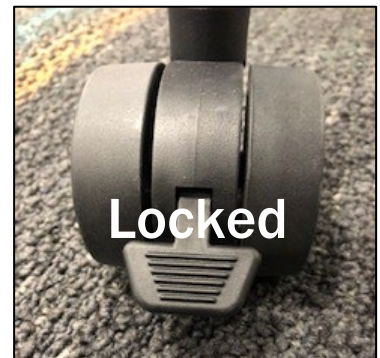
## Flex-Collab Tables

Flexible-Collaboration (Flex-Collab) tables and mobile seating is available throughout the room. The tables can be positioned for a traditional classroom lecture experience or the tables can be repositioned into clusters for collaborative group work. By default, the room is layout has five sets of three tables connected together to form a trapezoidal/arc shape.

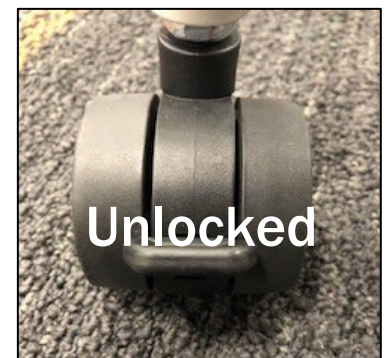


Mobile power stanchions are positioned throughout the room for convenient power access in any table configuration and anywhere in the classroom.

Each Flex-Collab table is outfitted with dual-wheel casters to maximize table mobility and classroom layout. To reposition tables, instructors will want to move the casters from the locked position to the unlocked position. Once in the unlocked position, the tables can be moved or reconfigured into a new shape and power stanchions can be relocated if powering of student devices is necessary.



While the tables and seating in MSHC 302 are mobile, please keep in mind that rearranging the classroom furniture for lessons can interfere with instructional time. If you know you have a lesson that will require the room to be rearranged, you can put in a request to have the room set-up prior to the start of their class by contacting campus scheduling at 216-987-4021. It is recommended to contact campus scheduling at least one-week in advance so they can work with Plant Operations to set the room as requested and to return the room to its default setup once the class is over. Please keep in mind, the daily activity in that room will determine setup turnaround so advanced notice needed.

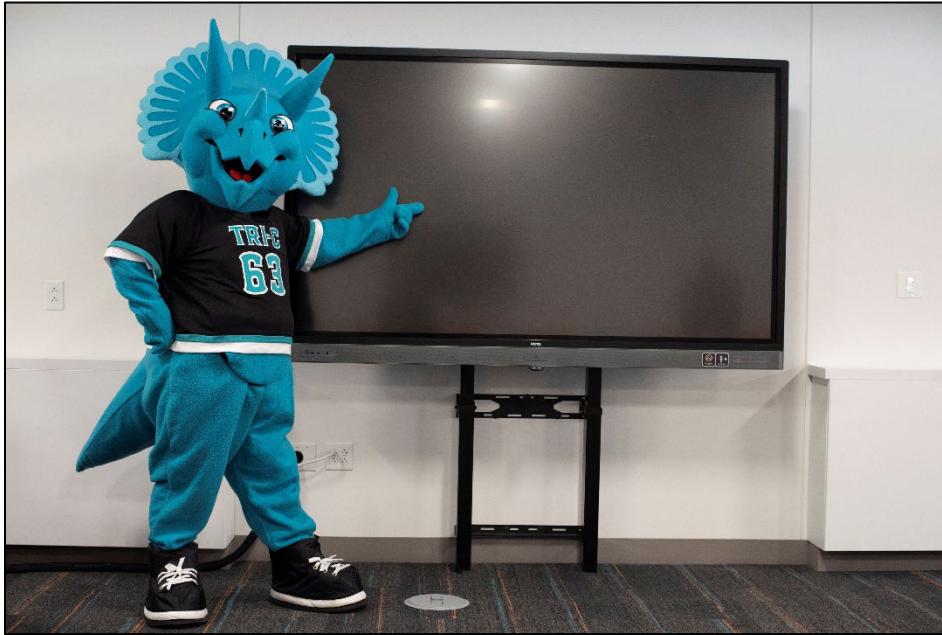


## Advanced Technology

Advanced technology refers to the interactive technologies outfitted in the classroom. In addition to the common technology solutions that are found in most Tri-C classrooms, the MSHC Immersive

Learning and Collaborative classroom offers a number of additional technology enhancements to stimulate creativity, collaboration, and engagement for 21<sup>st</sup> century learning.

## BenQ

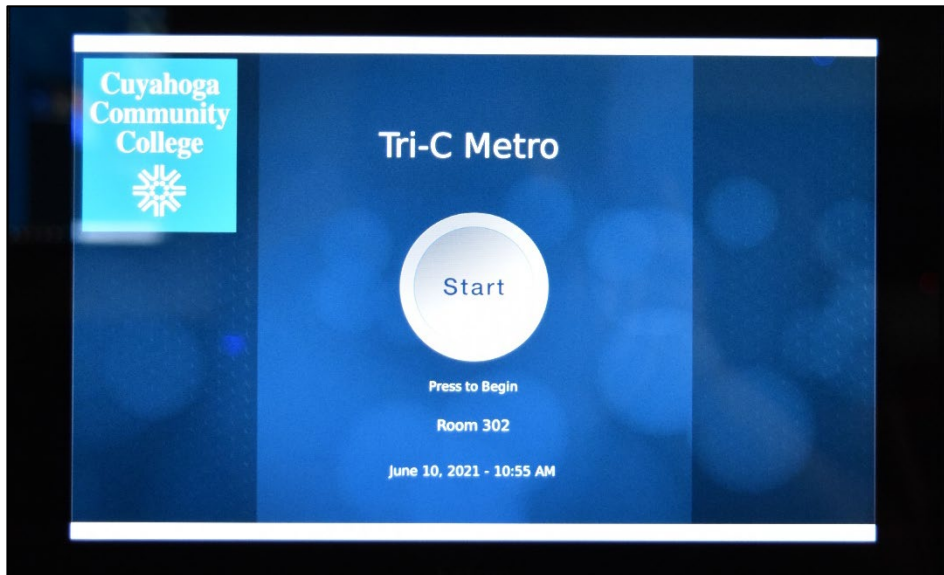


The BenQ wall-mounted monitor is featured in most Tri-C classrooms. It has replaced the previously used screen and projection system. The BenQ is mounted on an adjustable-height mount. It offers an interactive touchscreen that can be used to display webpages, PowerPoints and documents, as well as video displays or images from the cameras installed in the classroom. It can also be used as a digital whiteboard.

To get started with the BenQ, follow the instructions outlined below:

1. Turn on the desktop computer located at the instructor workstation. If the computer is already turned on, ensure the previous user is logged out.
2. Confirm the BenQ screen is powered to off before logging onto the instructor workstation. For privacy reasons, it is strongly suggested to keep the BenQ monitor off until class starts.
3. Log into the instructor workstation using your Tri-C credentials.

4. Before powering on the BenQ, you must activate the control panel. Touch the screen of the control panel located on the wall to the left of the BenQ. The device should then light up.



5. Press the "start" button on the touch panel.



6. To power on the BenQ, select the "PC" option on the top of the control panel display (if you are using a personal laptop, connect the laptop using the HDMI cable and USB cable on the instructor workstation and select the "laptop" option).



7. Navigate over to “Main Display” and press “on”.



Once the BenQ is powered on, the BenQ operates and functions like the BenQ systems equipped in most Tri-C classrooms.

You can use the optical touch screen to control the desktop operating system. The touch screen emulates basic mouse functions. The table below outlines the list of gestures you can use the on the touch screen.

**Table 1.2 Touch Screen Gestures**

<b>Click</b>	Tap the screen once.
<b>Double-click</b>	Tap the screen twice.
<b>Right-click</b>	<ol style="list-style-type: none"> <li>1. Press on the target.</li> <li>2. Hold and wait for a blue ring to appear.</li> <li>3. Release your finger.</li> </ol>
<b>Drag</b>	Drag one finger left or right.
<b>Pan up / Pan down / Back /Forward</b>	Quickly drag your finger (flick) in a desired direction.
<b>Zoom</b>	Move two fingers apart or toward each other.
<b>Scroll</b>	Drag one or two fingers up or down.

To adjust the height of the BenQ monitor, you will want raise and lower the mount using the arrow controls located on the front of the monitor.

1. To raise the monitor up, select the up arrow. ▲
2. To raise the monitor down, select the down arrow. ▼

### Pen Software

Each instructor workstation has Pen Software installed on the device which provides users the ability to write on the touchscreen monitor. There are currently two options of Pen Software available for use.

#### Option 1: Overlay Mode

Overlay mode allows users to write over what is displaying on the screen, whether it is a browser page, application or anything else that is being displayed. It is important to note that it is not possible to operate the screen as a touchscreen while in overlay mode. In order to change documents or navigate to another webpage using the touchscreen, overlay application needs to be minimized, this will turn off the writing mode.

To Access the Overlay mode software, click on the Overlay mode Pen Software icon on the desktop computer or double-click the software icon on the BenQ touchscreen by tapping on the button twice in quick succession.

#### Option 2: Whiteboard Mode

Whiteboard mode allows users to use the BenQ monitor as a digital whiteboard. To access the whiteboard software, click on the Pen Software icon on the desktop computer or double-click the software icon on the BenQ touchscreen by tapping on the button twice in quick succession.

### *Pen Software Overlay and Whiteboard Toolbar Navigation*

Both the Overlay and Whiteboard Pen Software use the same toolbar which is located at the bottom of the screen. The images below have the buttons on the tool bar numbered. The number of the button corresponds to the number in the list below which names the button and describes the function of the button in the Pen Software.

#### **Left side of the toolbar:**



1. **Pin Button:** to display toolbar at bottom of screen
  - a. Touch to switch between the pin / unpin settings.
  - b. If you want to always display the toolbar on the screen, pin button should be selected.
  - c. When set to the pin setting, the button is blue.
  - d. If you only want to display the toolbar when the square menu is displayed, select the unpin setting.
2. **Sheet List:**
  - a. Touch this tab to display the list of created sheets/white boards shown as thumbnail images.
3. **Settings:**
  - a. Displays the Pen Software settings screen.
  - b. To change the settings to allow for 2 pens to write at the same time, see “Simultaneous Drawing” section below.
4. **Navigation Window:**
  - a. Touch to show/hide the navigation window.
5. **Search Box:**
  - a. You can search for text and handwritten characters in the box.
6. **Sheet Navigation Buttons/Page Number:**
  - a. Touch the sheet navigation button (the arrows) to change the displayed sheet.
  - b. The number shown at the center is the page number of the current sheet.
  - c. When the last sheet is displayed, press the plus sign to add a sheet at the end.

#### **Right side of the toolbar:**





**7. Board List:**

- a. Touch to display the list of boards as thumbnail images.
- b. Select the Overlay Mode option to switch to Overlay Mode

**8. Minimize:**

- a. The software will be minimized to the task tray. In Overlay Mode this brings the monitor back to touch screen mode.

**9. Window / Maximize:**

- a. Switches from full screen mode to displaying the white board in a window.
- b. Select again to switch back

**10. Quit:**

- a. The software is exited. An options box will open for deciding to exit with or without saving.

*Menu Style Options*

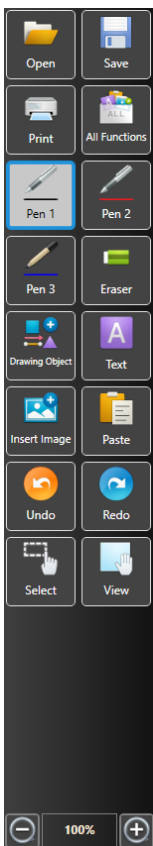
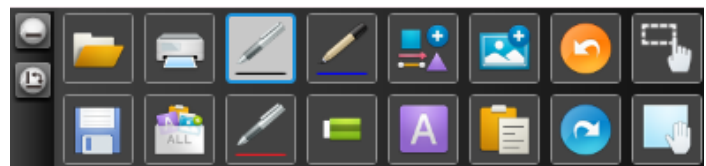
Pen Software offers three menu style options. By default, the menu style option is set to square. You can change the menu style options by clicking the settings option the tool bar. The three style options are as follows:

- **Square:** The square menu requires users to touch the square icon to expand the menu options. The square menu has two sides. To change the menu, touch the 1/2 or 2/2 button under the icon or touch the blank center of the square menu.



- **Classic:** The classic menu is stationary and displays all tool functions in a vertical sidebar located on the left side of the screen.

- **Floating:** Like the classic menu option, the floating menu displays all tool functions on the screen. However, the floating menu allows you to move the menu to your preferred location on the screen and also gives you the option to display the tools vertically or horizontally.



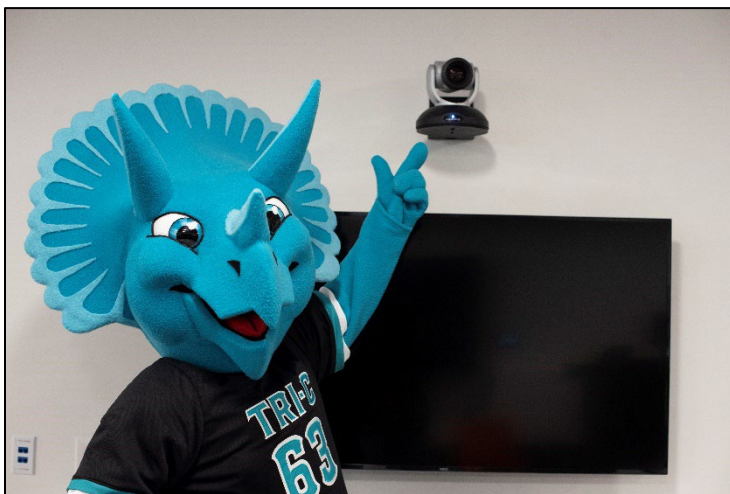
### Menu Writing Options:

Each menu offers three pre-set pen options that can be customized by changing the color, width, and translucence options. In addition to the pen options, each menu also offers the following selections:

- Eraser: removes hand-drawn lines and can be modified to change eraser size.
- Select: allows you to select an object and modify, move, copy, rotate, or changes the properties of the object such as font, color, and size.
- Undo: cancels the preceding operation.
- View: enlarge the view of the whiteboard, change the display position, move sheets, and change sheets.
- Redo: recreates the cancelled operation.
- Drawing Object: allows you to draw a figure, straight line, or arrow.
- Paste: inputs the most recently copied object onto the sheet.
- Open: opens a file and adds the select file to the whiteboard.
- Text: enter typed text onto the board with a text box.
- Insert Image: allows users to insert an image file or screen capture on the screen.
- Save: allows users to save board notes into a transferrable file format.
- All Functions: displays all functions in list view. From the list, users can select functions to be used and functions to be displayed in the menu as icons.
- Print: “print current sheet” or “print all” options appear. Not available in most classrooms.

Additional information and training on the Pen Software can be requested by scheduling a consultation with the Center for Learning Excellence or attending any of the Advance Technology (ATC) Workshops. Faculty can register for the ATC workshops through the College’s Talent Engagement Center (TEC).

### Wall-Mounted Camera



The wall-mounted camera or pan, tilt, zoom (PTZ) camera is located in the rear of the room. The wall-mounted camera is a high-resolution camera that broadcasts ultra-high definition video.

The camera offers 160° panoramic view of the room, +90° to -30° tilt, and 20x zoom.

Utilizing the default room layout, the wall-mounted camera can be employed to capture traditional classroom lecture, student presentations, web conferencing, and much more.

Hyflex or similar modalities can be enhanced by combining the wall-mounted camera with a modified room layout, student computer workstations, and video conferencing software.

Instructors experimenting with hyflex or similar course modalities are advised to work with the Center for Learning Excellence (CLE). Proper hyflex course design requires multiple consultations in order to implement correctly in the classroom. It is advised that instructors begin working on any hyflex modality or lesson a minimum of one-semester in advance.

The wall-mounted camera can be selected as the video source in Mediasite, WebEx, OBS or any other video conferencing or video recording software. Instructions on using this device with video conferencing software will be covered later in this document. Those who wish to use this device for video recording/lecture capture in Mediasite will need to take Mediasite training offered by the Online Learning and Academic Technology department (OLAT). The wall-mounted camera is controlled by the Vaddio remote controller located on the instructor workstation. The green button located in the top right corner of the remote powers on the camera.

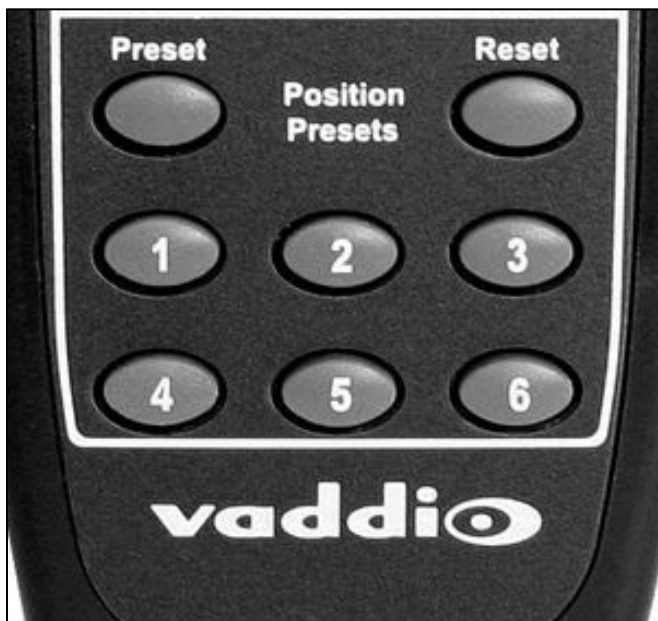


The burgundy arrows control the camera pan and tilt, pressing the burgundy home button will reposition the camera to the default position.

The light gray buttons are zoom controls and users can control zoom speed using these buttons.

Presets have been programmed into the remote for user convenience. Presets are:

- **Preset 1:** zooms to instructor workstation
- **Preset 2:** zooms to BenQ
- **Preset 3:** zooms to left of BenQ
- **Preset 4:** zooms to right of BenQ (focuses on drafting table)
- **Preset 5:** zooms out and to the right of the BenQ
- **Preset 6:** zooms out and to the left of the BenQ



## Ceiling-Mounted Camera

The ceiling-mounted camera is located directly above the white drafting table adjacent to the instructor workstation. The ceiling-mounted camera is a high-definition camera with zoom capabilities. The drafting table provides a large surface area to share multiple documents and also serves as a dry-erase writing surface which is then projected onto the BenQ via the ceiling-mounted camera.

The ceiling camera is powered on and off the by Vaddio remote. Similar to the PTZ wall-mounted camera, the ceiling-mounted camera can be selected as the video source in Mediasite, Webex, OBS, or any other video conferencing or video recording software. Instructions on using this device with video conferencing software will be covered later in this document. Those who wish to use this device for video recording/lecture capture in Mediasite will need to take Mediasite training offered by the Online Learning and Academic Technology department (OLAT). Like the other camera, the zoom functions are controlled by the light gray buttons on the remote however the ceiling camera does not offer pan or tilt options. The burgundy and preset buttons will not work for this device.



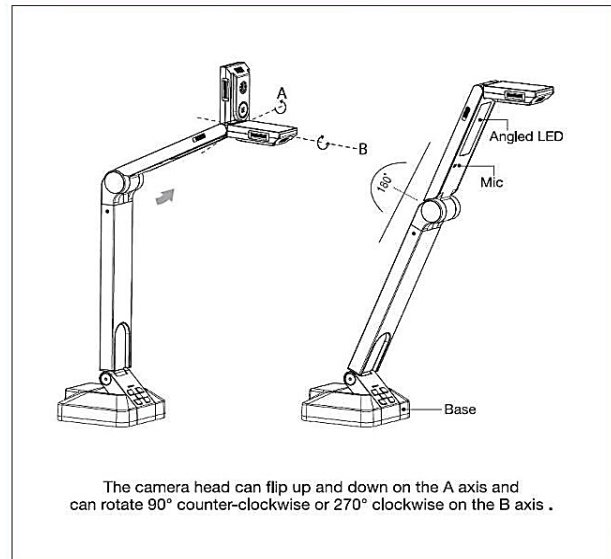
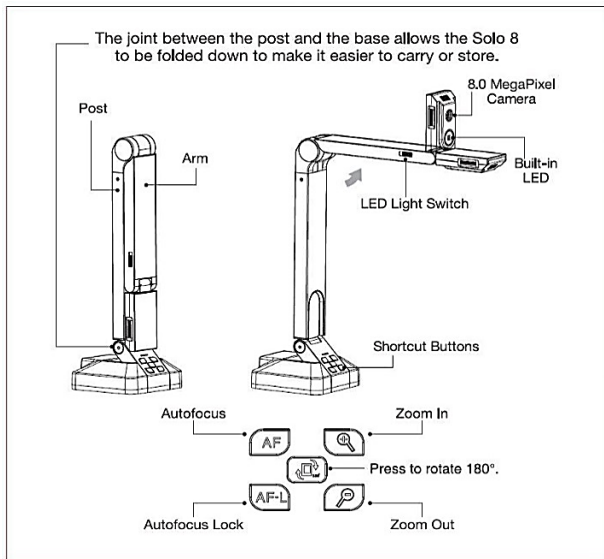
## Hovercam Document Camera

The Hovercam Document Camera and application software is standard equipment in most Tri-C classrooms. The Hovercam offers the same capabilities as the ceiling-mounted camera and drafting table and is an alternative to the ceiling-mounted camera.



## Hovercam Buttons and Components

The Hovercam has a number of buttons and components which are outlined in the illustration below.



Unlike the wall-mounted and ceiling-mounted cameras, the Hovercam has application software installed on the instructor workstation. There is no power button for the Hovercam, to use the device, you will want to launch the software:

1. Log on to the desktop computer on the instructor workstation
2. Select the Document Camera icon from the desktop computer
3. Turn on the BenQ monitor using the control panel



### Document Camera Application Software Functions

- **Side-by-Side:** Split screen. This mode will allow you to display a previous snapshot image next to your current live video feed, allowing you to compare documents side-by-side with your current live feed. Select the Side-by-Side icon again to return to full screen
- **Multi-Split:** The multi-split button functions similarly to the side-by-side function but allows you to split the screen into as many as 16 separate images (including the live feed.) The live feed will always display in the top left window. When you select multi-split, an option box will pop up. You can adjust the number of columns and rows that will display by selecting the corresponding up or down arrows. Select the Multi-Split icon again to return to full screen.
- **Slingshot:** The Slingshot feature allows you to insert the currently displayed image (and/or another stored image from your recent archive) into another software application, such as a Word document, interactive whiteboard software or file folder by dragging and dropping. Multiple images may be pasted into your other program with one click of the Slingshot icon. Once you select the Slingshot button, the document camera image will immediately minimize and a small window showing your current image will appear near the upper left

portion of your screen. Drag the image into the application that you want it to go. To return to the camera select the arrow at the top left.

- **Snapshot:** Once the live video image is adjusted to your liking, save a picture of it by clicking on the Snapshot icon. Your most recent snapshot will be shown in the “previous snapshot” box. It will also appear in the pullout panel on the left. Your snapshots are stored in the archive, select the arrow on the left and then select “Go to Archive”.
- **Recording:** This option is not recommended, to record use the college’s standard video recording application, Mediasite.
- **Multi-scan:** Scan multiple images (great for stop motion) to archive as JPG (PDF option available). Manually set scan interval and max images. The images are saved in the archive section, select the arrow on the left of the screen to view the images and select “Go to Archive” to be able to move the images to another location like an h-drive by using the export option. For a combined document with all the images select the PDF option.
- **Pause:** Pause recording (as previously noted, it is recommended to use the college’s video recording application, Mediasite).
- **View Options:** Open view options menu. Controls include rotate left/right, mirror left/right, visor (hides screen), full screen, picture-in-picture, project, and warp.
- **Zoom:** Open zoom option slider.
- **Focus:** Open focus options menu. Controls include selective focus, auto-focus, and autofocus- lock.
- **Selective Focus:** allows you to click on specific areas of the live video display for the lens to focus on.
- **AF (auto focus):** when selected, the camera lens will automatically determine the optimal focal point. As the display field changes, the camera will continue to automatically readjust the focus. To prevent the camera from continuing to readjust, select AF-L (auto focus lock).
- **AF-L (auto focus lock):** when selected, the camera lens will auto focus then “lock” and remain on the same focal point regardless of any changes to the camera’s field of view.
- **Adjustments:** Open adjustments menu. Controls include brightness, contrast, saturation, focus, exposure, and white balance.
- **Cropping:** Open cropping function. Pinch to zoom and adjust size. Controls include snapshot, copy to clipboard, OCR text recognition, focus, tilt, and show/hide grid.
  - **Clipboard:** saves the cropped image to your active clipboard so that you can paste the image into other programs. (similar to the “Slingshot” clipboard described on)
  - **OCR (optical character recognition):** The OCR feature converts a snapshot of a page of text into a text file which can be edited and copied into another program. When selected, a snapshot of the cropped plane will be taken and automatically converted into text in the right-side column under “OCR Results.” You can edit the text directly using a mouse and keyboard. Clicking the green “Copy to Clipboard” button will copy the scanned text to your active clipboard, allowing you to paste it directly into other applications such as a word processor or PowerPoint.
  - **OCR Usage Tips:**
    - OCR works best when scanning a non-reflective paper surface.

- Adjust your cropped plane to crop out as much of the surrounding surface as possible.
- If you're experiencing inaccurate scans of your texts, try using the "Gridlines" and "Straighten" features (described below) to align and level the text as much as possible before taking the OCR scan.
- Insure the cropped plan is in focus by using the "auto-focus" button described below.
- **Auto-Focus:** When selected, the camera will automatically adjust its focal settings to bring the current field of view into focus.
- **Straighten:** When selected, a gridline overlay will be placed over the cropping plane and an alignment slider will open inside the tool bar. This slider will allow you to adjust the tilt of the cropping plane.
- **Close:** closes the cropping pop-up tool bar
- **Settings:** Open settings menu. Controls include input selection, microphone selection, resolution selection, file naming, extension formatting, frame rate and save location options.
- **White Board:** The Hovercam Software has a white board feature available for use but is not the preferred white board software of the College. For the preferred digital whiteboard, use the college's Pen Software.

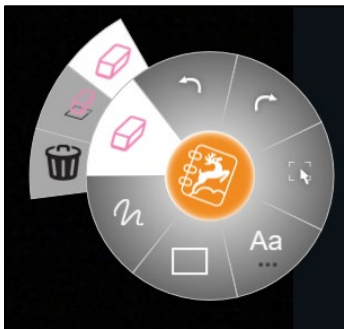
### The Annotation Wheel



The annotation wheel will automatically open on the right side of the screen when the document camera launches. The wheel can be expanded or collapsed by clicking on the orange icon in the center. You can also drag and drop the wheel to different locations on the screen.

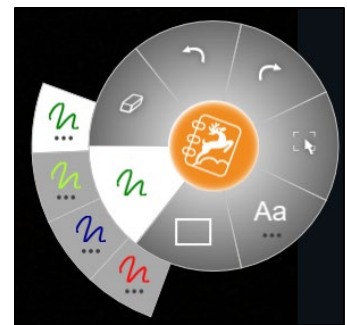
**Pen Tool:** The pen tool allows you to mark free-hand annotations. When selected, a pop-out window will display your four most recent pen settings. Holding a long click on any of the pen icons will open customization options for that pen allowing you to change the color, transparency, and thickness of the selected pen.

**Eraser tools:** Clicking on the eraser icon will open a pop-out window with the three eraser tools.



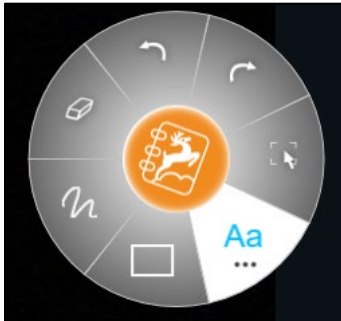
**Undo:** This button will undo the previous action.

**Redo:** This button will restore the previously undone action.

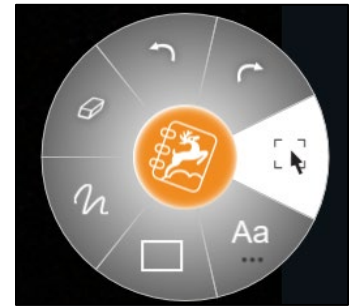


**Canvas Select:** Once selected, you can use your mouse or touch pen to trace a dotted line around specific annotations you wish to adjust. Once the annotations are selected, a dotted outlined box will appear around the selected annotations as well as a red “close” button on the top right corner. You can now drag the selected annotations and move them to a different location on the screen. You can also delete the annotations by selecting the red “close” button.

**Text Tool:** Creates an editable text box. You can use your keyboard to type in text. You can access customization options by clicking and holding on the text tool icon. From here you can change the color, transparency, size, and font style of your text.

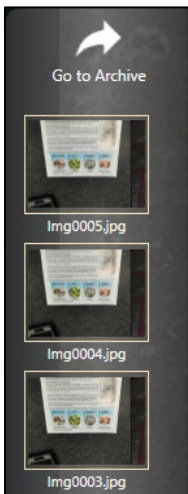


**Insert Shapes:** This button allows you to insert shapes onto the plane. When selected, the shapes pop-out window will be displayed. From there you can select your desired object. Holding a long click on any of the objects will open customization options for that object. This allows you to change the color, transparency and thickness of the selected shape.

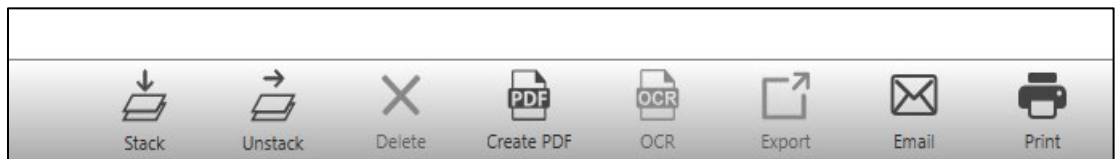


## Archive

The Archive feature allows you to view your saved image and video files, as well as PDF files you have created. The files may be organized, printed, deleted, renamed and moved to different directories. Click the pull-out tab on the left side of the main screen and the recent snapshots will be displayed in a panel, along with an arrow icon at the top of the panel labeled “Go to Archive”. As you move your mouse over each image on this panel, a red “X” will appear in the upper right corner of the image. You can delete the image easily by clicking the red “X”.



If you double-click on one of these images, side-by-side mode will launch, and the image will appear on the left window. Click the “Go to Archive icon” and the Archive screen will appear.



**Stack:** The Stack feature lets you organize files by allowing you to group similar files together into one file called a “stack”. This is very convenient for emailing a group of images or for creating a virtual booklet of your scanned documents. To stack items, simply select all files that you would like to include in a group by highlighting them or clicking on the box to the left of each file, then clicking the Stack icon. The files will be bundled into one file. The filename of the new file will be the filename of the first file in the stack. There will be no file extension.



**Unstack:** Use the Unstack button to ungroup a stacked group of files. Simply select the stacked file and click the Unstack button.

**Delete:** The Delete button allows you to delete selected files. Deleted items are moved to the “Recycle Bin”. Click on a file to select it, then click the Delete button. You will be asked to confirm the deletion.

**Create PDF:** This handy feature saves your selected image(s) as a PDF file. Select one or more image files, then click the “Create PDF” button. Your new .pdf file will be saved in the “Images” subdirectory. It will also be shown when you click on the PDF file type on the left side of the screen.

**OCR (Optical Character Reader):** The OCR feature is for converting an image of a page of text to an actual text file. It could take a minute or two depending on the print quality of the original image.

**Export:** The Export feature allows you to copy one selected file from your library and save it as a JPG, PNG, BMP or TIFF file elsewhere on your computer. Select a file, then click the “Export” button. A dialog box will prompt you for the location, new filename and file type to save. This dialog also displays a thumbnail of the image that will be exported. Click OK to proceed or Cancel to abandon the export. If you specify more than one file, only the first file listed is included in the exported file.

**Email:** The email feature allows you to email your archived files directly to an email address. Select a file, then click the “Email” button. Your default email application will launch a new composition window with the file already attached (may not be applicable in the classroom).

**Print:** Print files by selecting them and then clicking the Print button (may not be applicable in the classroom).

## Sharing Video

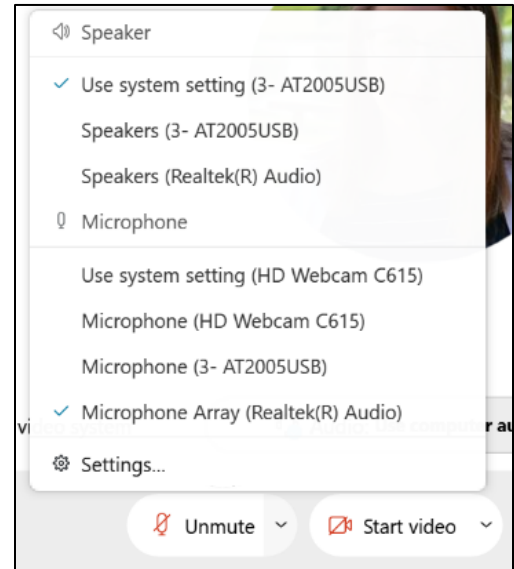
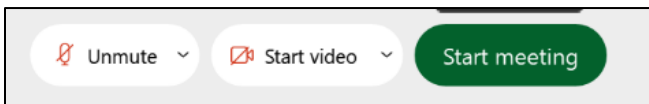
Instructors utilizing the equipment in the room can record and share video using the College’s designated video recording and video conferencing software. Training on video recording using Mediasite is provided by the Online Learning and Academic Technology department (OLAT). Those interested in attending Mediasite training can register in the College’s Talent and Engagement Center (TEC). Instructions on using the room and equipment for video conferencing is provided below.

## Video Conferencing (Webex)

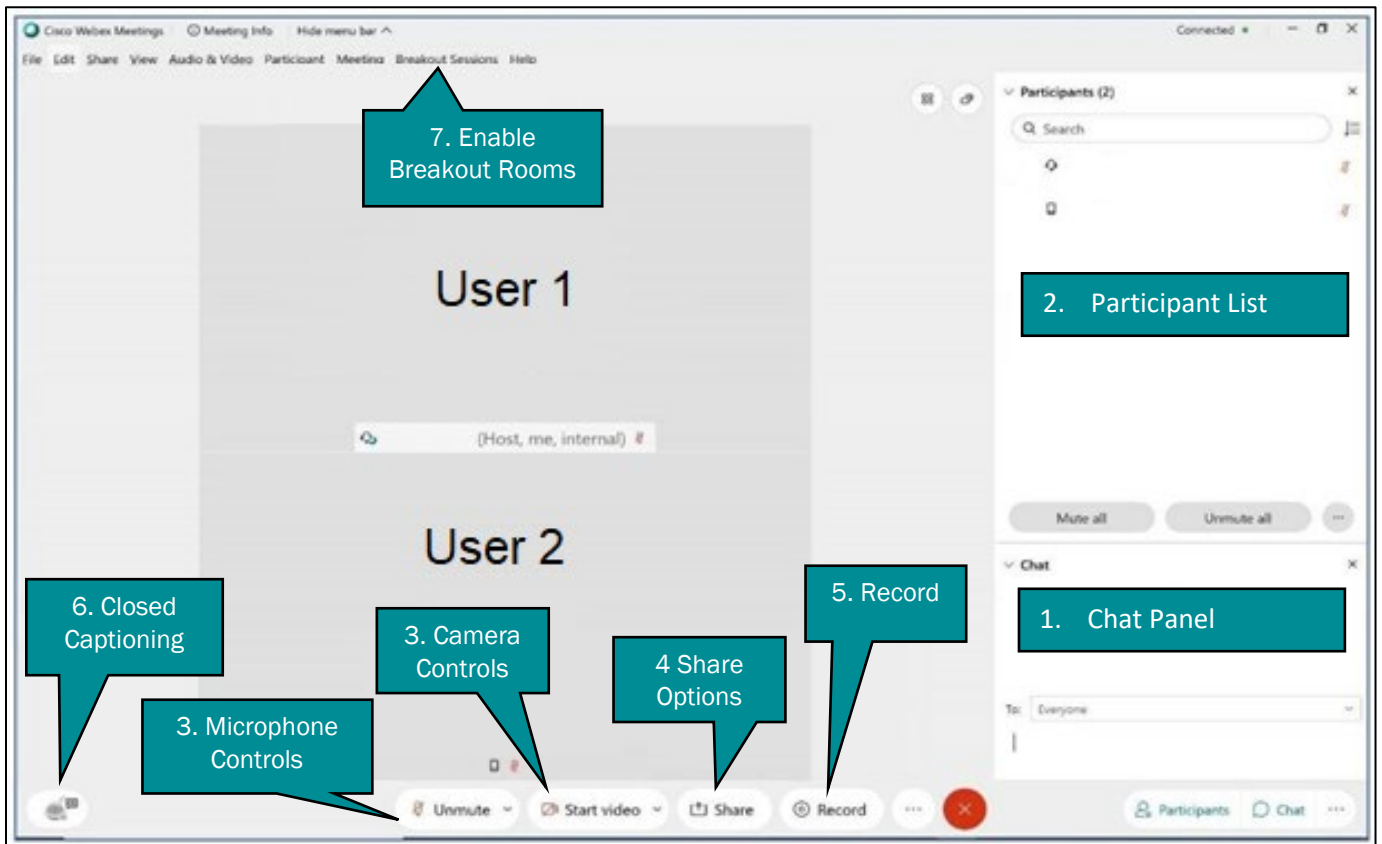
Webex is the College's supported video conferencing platform. Webex can communicate via audio, video, chat, and document/screen sharing. Webex Meetings allows collaboration virtually on computers and mobile devices in real time. To host a class using Webex Meetings, you can follow the quick start instructions below. For a more in-depth training, please register for Webex training in the College's Talent and Engagement Center (TEC).

### Starting a Meeting

1. Set your audio and video options on the "start meeting" screen by clicking on the downward pointing caret arrow next to the unmute/mute and start/stop video buttons.
2. Once you have selected your audio and video options. Click on the "start meeting" button.



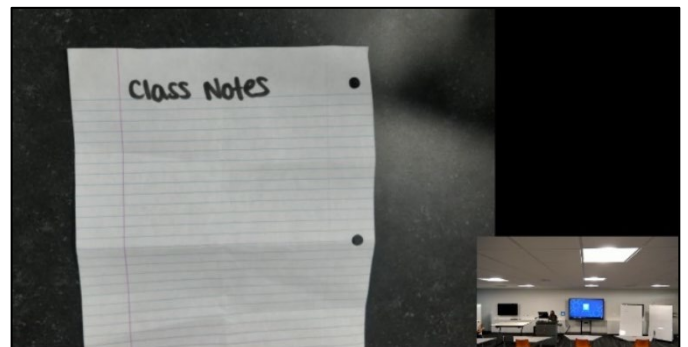
### Basic Functions



1. Participant List:
  - As individuals join the meeting their names will appear in the participants list.
  - Right click on a participant name for options, i.e. change their role, mute them or expel them from the meeting.
2. Chat Panel:
  - Host and participants can text chat with all or individual participants.
  - Participant chat options can be revised by going to the top tab “Participant” > “AssignPrivileges”.
  - Video Resource: [Webex Meeting: The Chat Function to Engage Students](#)
3. Microphone and Camera Controls:
  - Mute/unmute and turn on/off your webcam.
  - Use the drop-down arrow at each setting to change your options.
4. Share Options:
  - Host or presenter can share with participants their screen, applications, whiteboard, and browsers.
  - Resource: [Share Content in Cisco Webex Meetings and Cisco Webex Events](#)
  - Video: [Webex Meetings: Sharing Content](#)
5. Record:
  - The session can be recorded, it is recommended to record to the cloud.
  - Video Resource: [Webex Meeting: Record a Meeting and Share the Recording](#)
6. Closed Captioning (using Webex Assistant):
  - For faculty and staff to request the addition of the Webex Assistant email [webex@tri-c.edu](mailto:webex@tri-c.edu)
  - Once enabled, selecting the Webex Assistant adds live captioning, as well as a transcript that can be highlighted during the session.
  - Video Resource from Cisco: [Cisco Webex Assistant for Webex Meetings](#)
  - Video Resource from Tri-C: [Webex Assistant: for Live Captioning and Highlights](#)
7. Breakout Sessions:
  - If not already enabled, select the top tab “Breakout Sessions” > “Enable Breakout Sessions”, the Breakout Session button will then appear on the bottom dock.
  - Resource: [Webex Meetings | Breakout Sessions](#)
  - Video: [Webex Meetings: Breakout Sessions](#)

## OBS

Open Broadcaster Software (OBS) has been installed on the instructor workstation and can be used in combination with Webex and the installed cameras in the room to provide an enhanced video conference or hyflex teaching experience. OBS provides faculty with the opportunity to display

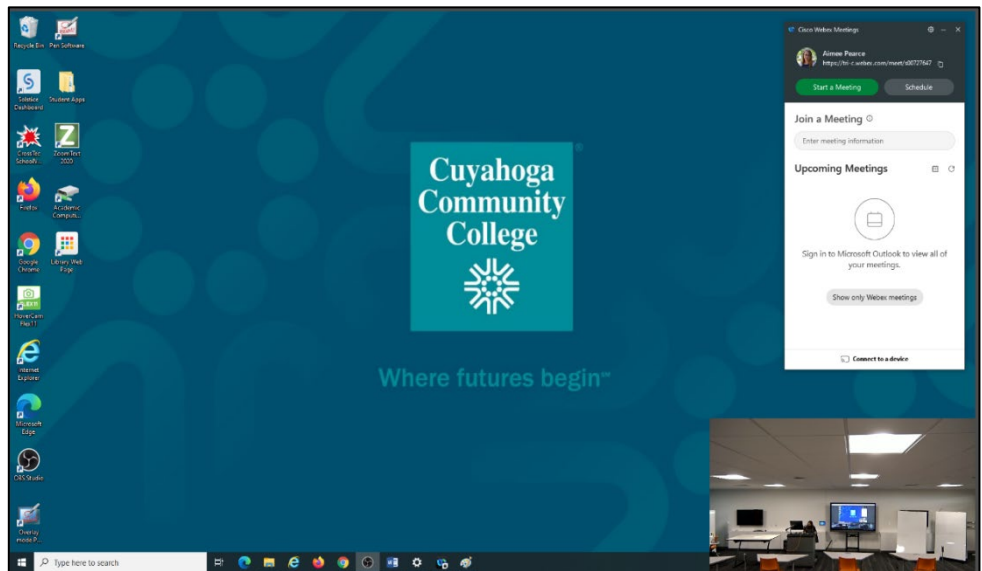


multiple video sources while using video conferencing software.

Pre-set scenes have been created in OBS. The current pre-sets include:

1. Drafting Table with Instructor
2. HighTech Room
3. HoverCam and Instructor
4. BenQ Display with Instructor at Workstation
5. HoverCam Only
6. BenQ Only
7. Monitor Display with Instructor at Workstation

In order to utilize the OBS software and pre-set scenes, you will need to schedule an appointment with a TLC, CLE, or Desktop services representative so that the presets can be installed on your account. Once the presets for the software are installed on your account, you can begin using OBS.

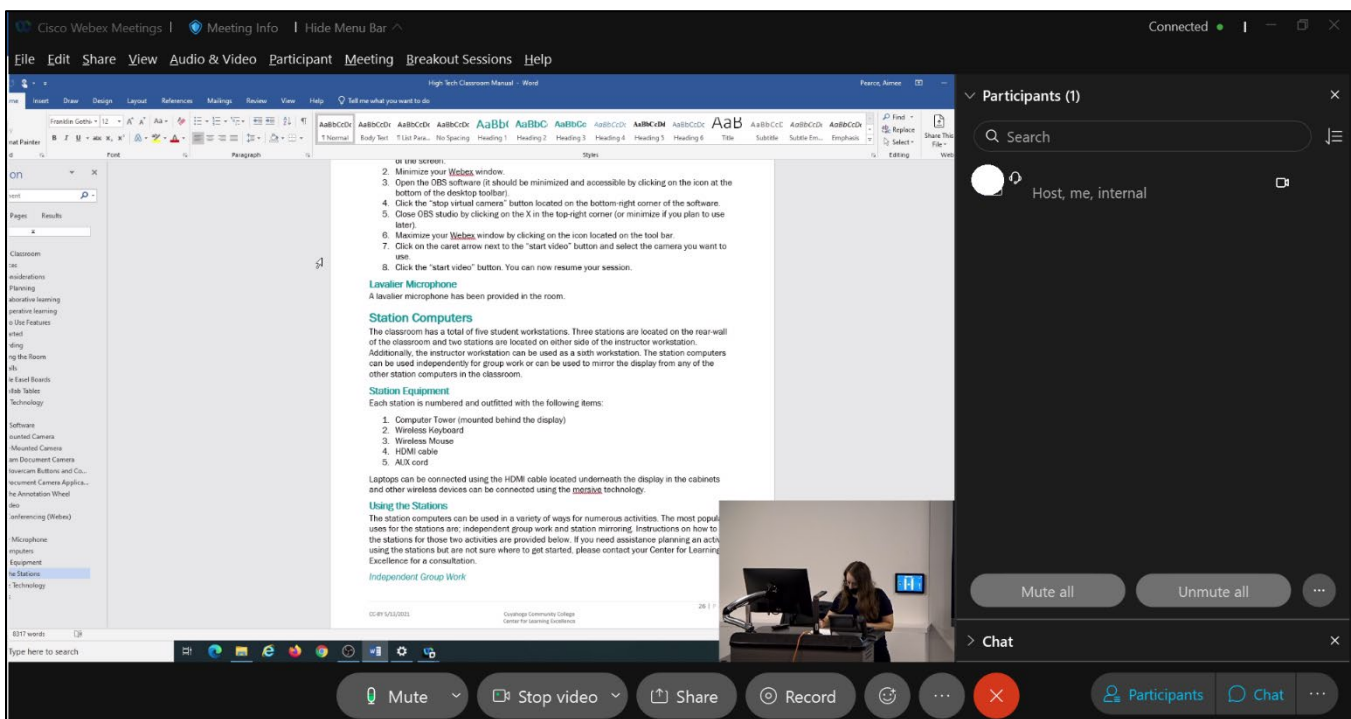
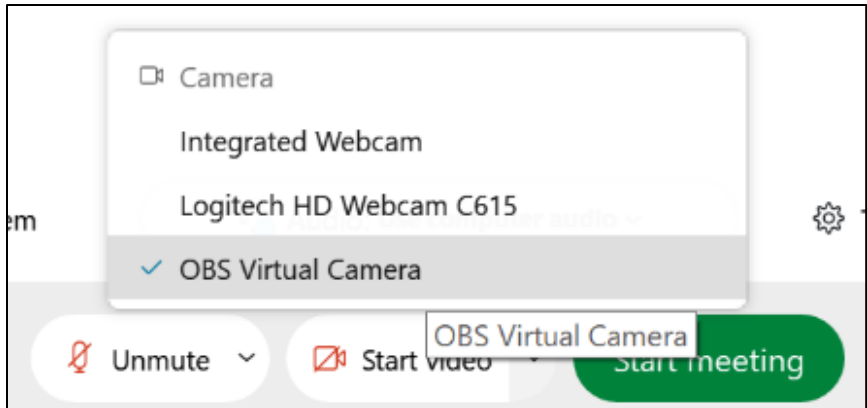


### Getting Started in OBS with Webex

1. Launch the OBS software from the desktop by double-clicking on the icon.
2. Select the scene you wish to use by clicking on the scene name in the bottom-left corner of the software.
3. Click on the "start virtual camera" button located on the bottom-right corner of the software.
4. Minimize the OBS studio software
5. Launch your Webex meeting



6. In the Webex “starting meeting” screen, open the video sharing options by clicking on the downward pointing caret arrow next to the start/stop video button.
7. Select the OBS virtual camera option.
8. Start the Webex meeting by clicking the “start meeting” button.



### Changing Scenes or Switching to Single Camera View

You may change scenes at any time during your Webex meeting. To change scenes, open the OBS software on the desktop (it should be minimized during use and readily accessible by clicking on the icon at the bottom of the desktop toolbar).

Once open, you can select a new scene from the preset scenes located in the bottom-left corner of the software. Toggle back to Webex by minimizing the OBS software.

At other times, you may simply wish to switch from using multiple video sources to streaming only one video. To switch to one video stream while in the middle of using OBS you will need to:

1. Stop displaying your video in Webex by clicking the “stop video” button located at the bottom of the screen.
2. Minimize your Webex window.
3. Open the OBS software (it should be minimized and accessible by clicking on the icon at the bottom of the desktop toolbar).
4. Click the “stop virtual camera” button located on the bottom-right corner of the software.
5. Close OBS studio by clicking on the X in the top-right corner (or minimize if you plan to use later).
6. Maximize your Webex window by clicking on the icon located on the tool bar.
7. Click on the caret arrow next to the “start video” button and select the camera you want to use.
8. Click the “start video” button. You can now resume your session.

## Lavalier Microphone



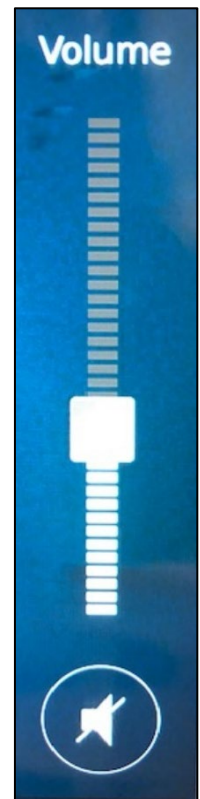
A lavalier microphone has been provided in the room to increase voice projection. The microphone is located in the networking equipment cabinet in the room. To use the microphone, press down and hold the “on” button.

The microphone light will change to green once powered on. To mute the microphone, press the power button again. The light will change to red.

To turn the microphone off after use. Press and hold down on the “on/off” button until the light on the microphone turns off.

Volume and audio controls can be adjusted on the instructor workstation panel. Volume controls are located on the right side of the panel. Users can increase or decrease the volume by moving the volume bar up or down with their fingers.

The audio controls can be accessed by pressing the “audio controls” button in the lower right corner of the panel screen.



It is recommended to test out the microphone and adjust any audio controls before the start of your class.

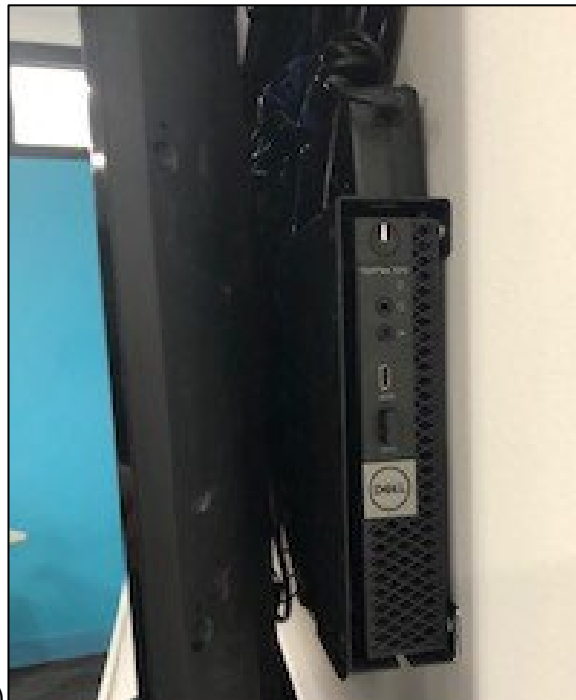
## Station Computers

The classroom has a total of five student workstations. Three stations are located on the rear-wall of the classroom and two stations are located on either side of the instructor workstation. Additionally, the instructor workstation can be used as a sixth workstation. The station computers can be used independently for group work or can be used to mirror the display from any of the other station computers in the classroom.

## Station Equipment

Each station is numbered and outfitted with the following items:

1. Computer Tower (mounted



behind the display)

2. Wireless Keyboard



3. Wireless Mouse



4. HDMI cable (for using personal laptop)



5. AUX cord





Laptops can be connected using the HDMI cable located underneath the display in the cabinets and other wireless devices can be connected using the mersive technology.

## Using the Stations

The station computers can be used in a variety of ways for numerous activities. The most popular uses for the stations are; independent group work and station mirroring. Instructions on how to use the stations for those two activities are provided below. If you need assistance planning an activity using the stations but are not sure how to get started, please contact your Center for Learning Excellence for a consultation.

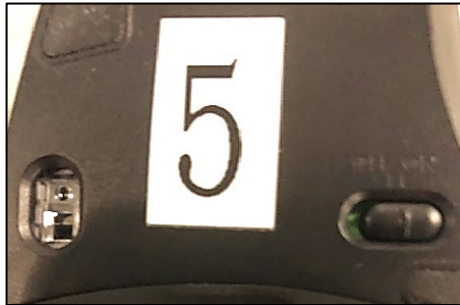
### *Independent Group Work*

Independent group work involves dividing the class into small groups and assigning them to a work station where they can complete the tasks using the computer. This typically involves one student operating the computer or students taking turn operating the computer as they collaborate on completing a task or assignment. To get started:

1. Turn on the station computer by hitting the power button on the tower. It is mounted behind the display. If the computer is already on, proceed to step two.
2. Turn on the display by pushing the “on” button which is located on the



- white wall panel mounted next to the display.
3. Press the PC button on the panel.
  4. Grab the corresponding keyboard and wireless mouse, both should be located in the cabinet under the display.
  5. Turn on the keyboard and wireless mouse by sliding the button on each device to the on position.



Once steps 1-5 have been completed, users can begin working at the station. As a reminder, it is a best practice to have students continuously save their work while completing a project. It is recommended that students use the Office 365 cloud suite provided by the institution. All projects created in the cloud are automatically saved, can be edited simultaneously, and accessible anywhere and everywhere there is an internet connection. If you are interested in learning more about Office 365, you can sign up for the Office 365 for Faculty in the Talent and Engagement Center (TEC). Student training for Office 365 is provided by the Technology Learning Center (TLC). A TLC representative can also provide a class training on Office 365 by request.

Students may also connect their personal laptop to the workstation display by using the HDMI cable located in the station cabinet. Student will insert the HDMI cable into the laptop HDMI port and the corresponding station port located inside the cabinet. Once the device is connected using the HDMI cable, the input on the station wall panel must be switched from PC to laptop by pressing on the “laptop” button.

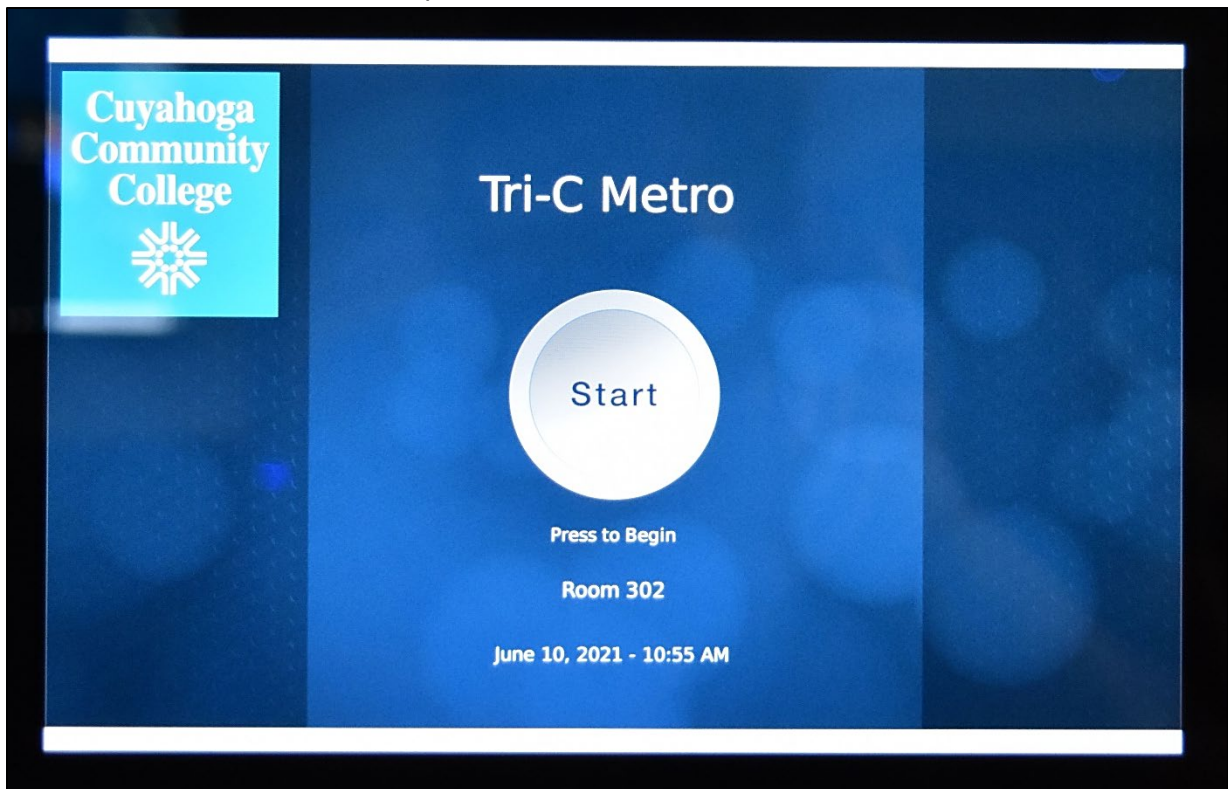


## Station Mirroring

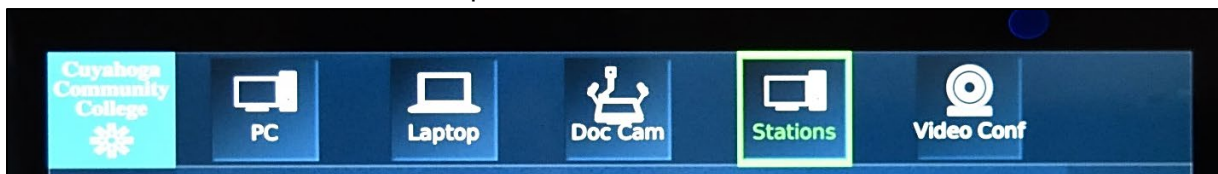
Each station computer as well as the instructor station has the ability to mirror its display on any or all of the stations in the classroom. This feature is useful for presentations, conferencing, hyflex teaching, and more.

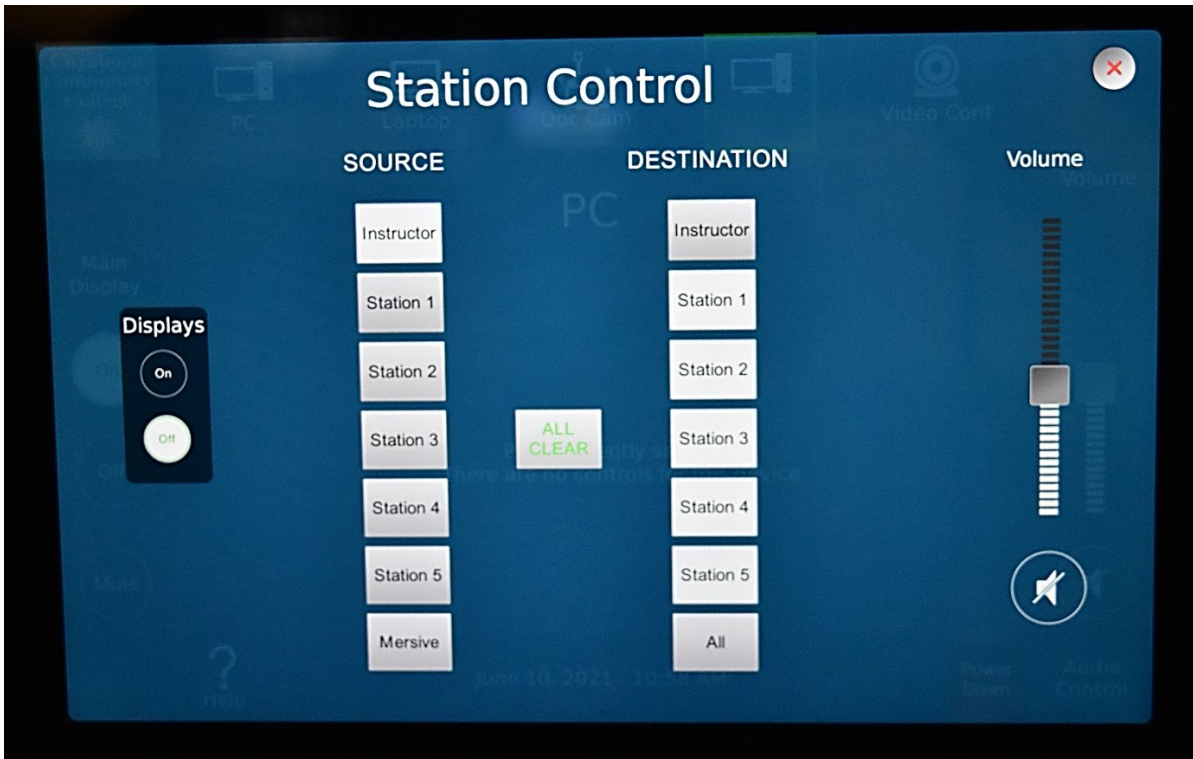
Station mirroring is controlled by the main panel at the instructor workstation. To use the station mirroring feature:

1. Touch the screen of the control panel located on the wall to the left of the BenQ. The device should then light up. If the panel is already on, proceed to step 3.
2. Press the “start” button on the panel.

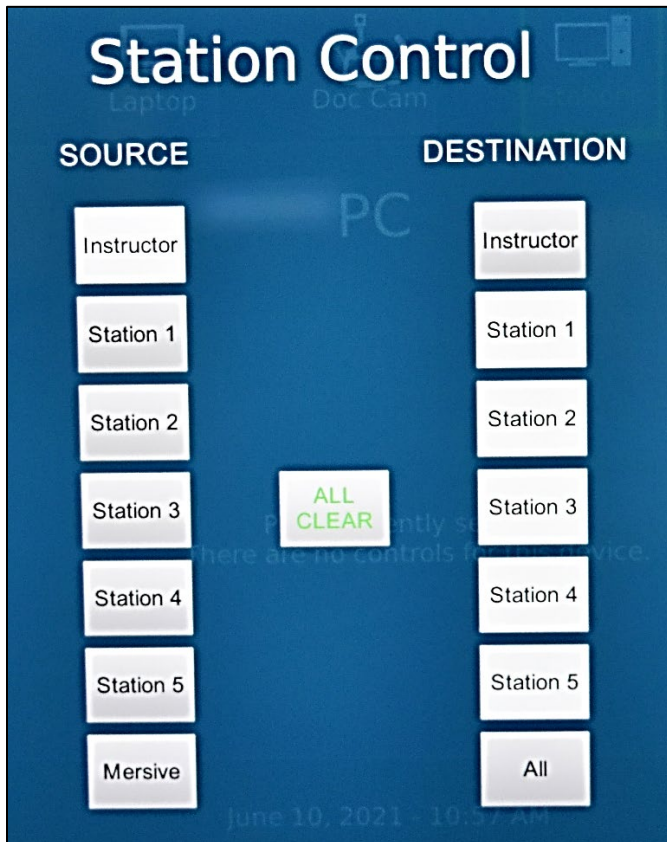


3. Press the “stations” button on the panel.

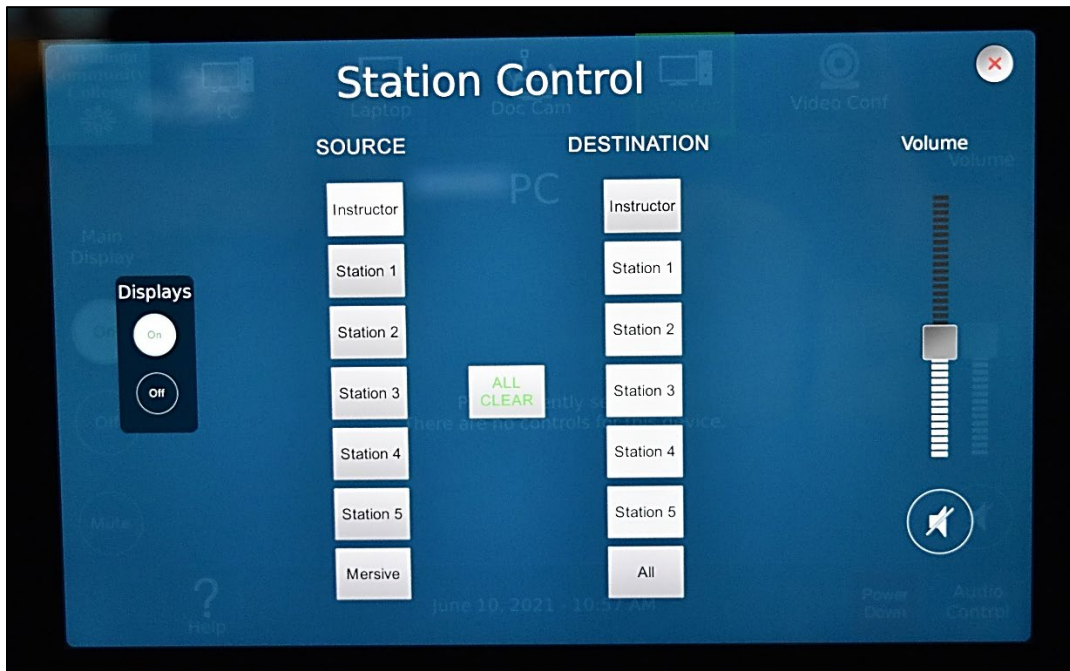




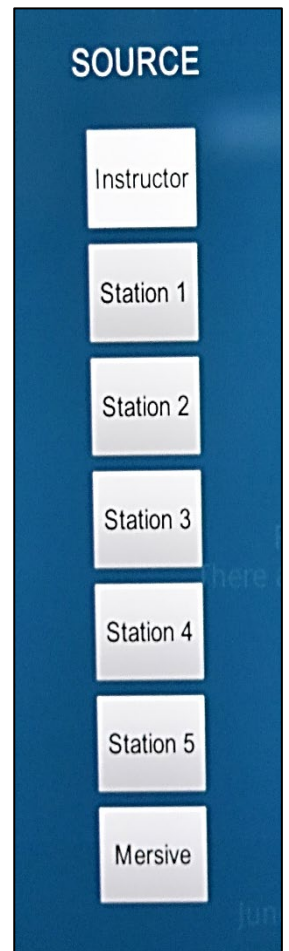
4. Press the "all clear" button in the center of the panel.

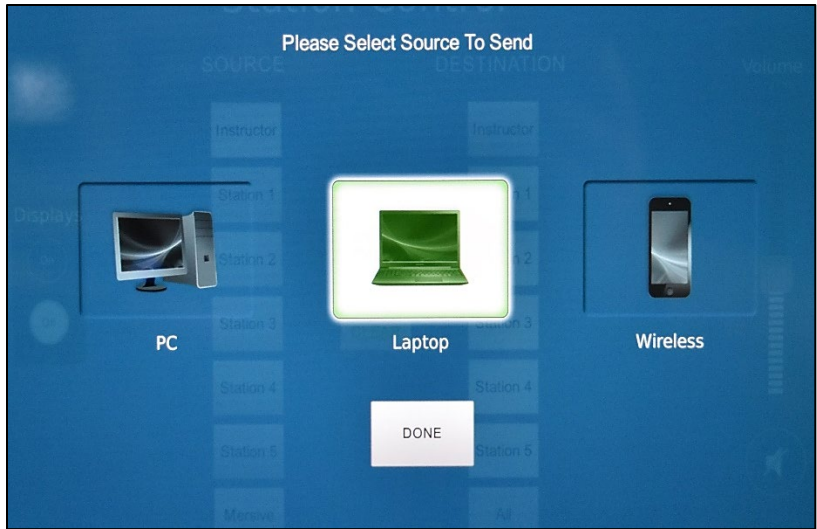


- To turn on all displays, press the “on” button. All displays should power on.



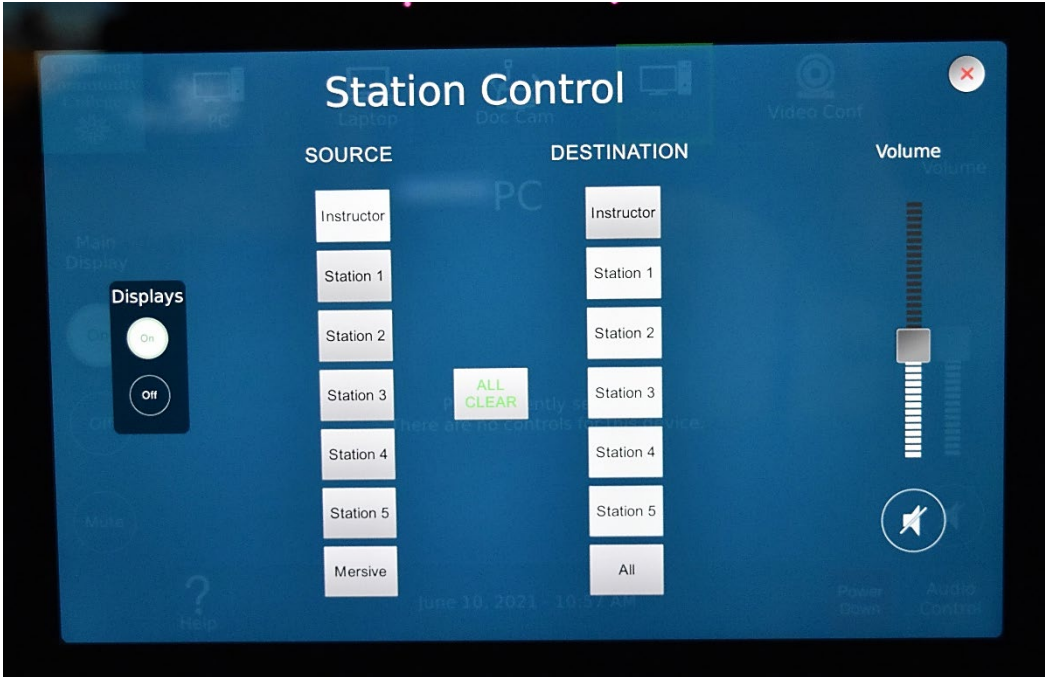
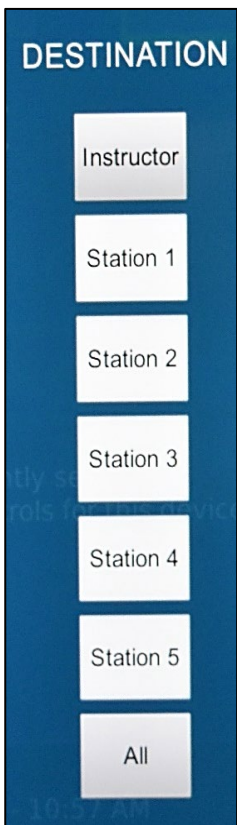
- To mirror the instructor/main screen on the workstations, press the “instructor” button under the source column.
- Press PC and press done (if you want to display your personal laptop, connect your laptop using the HDMI and USB cables on the instructor workstation and then press the laptop button).





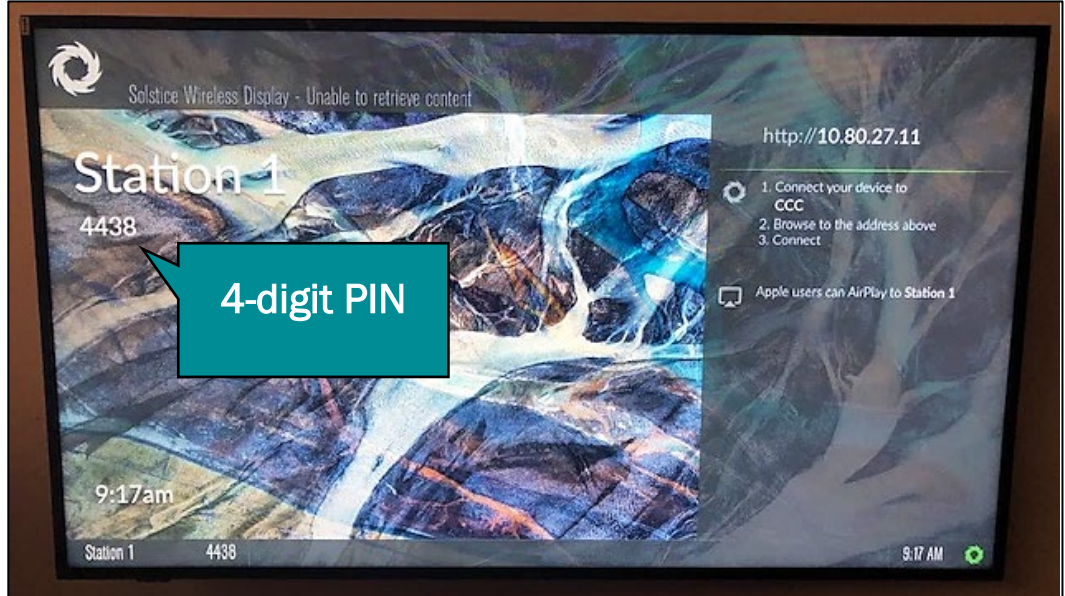
- Press the “all” button in the destination column. If all screens do not mirror, press the “all” button in the destination column a second time. Alternatively, if you want to mirror the screen from one of the workstations, you would press the station number you want to mirror in the source column and then press the “all” button in the destination column.

Depending on what activity you are completing, you may not want to mirror the screen on all workstations but only select workstations. In this situation, instead of pressing the “all” button, you would individually press the station buttons located in the destination column on the panel.



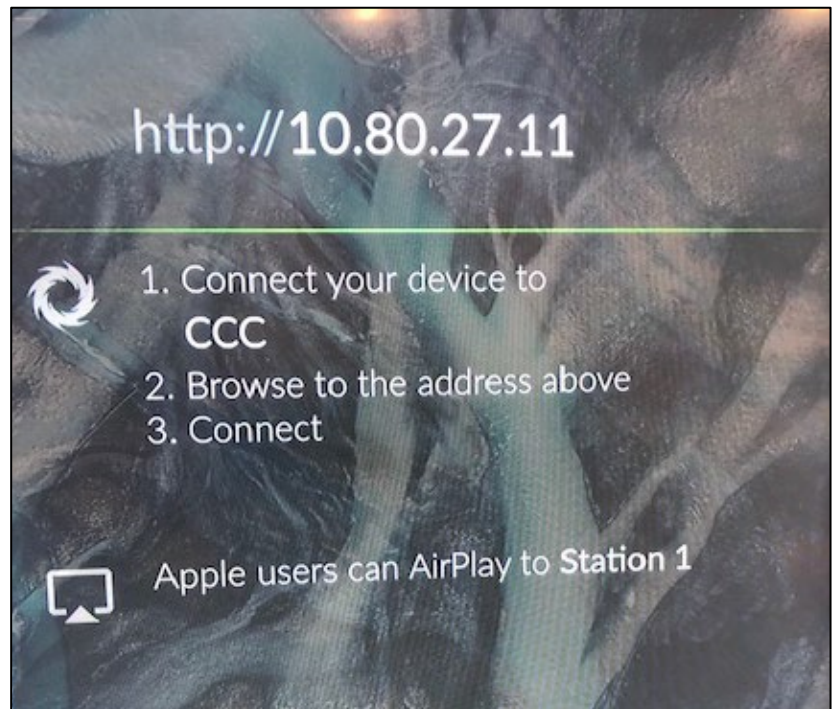
## Mersive Technology

The Solstice Pod is a collaboration platform by Mersive Technologies. Solstice enables students to wirelessly share and collaborate on projects using their own device. Each computer workstation and the instructor workstation are connected to a Solstice Pod.



When viewing a Solstice display that is not currently being used for a collaboration session, you will see the welcome screen containing the Solstice display name, a screen key, network information, and user connection instructions.

Students can connect to a Solstice display using the Solstice user app. The Solstice user app is installed on Windows, MacOS, Android, and iOS devices (such as laptops, tablets, and phones) that you want to use to connect and share media to the workstation display. These user devices must be on the same network as the Solstice host in order to connect. Student using the Solstice Pod that have not previously installed the Solstice user software app have two options: download the user app from the Mersive downloads page, or download the app directly from the Pod by visiting the URL listed on the Solstice display.



To connect a personal device to the Solstice Pod, press the “video” button on the workstation panel. Enter the 4-digit PIN visible on the Solstice display. Once the device is connected, users can

begin displaying the content on their personal device on the workstation screen.



## References

Promethean (2017). <https://resourced.prometheanworld.com/collaborative-cooperative-learning/Implementing Group Work in the Classroom>. Centre for Teaching Excellence, University of Waterloo (2020). <https://uwaterloo.ca/centre-for-teaching-excellence/teaching-resources/teaching-tips/alternatives-lecturing/group-work/implementing-group-work-classroom>

## Glossary

**Advanced Technology:** Refers to classroom equipment that provide interactive and collaborative technologies.

**Blackboard:** Blackboard Learn is the Learning Management System (LMS) used to house course materials online.

**Center for Learning Excellence (CLE):** The Centers for Learning Excellence (CLE) collaborate with faculty and staff to design and develop courses that promote student-centered learning.

**Hyflex/Hyflex Teaching:** HyFlex combines the terms “hybrid” and “flexible.” Hybrid learning refers to learning that integrates complementary face-to-face (synchronous) and online learning (asynchronous) experiences. Students are given a choice in how they participate in the course and engage with material in the mode that works best for them over the course and from session to session.

**Idea Walls:** Walls with specialized paint that allow you to write using dry-erase markers.

**Instructional Modalities:** Refers to how the course is offered/taught by the instructor.



**Information Technology Services (ITS):** Information Technology Services (ITS) provides end user service and support, software applications development and administration, data networks and connectivity, data center management, telecommunications management, IT security, and IT project management.

**Learning Management System:** A learning management system is a software application for the administration, documentation, tracking, reporting, automation and delivery of educational courses, training programs, or learning and development programs.

**Mediasite:** The College's video creation, hosting, and delivery service.

**Mersive:** Mersive or Mersive technology refers to the Solstice Pod system installed on the instructor workstations and provides an opportunity for wireless sharing between end user devices.

**OBS Studio:** OBS studio is a free and open-source streaming and recording platform.

**Online Learning and Academic Technology (OLAT):** The Office of Online Learning & Academic Technology (OLAT) leads the College in the planning, development, and implementation of technology innovation in support of teaching and learning. OLAT supports college-wide online synchronous and asynchronous learning initiatives including online learning, blended learning, and other online learning modalities as well as its application to classroom-based learning.

**PTZ Camera:** A pan-tilt-zoom camera is a camera that is capable of remote directional and zoom control.

**Station Mirroring:** Screen mirroring technology allows a phone, tablet or computer screen to wirelessly display on another device screen. Screen mirroring is frequently used during meetings, presentations and lectures to easily display relevant content to others in the room.

**Webex:** The College's online meeting solution that can be used to communicate via audio, video, chat, and document/screen sharing.