# Teaching Technology Tour and Q&A

**Presenters:**

Katrina Johnson
Crystal Clemons
Alexandra Masterson
Joe Balducci
Jim McLean
Julia Tungli
LeAnn Pittman

September 24, 2020

George Mason University | Stearns Center for Teaching and Learning
Digital Learning | Teaching Excellence

Information Technology Services

College of Science

# Before We Get Started

- Keep your Microphones Muted
- Q&A after the teaching technology tour, so please type your questions in the Chat
- Complete the one-question Survey to provide Feedback (We will provide a link)

# Topics

- How teaching technologies support these three basic teaching practices:
  - sharing information
  - checking student understanding in real time or asynchronously
  - getting students to work collaboratively
- How to incorporate teaching technologies and online learning management system tools
- How to engage students with technologies in Mason classrooms
- Where to find information and advice on teaching technologies

# Overview

**Pedagogical Overview and Online Technology Tools**

Stearns Center, Digital Learning

**Classroom Technology Overview**

ITS

**Online Labs Teaching Experience**

College of Science

**Q&A**

**Breakout Sessions**

After Q&A

# Choose Two Breakout Sessions

**Main Room** Online Labs (20 mins)
Alexandra Masterson – College of Science

**A** Classroom Technologies: How Can We Help You? (20 mins)
Crystal Clemons and LeAnn Pittman - ITS

**B** Zoom and Blackboard Collaborate Ultra: Key Differences, Use Cases, and More (20 mins)
Julia Tungli - ITS

**C** Vyond: From Script to Animated Video (20 mins)
Katrina Johnson – The Stearns Center, Digital Learning

**D** Virtual Realty/Augmented Realty for Online Learning (20 mins)
Jim McLean – ITS

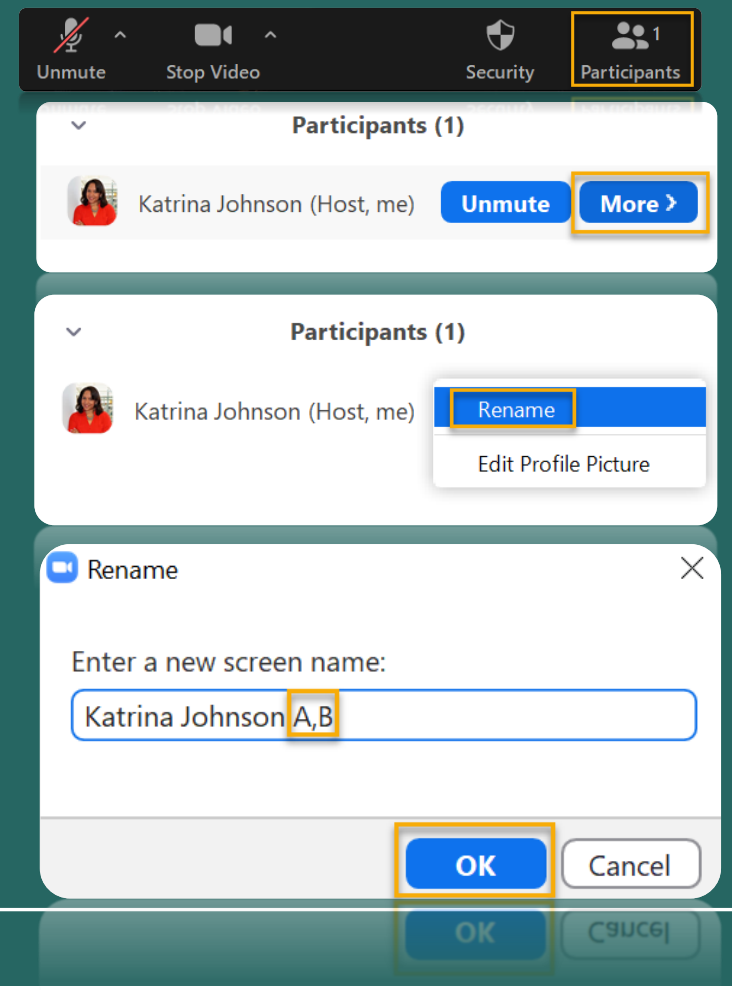
# Rename Your Screen Name e.g., Katrina Johnson A,B

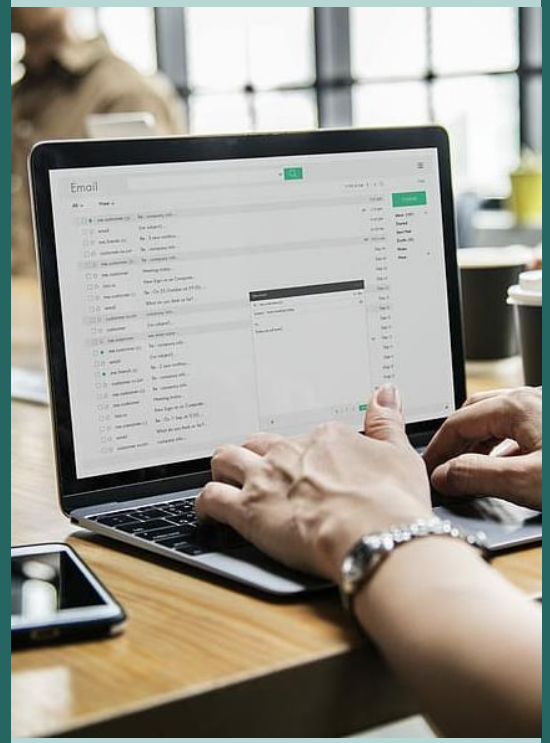
Step 1

Step 2

Step 3

Step 4





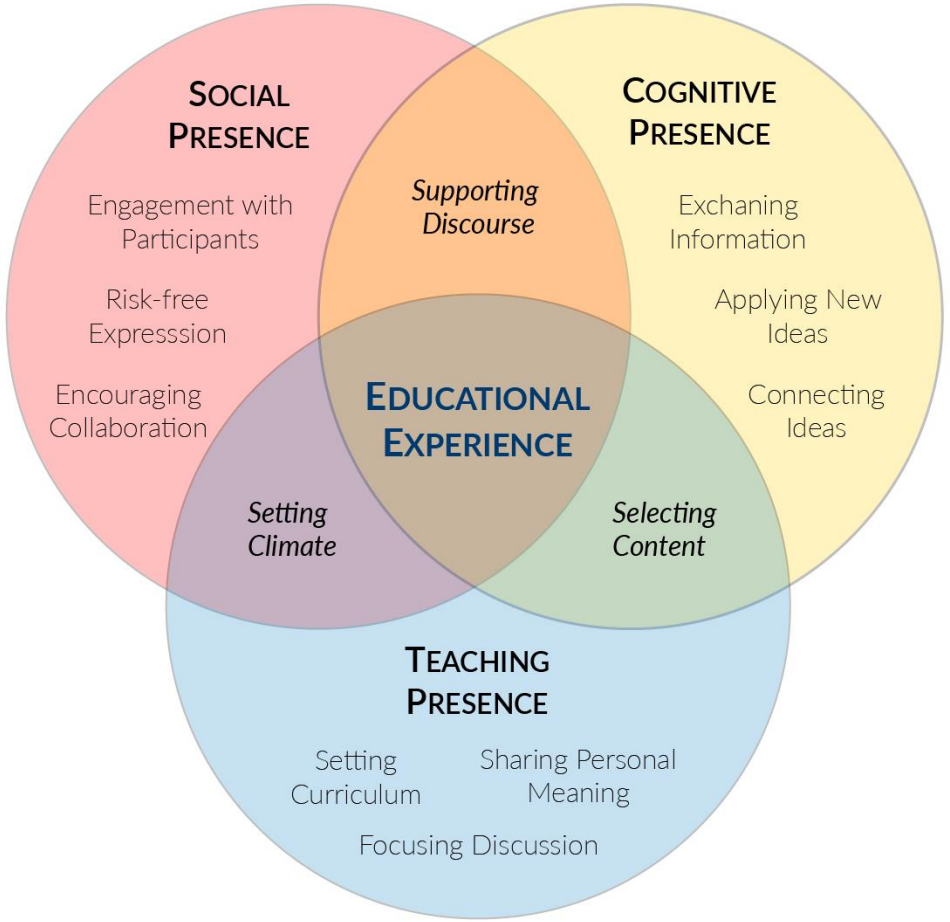

# Pedagogical Overview and Online Technology Tools

Katrina Johnson

Instructional Designer, Digital Learning

Stearns Center for Teaching and Learning

# Community of Inquiry Model




Adapted from Garrison, D.R., Anderson, T., Archer, W. (1999) Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education* 2(2), 87–105

# Social Presence

Engage in supportive contact, collaboration, and interactions

Ask students to create an introduction video; submit a video assignment

Active instructor engagement; acknowledge student contributions and expertise

Encourage collaboration; exchange of ideas

Encourage collaboration; provide personalized, timely assignment feedback, such as media commenting

Establish group cohesion

Encourage collaboration; exchange of ideas

# Cognitive Presence

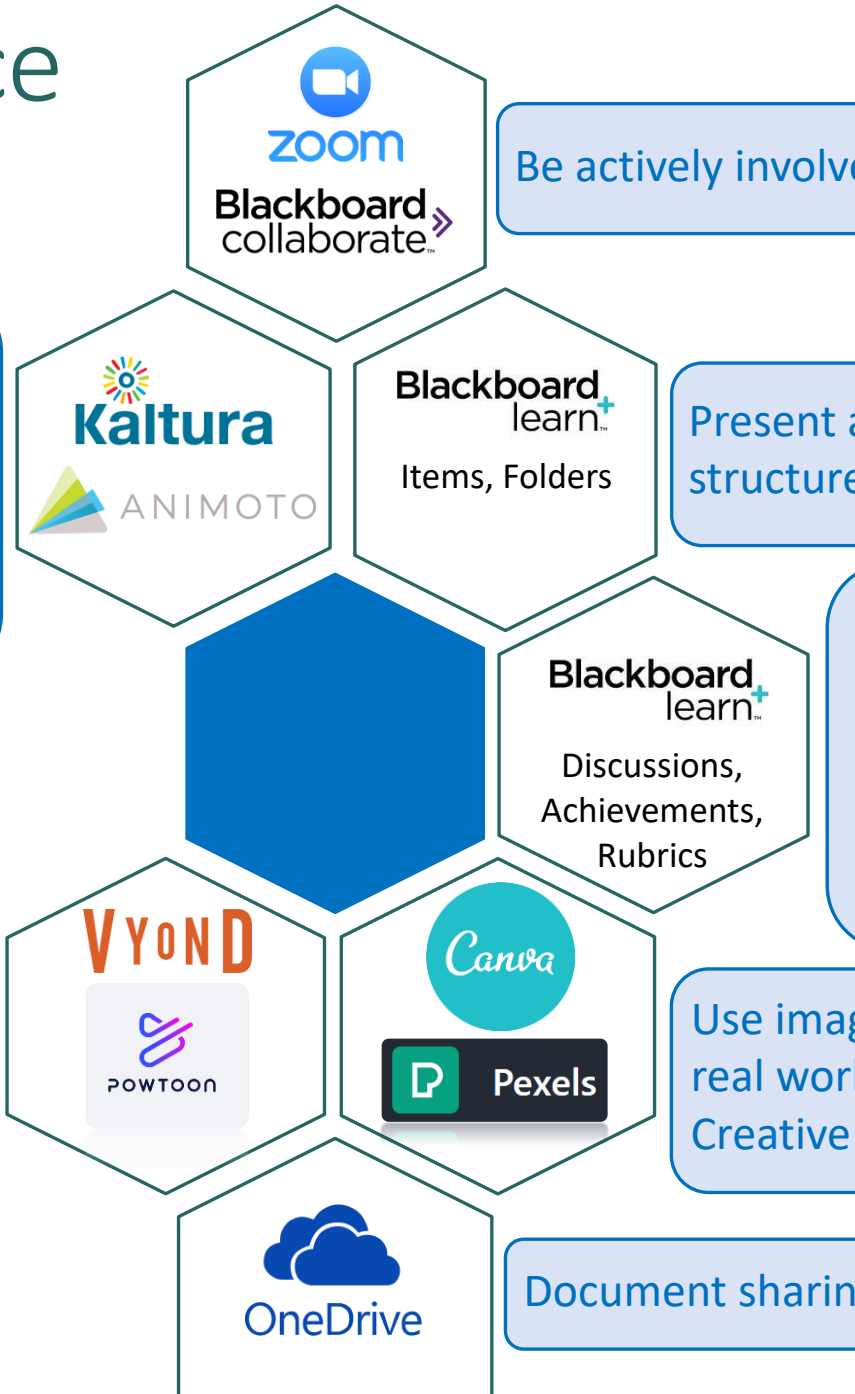
Create opportunities to foster meaningful application of new knowledge

Create opportunities to connect ideas to prior learning and other course concepts; provide knowledge from diverse sources

Discuss and introduce effective triggering events that create a sense of puzzlement

Promote information exchange

# Teaching Presence




Be actively involved in discussions to facilitate dialogue

Create an instructor introduction video; learning environment video tour; video announcement; mini lecture video; demonstration video; guest speakers/panel discussion; video feedback; video assignment

Present a syllabus and schedule; module structure/organization with an intuitive navigation

Be actively involved in discussions to facilitate dialogue; provide digital credentials to recognize student accomplishments; engage in supportive contact and interactions; provide self-assessments and grading rubrics

Use animations and storytelling to make connections to real world situations

Use images and video to make connections to real world situations (Additional tools: Mason Creative Services, Pixabay, Picktochart)

Document sharing; signup sheets

# Tips for Success

- Begin with your learning outcomes
- Consider the technology needs of your students
- See the Stearns Center website for recommended sample statements for technology requirements and class recordings
- Practice with the technology tool and allow your students to practice

# Resources

Stearns Center Helpful Resources

- Teaching in Fall 2020
- Designing Your Syllabus
  - NEW Fall 2020: Policies for New Course Structures and Interactions

Where to Locate Animations Images, Videos and More

- Vyond
- Powtoon
- Kaltura Capture
- Animoto
- Canva
- Mason Photos
- Pexels
- Pixabay
- Piktochart
- Creative Commons
- Smithsonian Open Access
- Unsplash

# Classroom Technology Overview

Crystal Clemons

Director, Classroom & Lab Technologies

ITS

# Classroom Technology at Mason

- Supports over 200 classrooms across four campuses
- Provides standard technologies to facilitate a standardized user experience
- Technologies offer flexibility in teaching supporting both high tech and low tech instruction

# Classroom Technology Updates

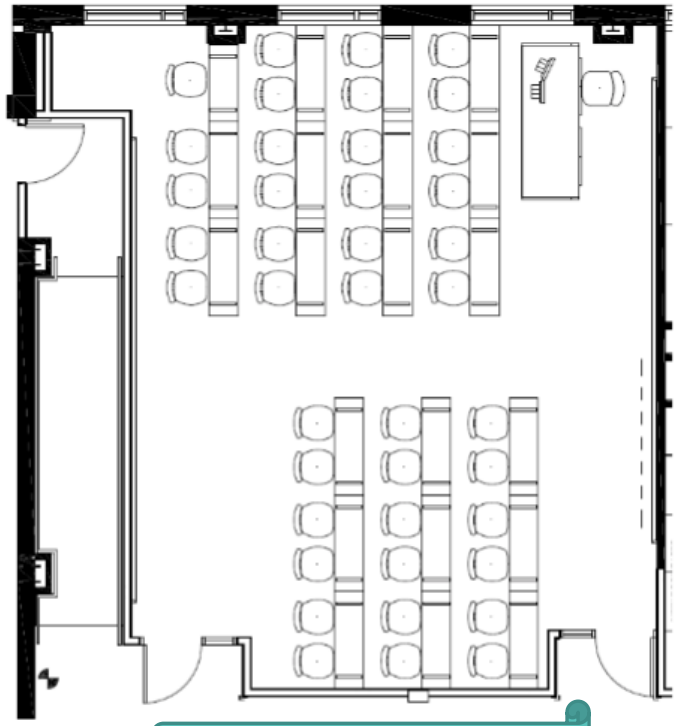
**Fall 2020 return to campus** activities addressed a new challenge

**COVID-19 PANDEMIC**

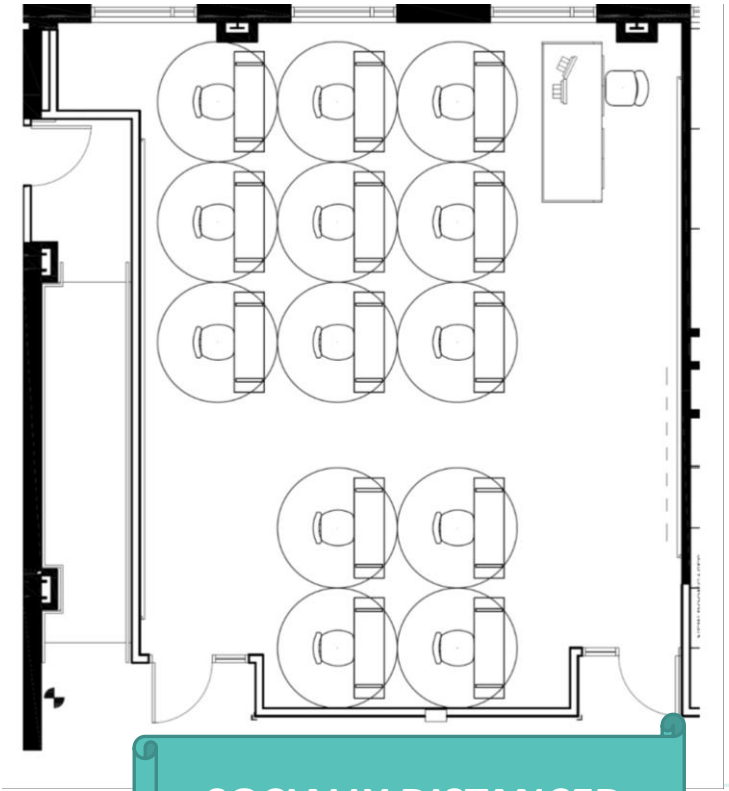
**Our question: How can we utilize technology to address the teaching and learning needs during the pandemic?**

# Classroom Technology Updates

**Fall 2020 return to campus** activities yielded changes to all classrooms:



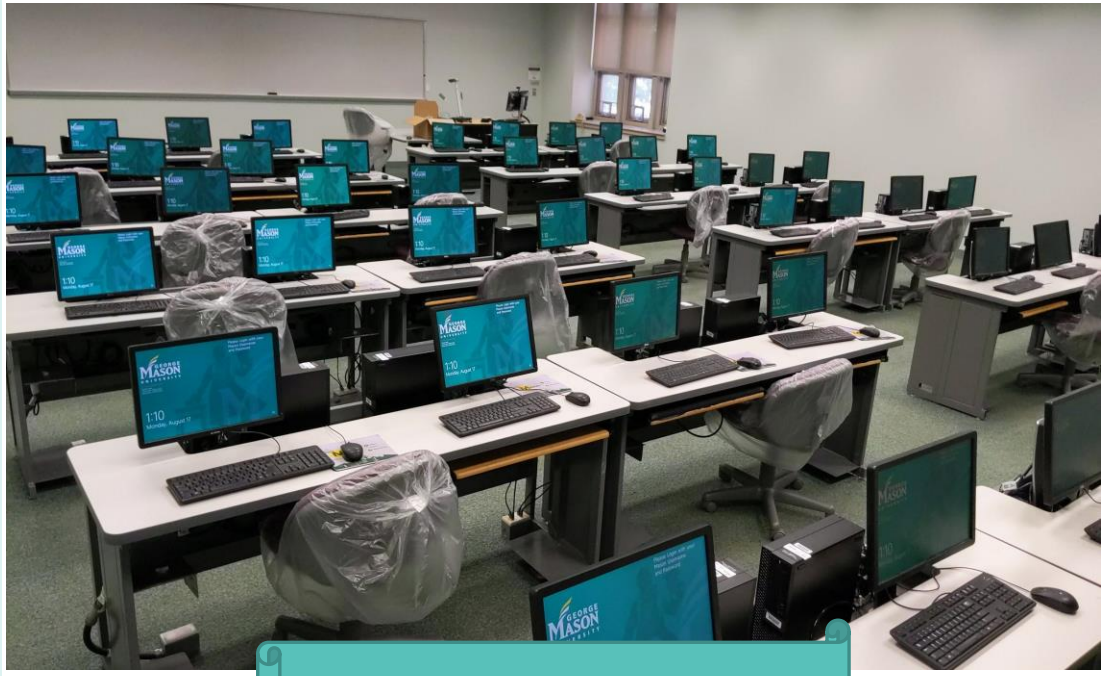
ORIGINAL



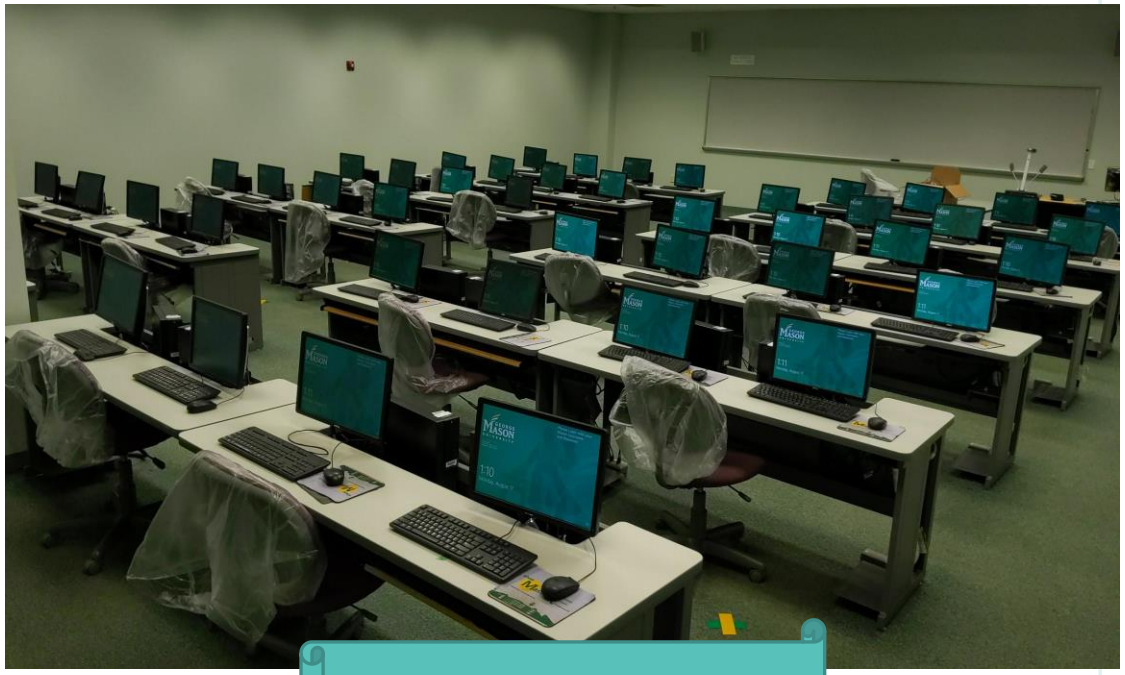
SOCIALLY DISTANCED

# Classroom Technology Updates

**Examples…**



SOCIALLY DISTANCED



SOCIALLY DISTANCED

# Classroom Technology Updates

**The pandemic created** challenges for instructors <u>in the classroom</u>:

1. Being heard while wearing masks *(audio)*
2. Teaching hybrid and blended courses and communicating with remote virtual learners *(audio and video)*

# Classroom Technology Updates

**Pandemic challenges** led to the following modifications:

- ✓Standard technology now supports hybrid and blended learning
- ✓BYOD rooms updated with more technology
- ✓Microphone installation in all rooms
- ✓Protective coverings on all technology
- ✓Modified hours for computer labs and support offices

# Classroom Technology Updates

NEW

- ✓Standard technology supporting <u>hybrid and blended learning</u> includes:
  - Computer with interactive monitor (annotation capable)
  - Document camera
  - Microphones for speech amplification
  - Standard user interface
  - Webcam for audio and video conferencing with remote learners
  - Classroom capture via Zoom, Bb Collaborate Ultra, etc…

# Classroom Technology Updates

NEW

- ✓ BYOD rooms updated with more technology:
  - All BYOD rooms have been updated with **speech amplification** and the **standard computer** and includes:
    - Computer with interactive monitor (annotation capable)
    - Webcam for audio and video conferencing with remote learners
    - Access to standard Mason software
    - Ability for classroom capture via Zoom, Bb Collaborate Ultra, etc…

# Classroom Technology Updates

✓Modified hours for computer labs and support offices

**FFX Support:**

- Sunday to Saturday 7:00 to 10:30

**Sci Tech Support:**

- Monday to Thursday 8:00 to 10:00
- Friday 8:00 to 5:00
- Saturday and Sunday Closed

**Arlington Support:**

- Sunday Closed
- Monday to Friday 8:30 to 10:00
- Saturday 9 to 5

**FFX JC 342 Computer Lab:**

- Monday to Thursday 9 - 9
- Friday, Saturday, Sunday 9 – 8

**Sci Tech Computer Lab:**

- Monday to Friday 8:30 to 8:30
- Saturday and Sunday- Closed

**Arlington Computer Lab:**

- Monday to Thursday 9:00 to 10:00
- Friday and Saturday 9:00 to 5:00
- Closed Sunday

https://mymasonapps.gmu.edu.

# Citrix Virtual Lab

VCL REPLACEMENT (RETIRED AFTER SUMMER 2020)

IMPROVED REMOTE DELIVERY OF ACADEMIC SOFTWARE VIA THE INTERNET

THIS SEMESTER SUPPORTED OVER 907 UNIQUE USERS AND SIMULTANEOUS USERS

OVER 3,900 **DIFFERENT** LAUNCES SINCE THE BEGINNING OF THE SEMESTER

# Tips for Success – Demo Rooms

- Classrooms available for faculty use during the semester. The rooms will support:
  - GENERAL USE
  - LECTURE RECORDING
  - GAINING FAMILIARITY WITH EQUIPMENT
- Rooms are as follows:
  - ✓ENGR 1108
  - ✓BUCH D001
  - ✓BUCH D003
  - ✓VM 118
  - ✓VM 120
  - ✓KGJ 134

# Tips for Success – Tech Assistance

**(703) 993-3456** or **x3456** (FFX)

**(703) 993-8499** or **x8499** (Sci Tech)

**(703) 993-8226** or **x8226** (Arl) for

1. Remote tech support for
2. In-person training
3. Remote/Zoom training

# Resources

- Classroom Specific Information - Stearn's Center Classroom Guide
- ITS Services – https://its.gmu.edu/find-a-service/
- Classroom Support - https://its.gmu.edu/service/classroom-support/
- Learning Space Design - https://its.gmu.edu/service/learning-space-design/

# Online Labs Teaching Experience

Alexandra Masterson

Assistant Professor, Biology

College of Science

# How do I begin constructing my online lab?

**Reviewed the literature and critically read peer-reviewed higher-ed journals.**

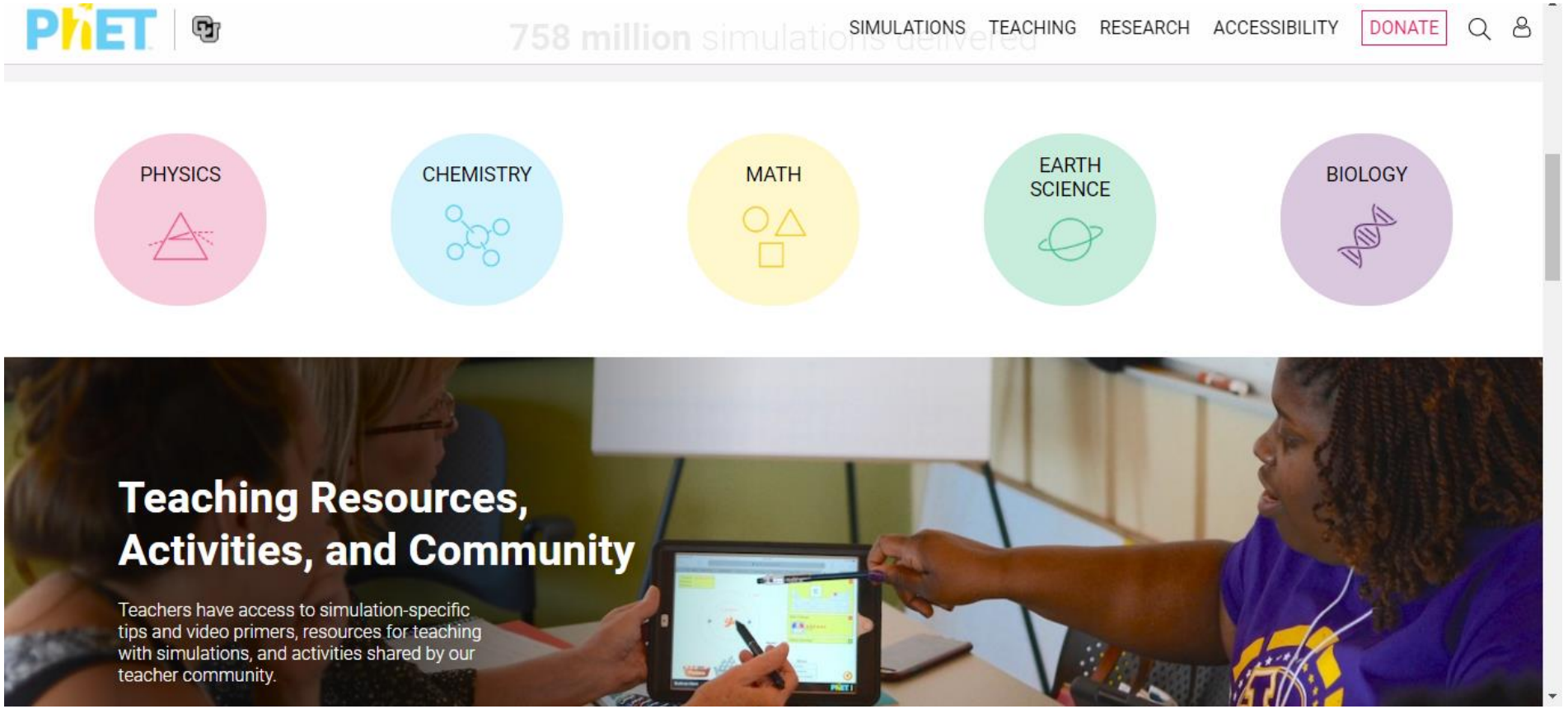
**The Chronicle of Higher Education**: *How to Quickly (and safely) Move a Lab Course Online,* by Heather R. Taft, March 17, 2020.

1. ***JoVE Scientific Video Journal*—Fenwick Library; Mr. Carl Leak, Biology Librarian** **FREE**
2. ***PhET***—University of Colorado Boulder. **FREE**
3. ***BioInteractive***—Howard Hughes Medical Institute **FREE**
4. ***Labster*** **$$$**
5. ***Visible Body*** **$$$**
6. **UCLA List of Online STEM Lab Resources** **FREE & $$$**
7. ***PAL (Practice Anatomy Lab)—Histology*** **$$$**

# JoVE

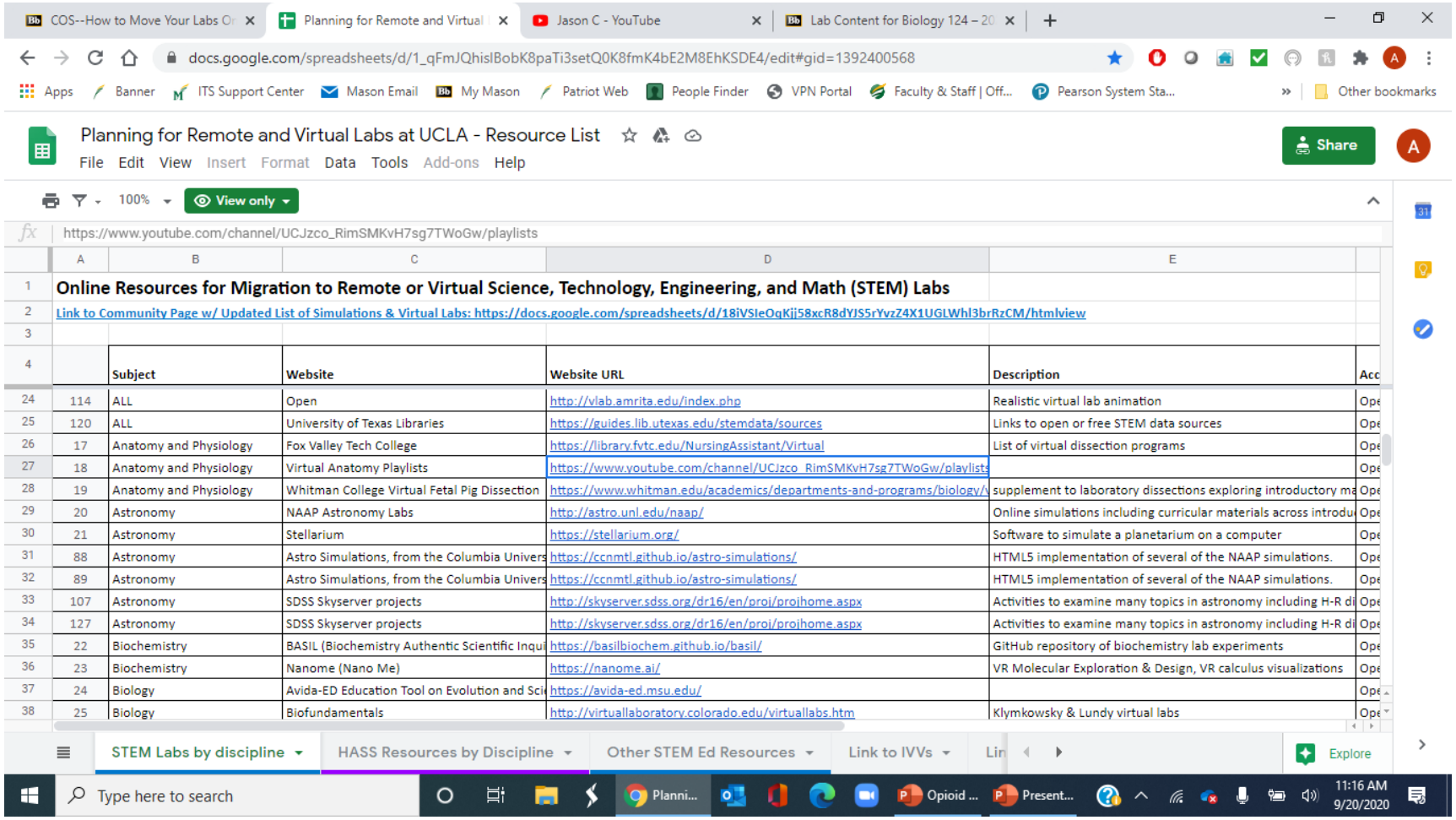
http://www.jove.com

# PhET




https://phet.colorado.edu/

# UCLA List of Lab Resources




https://docs.google.com/spreadsheets/d/1_qFmJQhislBobK8paTi3setQ0K8fmK4bE2M8EhKSDE4/edit#gid=1392400568

# Advice In Starting Your Online Lab

- Design your lab with the course objectives in mind.  You can always modify as your lab progress.
- Invest in an inexpensive document camera. Can use with Blackboard Collaborate and Zoom.
- Safety at home—still follow lab safety guidelines.
- Science kits or not? Liability?
- Make lab instructions simple and clear as possible.
- Be available online if you are asynchronous. Prefer synchronous, especially for freshmen & sophomores, with lots of live demonstrations online.
- Online demonstrations are a good way of demonstrating lab techniques to inexperienced students.

# Q&A

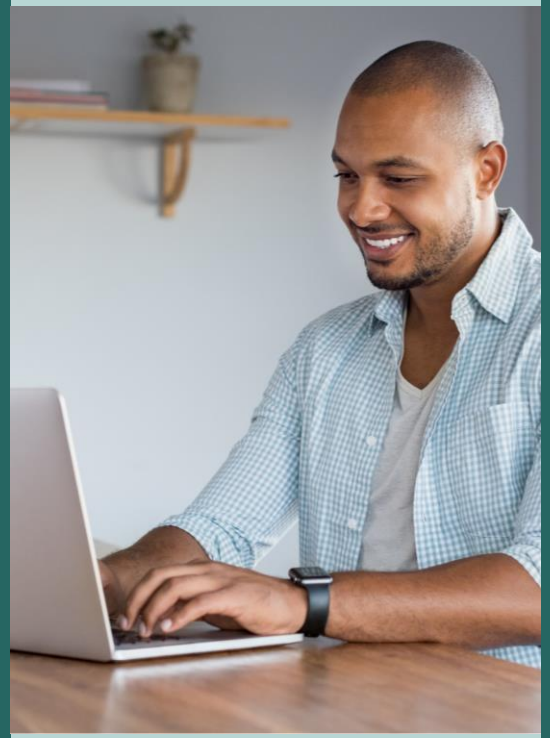
Joe Balducci

Assistant Director, Instructional Technology/Media Services

ITS

Join us 3pm

# Please Attend Our Spin Off Workshops at 3pm



**Classroom Technologies: What to Expect in Horizon Hall (40 mins)**
Crystal Clemons, LeAnn Pittman

**Group Work and Collaboration Tools (40 mins)**
Julia Tungli

**Effective Video for Online Courses (40 mins)**
Katrina Johnson, Jim McLean

# Choose Two Breakout Sessions

**Main Room** Online Labs (20 mins)
Alexandra Masterson – College of Science

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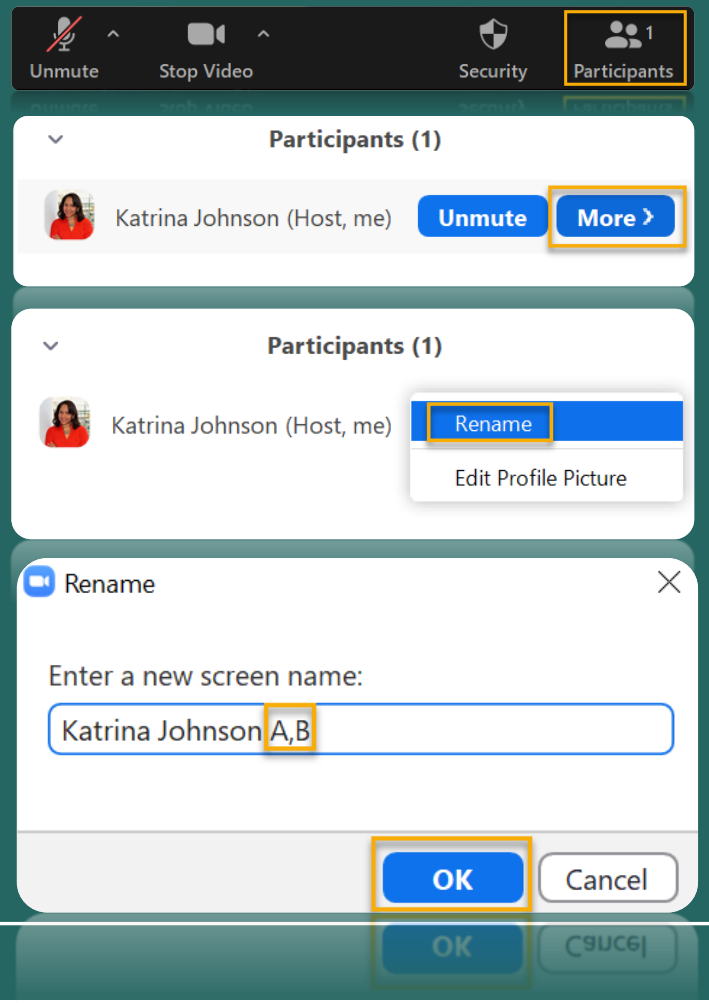

# Breakout Session

Main Room

## Online Labs (20 mins)

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Breakout Session

A

Classroom Technologies: How Can We Help You? (20 mins)

Crystal Clemons and LeAnn Pittman - ITS

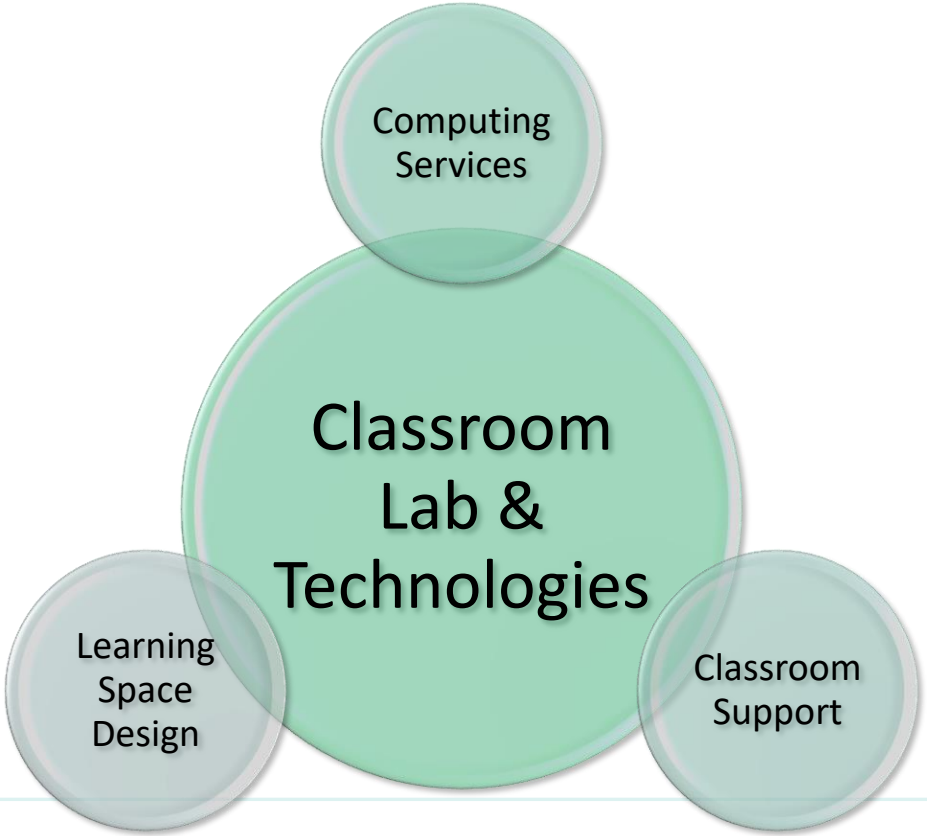
# Classroom Technologies: How can we help you?

Crystal Clemons

Director, Classroom & Lab Technologies

ITS

# Classroom and Lab Technologies



# Classroom and Lab Technologies

***2019 in review…***

**314**
Supported learning spaces

**28**
Refreshed classrooms

**100%**
Technology enabled spaces

**338**
Equipment checkouts

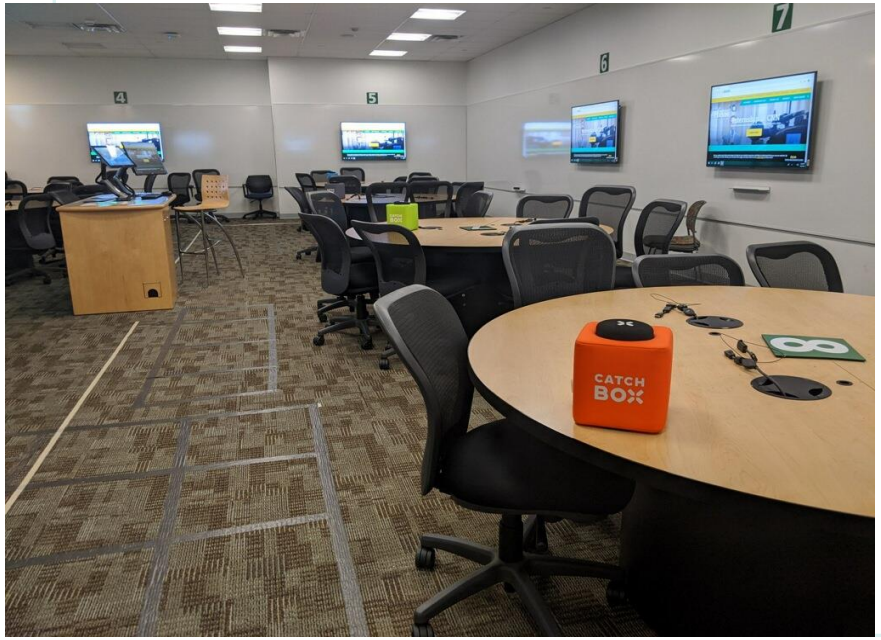
**43,489**
Computer lab visits

**7,757**
Courses supported

**129,190**
Supported classroom sessions

# Learning Space Design

- Design and engineering of classroom technologies
- Manage classroom design and installation projects



# 1st Active Learning Classroom

**Successes:**

-Maximized writable surfaces on wall

-Displays around the room

-Faculty tech workshops kept in-class training to a minimum

**Challenges:**

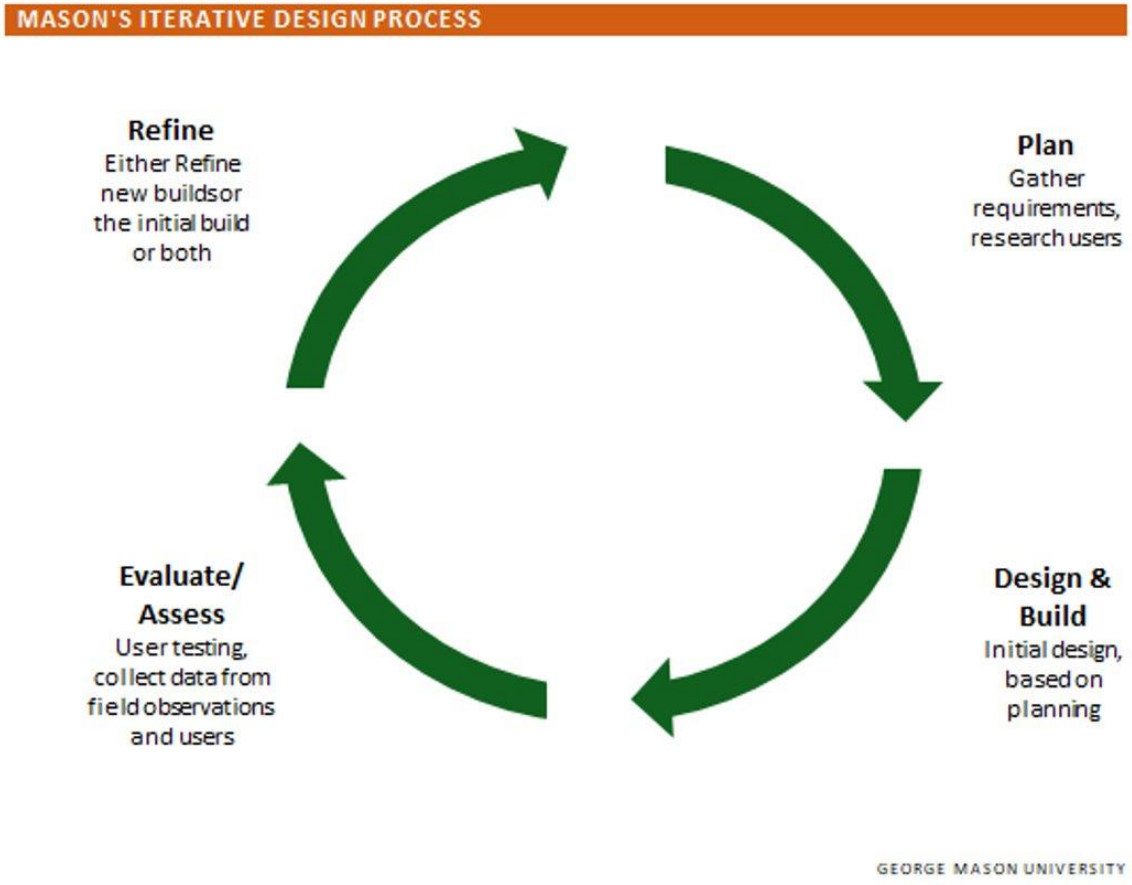
-Cost; Unscalable model/unsustainable

-Complexity of user interface

-Various facilities issues

-Technology support issues

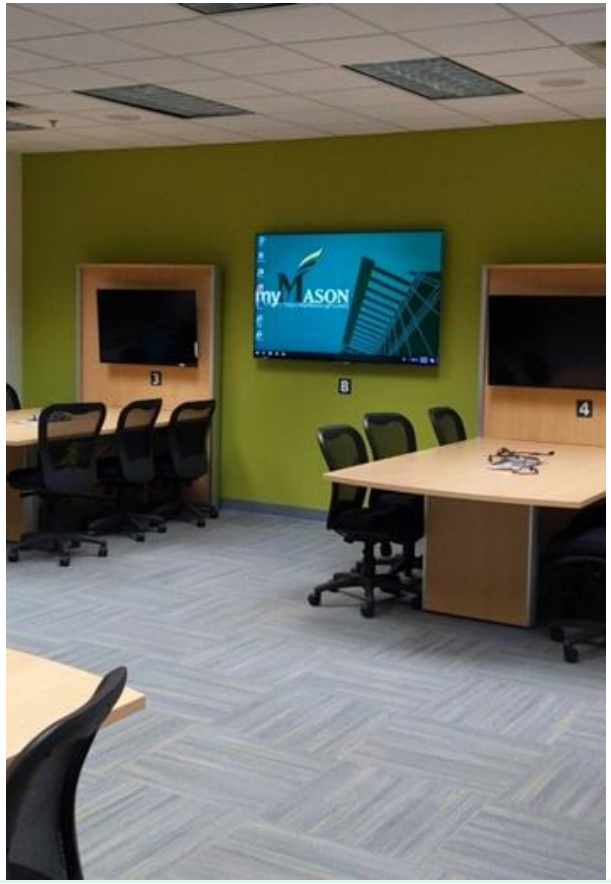
# The Iterative Process




**Implementation of the Process for Peterson Hall:**

- **PLAN**: We worked with Facilities Planning and faculty to gather requirements
  - Continuous meetings with Stearns Center/Center for Teaching and Faculty Excellence and Learning Environments Group
  - Participated in focus group/workshop with Facilities Planning, faculty, and architects
- **DESIGN/BUILD**: We designed classrooms & group study rooms
- **ASSESS**: We held open houses for faculty & obtained feedback
- **REFINE**: Applied feedback to upcoming projects and/or technology standards
- **PLAN**: Used feedback from Innovation Hall 3rd floor project to inform Peterson Hall

# Examples of the iterative process




- Low cost solutions for active learning
- A more flexible classroom with computer stations

# Peterson

# Annual Refresh

- Classroom technology has a 6yr lifecycle
- Approx 40 classrooms are refreshed across all campuses each year
- Recent changes to the standard technology package includes:
  - Wireless presentation to provide both faculty and students ability to share content wirelessly
  - Web conferencing functionality for faculty to engage remote students and host guest speakers
  - Enhanced presentation capabilities in active learning classrooms

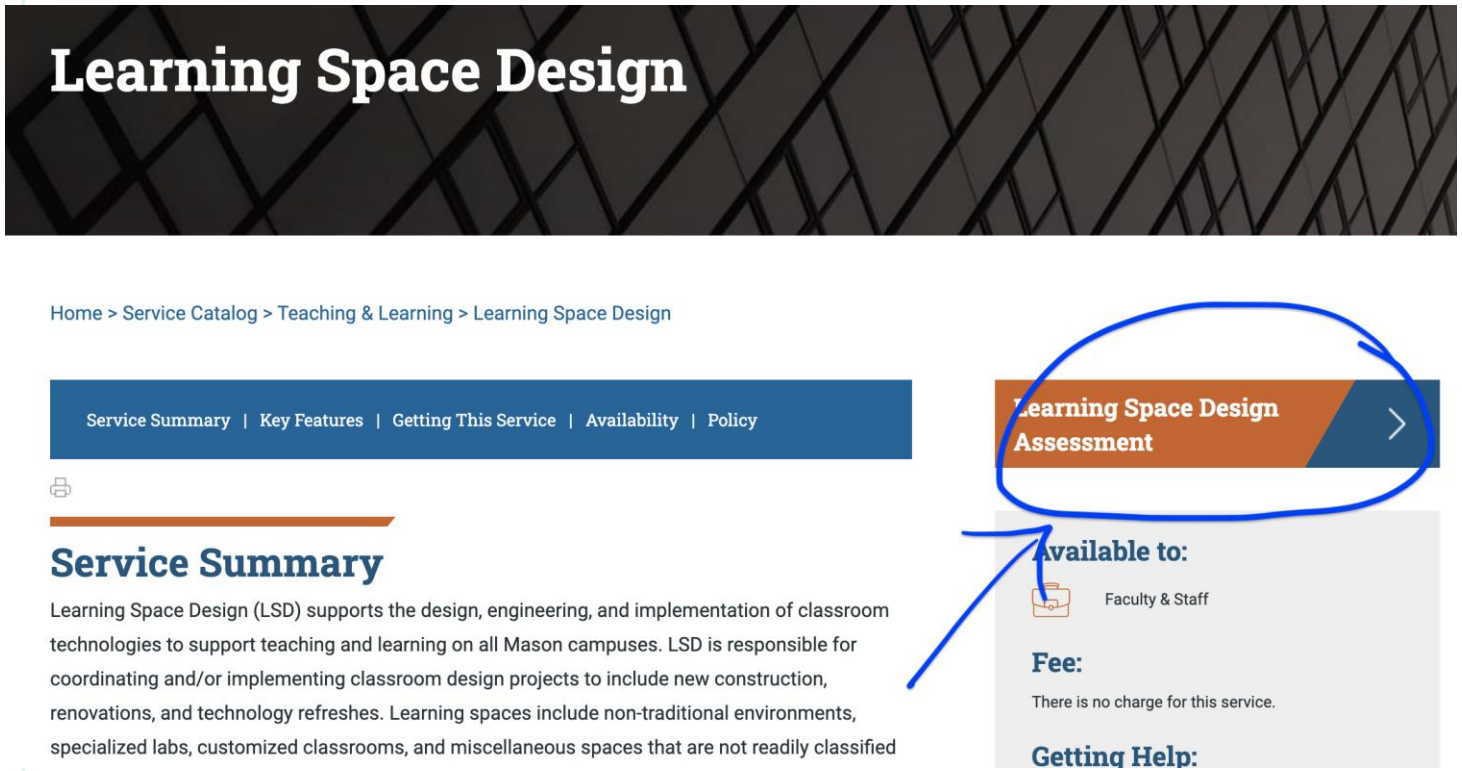
# Consulting

SERVICE REQUESTS

CLASSROOMS

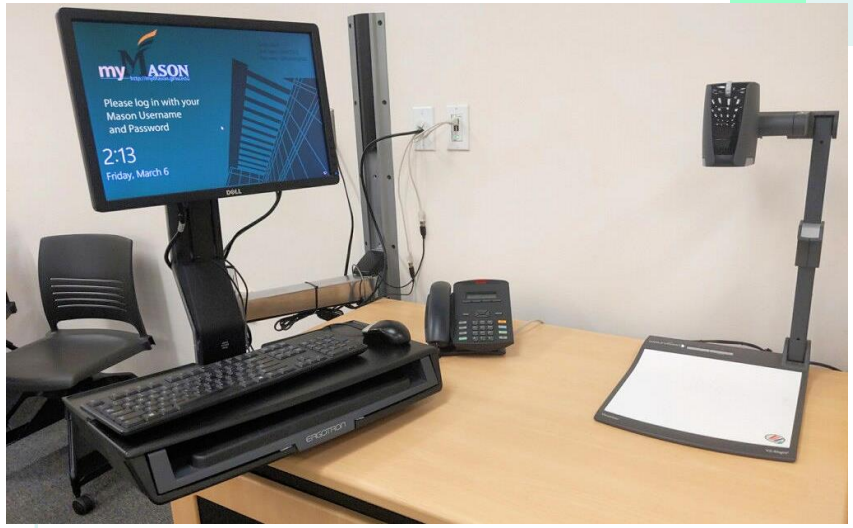
CONFERENCE ROOMS

LABS




# Resources

- Classroom Specific Information - Stearn's Center Classroom Guide
- ITS Services – https://its.gmu.edu/service/learning-space-design/



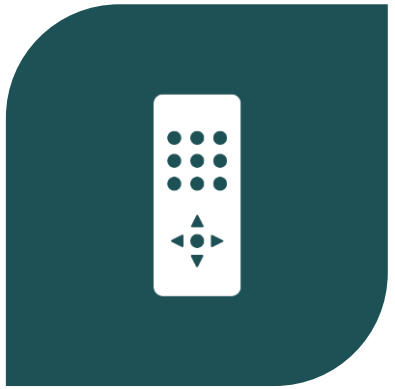
# Classroom Support

- Maintenance and support of classroom technologies, computer classrooms, and computer labs
- Provides Service Level Agreements (SLA) for maintenance and support on department owned classroom technologies.

# Methods of Support

HELP DESK- MANAGES THE CLASSROOM SUPPORT HELP DESK TO PROVIDE TECHNICAL SUPPORT AS NEEDED

TECHNICAL ASSISTANCE - PROVIDES REMOTE AND IN-PERSON ASSISTANCE TO REMEDIATE CLASSROOM TECHNOLOGY ISSUES



TRAINING- PROVIDES REMOTE AND IN-PERSON TRAINING

# Computing Services

- Manage over 800 computers in Mason classrooms and labs across all four campuses
- Test, implement, support and maintain the Citrix Virtual computing labs
- Provide technical support for hardware and software on supported workstations

# Software Services

**Software Images:** Computing Services develops, maintains, and installs the software image for all Mason computers.

**Software Request**: Computing Services conducts software evaluation, testing and license compliance for all software installed on all Computing Services imaged workstations

# Key Takeaways

**Design Consultations:**
LSD offers design consultations for various learning spaces **across all campuses.**

**Technology Refresh:**
LSD ensures learning spaces are updated to improve the teaching and learning experience.

Training:
Classroom support offers training to inform instructors about available technology

Technical Support:
Classroom support provides timely remote support to help prevent classroom downtime.

Remote Software Delivery:
Computing Services tests, implements, and supports the virtual computing labs

Software:
Computing Services develops, maintains, and installs the software image for Mason computers.

Breakout Session

B

# Zoom and Blackboard Collaborate Ultra: Key Differences, Use Cases, and More (20 mins)

Julia Tungli - ITS

# Zoom and Blackboard Collaborate Ultra: Key Differences, Use Cases, and More

Julia Tungli

Instructional Technologist

Learning Support Services, ITS

# Differences

- Breakout Rooms
- File Sharing
- Integration with Blackboard
- Personal Meeting Room
- Polling
- Video Tiles
- Waiting Room
- Whiteboard

# Use Cases

- How do you use web conferencing?
- How do you want to use web conferencing?

# Tips for Success

- Do what you find comfortable.
- Try out any new tool or feature before you use it.
- Allow time for technical difficulties.
- Have a backup plan.
- Invite feedback for improvements.

# Resources

- Collaborate Ultra @ GMU: https://its.gmu.edu/knowledge-base/introduction-to-blackboard-collaborate-ultra/
- Collaborate Ultra @ Bb: https://help.blackboard.com/Collaborate/Ultra/Moderator
- Zoom @ GMU: https://its.gmu.edu/service/zoom/
- Zoom @ Zoom: https://support.zoom.us/hc/en-us
- Comparison Matrix: http://bit.ly/BbCUvsZoom
- This PowerPoint: Email jtungli@gmu.edu for a copy.

Breakout Session

C

Vyond: From Script to Animated Video (20 mins)

Katrina Johnson – The Stearns Center, Digital Learning

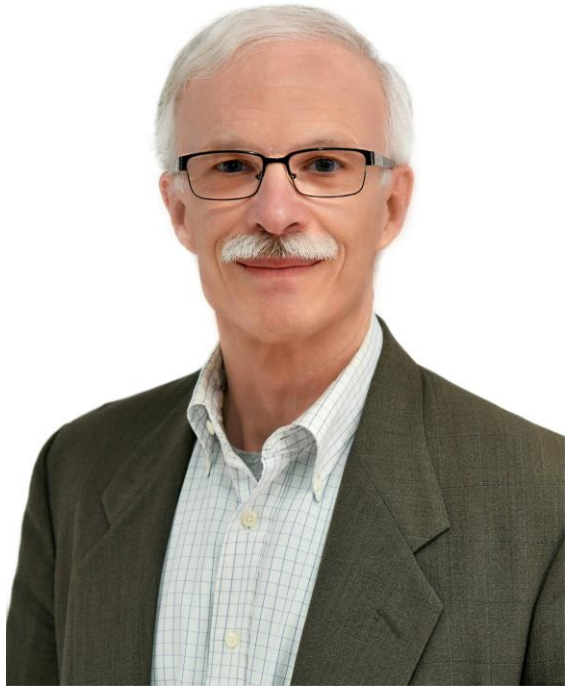
# Vyond

## Script to Animated Video

Katrina Johnson

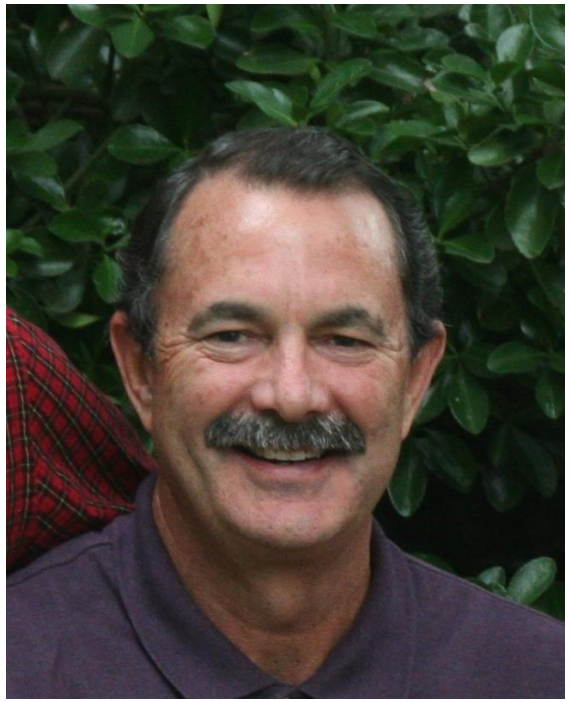
Instructional Designer, Digital Learning

Stearns Center for Teaching and Learning



**Dr. Gene Shuman**
Assistant Professor
Information Sciences and Technology
Volgenau School of Engineering
IT 109: Intro to Programming

# Learning to Program: A Piano Analogy



**Professor Craig Esherick**
Associate Professor
Sport Management, SRTM
College of Education and Human Dev
SPMT 455: Gov and Policy in Sports Org

## Campus Recreation

# Resources

Vyond - https://www.vyond.com

**Animations**

Two microlearning animations co-created by instructional designers and Mason professors to engage students with humor:

- Dr. Gene Shuman's Learning to Program: A Piano Analogy (shorturl.at/iDFYZ) (2:03 minutes)
- Professor Craig Esherick's Campus Recreation (shorturl.at/byEU4) (2:12 minutes)

Breakout Session

D

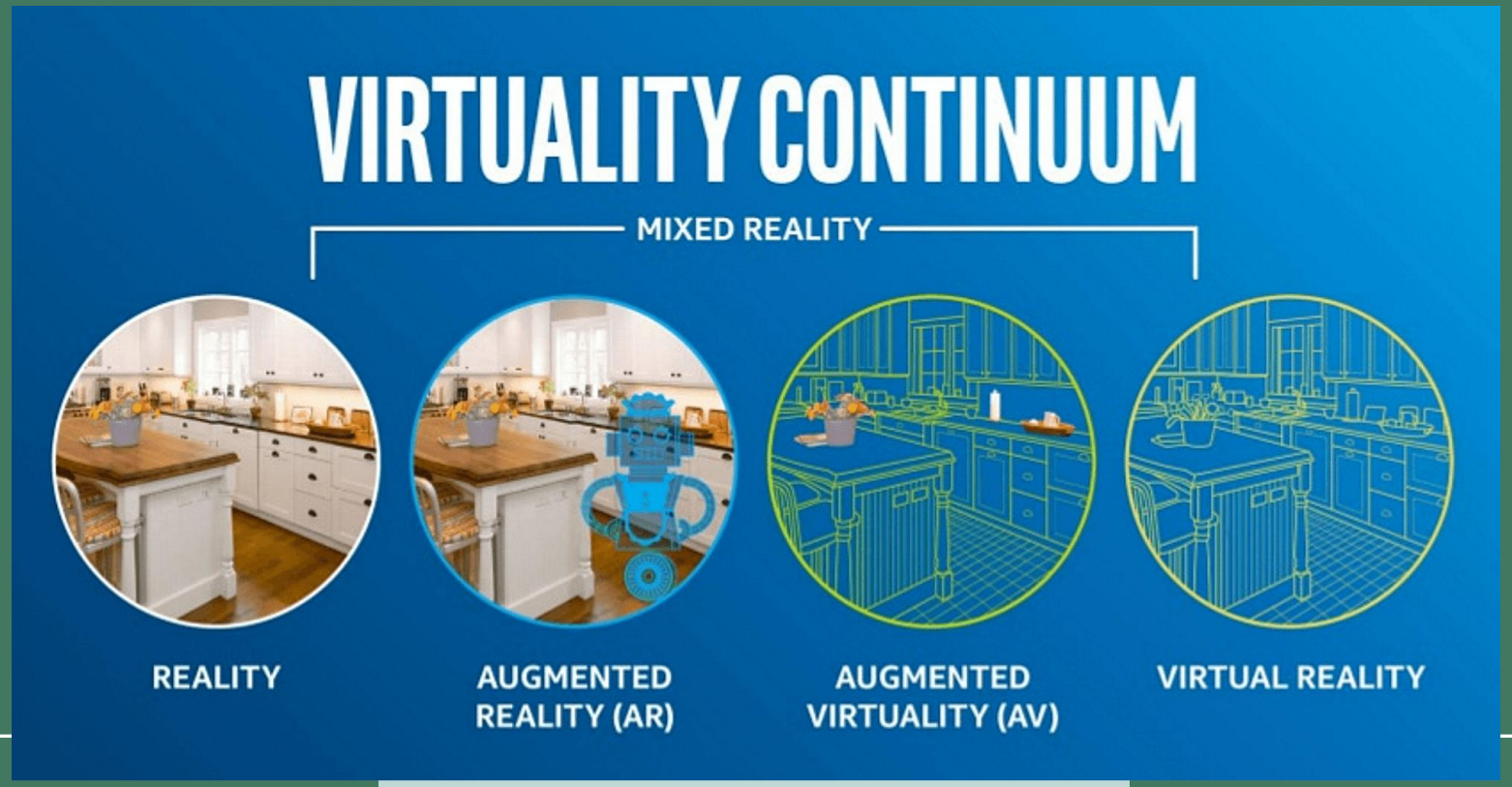
# Virtual Realty/Augmented Realty for Online Learning (20 mins)

Jim McLean – ITS

# What is Augmented Reality

**Augmented reality** (AR) is an interactive experience of a real-world environment where the objects that reside in the real world are enhanced by computer-generated perceptual information, sometimes across multiple sensory modalities, including visual, auditory, haptic, somatosensory and olfactory.

# Milgram’s Reality-Virtuality Continuum



# VR/AR Examples

**Spatial**
VR Team Collaboration, Presentation & Virtual Office

**Google Tour**
360° Video with Immersive Interaction

**Blippar**
Augmented Reality Creation Tool

# Software Resources

**VR for Online Learning**
**Collaborative Virtual Spaces**

**Spatial** https://spatial.io/
**MeetinVR** https://www.meetinvr.com/
**MootUp in Zoom** https://mootup.com/zoom/
**LearnBrite** https://www2.learnbrite.com/

**AR for Online Learning**
**Project tools for students**

**Google Tour/Expeditions-** Google Expeditions
**Tour Creator** https://arvr.google.com/tourcreator/
**Theasys** https://www.theasys.io/
**Blippar** https://www.blippar.com/

**Recommended Mobile Apps**
**Plantale** https://www.commonsense.org/education/app/plantale
**Starwalk 2** https://starwalk.space/en
**Google Lens** https://lens.google.com/

# Hardware Resources

## Equipment VR Equipment for Online Learning

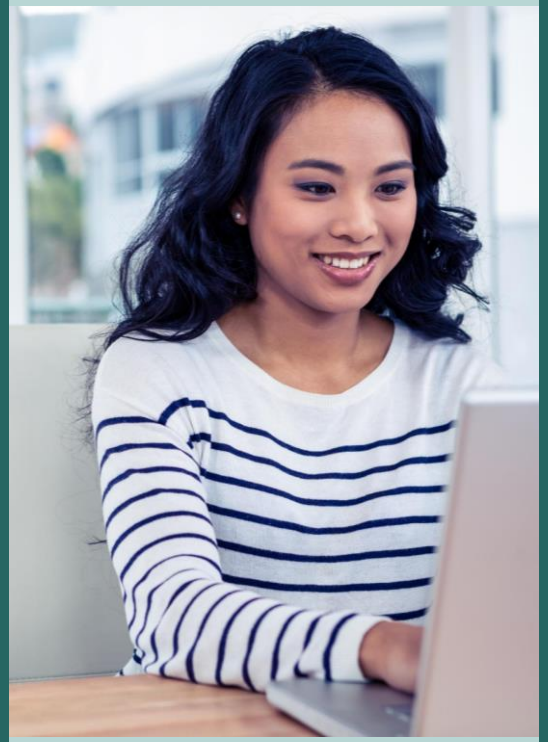
**Oculus Quest 2** https://www.oculus.com/quest-2/
**Occulus Rift** https://www.oculus.com/rift/
**HTC Vive** https://www.vive.com/us/
**Hololens 2** https://www.microsoft.com/en-us/hololens

## AR Equipment for Online Learning

Any smart mobile device or tablet
Vuzix Blade
Google Glass
Epson Moverio BT-300
DreamGlass

Join us 3pm

# Please Attend Our Spin Off Workshops at 3pm



**Classroom Technologies: What to Expect in Horizon Hall (40 mins)**
Crystal Clemons, LeAnn Pittman

**Group Work and Collaboration Tools (40 mins)**
Julia Tungli

**Effective Video for Online Courses (40 mins)**
Katrina Johnson, Jim McLean

Katrina Johnson, Instructional Designer, Stearns Center for Teaching and Learning, Digital Learning, kjoseph@gmu.edu

Crystal Clemons, Director, Classroom & Lab Technologies, ITS, cclemons@gmu.edu

Alexandra Masterson, Assistant Professor, Biology, College of Science, amaster2@gmu.edu

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Join a Teaching Square or Social "Lunch" 12:15-12:45pm daily.

**Additional Session Resources:**
journals.gmu.edu/ITLCP/

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