



Higher Education

PREPARING HANDS-ON COURSE ACTIVITIES FOR ONLINE LEARNING

The move to remote teaching has impacted many areas of higher education but one area that was significantly impacted was in-person classroom activities. These in-person activities include everything from science experiments, to dance performances, to welding; so there is no one solution to meet their needs. Many higher education institutions have invested in creating quality lab experiences for students on their campus but how can you adapt this same high-quality experience to a remote online learning environment? The fully online higher education institutions had already found solutions for creating high quality, engaging online learning activities. This session will showcase higher education leaders from a variety of institutions to learn about how they are creating engaging content-aligned online learning activities and what their plans are for the future.

Key Takeaways

- **EMPOWER FACULTY**
Upskill your faculty to identify solutions to meet the learning outcomes. Trust your faculty to meet the learner's needs in creative ways
- **CREATIVE SOLUTIONS**
 - Simulations/Visualizations: using a digital representation of the physical activity
 - Physical Kits: shipping the physical supplies to students this could be probes, electrical boards, or even body parts.
 - Hybrid: Using a physical kit combined with technology, for example, using a learner's cell phone to document the experience
 - Robotic: Remotely controlling lab equipment such as a telescope
- **POLICY CHANGES**
 - Transferability: Addressing the mindset that virtual experiences are less than traditional lab experiences. Challenge them to test the outcomes of both experiences
 - Course Fees: Balancing increased expenses with access and equity
 - Experiential Learning: Expanding opportunities for students to learn in the field through apprenticeships and internships
- **LEARNING OUTCOMES**
Evaluate what is important and move forward from there. This shift to digital can result in richer learning experiences through student reflection and self-evaluation because they can make mistakes and try again.

Resources

- **UNIVERSITY SYSTEM OF MARYLAND ONTRACK**
<https://www.usmd.edu/cai/online-teaching-resources>
Kirwan Center and University of Maryland Global Campus (UMGC) are partnering to help build institutional capacity for online learning
- **UNIVERSITY OF CENTRAL FLORIDA VIRTUAL AND REMOTE LABS**
<https://digitallearning.ucf.edu/ilab/remote-labs/>
UCF's Center for Distributed Learning has curated virtual and remote lab resources.
- **AMERICAN PUBLIC UNIVERSITY SYSTEM STEM ONLINE LAB WEBINARS**
https://www.youtube.com/channel/UCG1Qwgij_gYgcAJMS9_-X9w
Series of recorded webinars to support STEM disciplines in moving to online labs options
- **KENTUCKY COMMUNITY & TECHNICAL COLLEGE SYSTEM (KCTCS) REMOTE LAB GUIDANCE**
<https://kctcs.edu/education-training/kctcs-online/remote-teaching/index.aspx>
Resources for Lab activities are divided into Need to Know, Need to Show, and Need to Do