

The background of the slide features a blurred image of the University of Florida's main archway with the words "University of Florida" inscribed on it. In the foreground, the backs of several graduates wearing black caps and gowns are visible, looking towards the archway. A large, semi-transparent blue triangle is overlaid on the left side of the image.

# Report out from the System-wide Task Force **STEM Labs for Online Students**

January 25, 2018

Presentation to the Innovation and Online Committee

Presenter, Labs Taskforce Chair: Assistant Provost and Director of UF Online, Evangeline Tsibris Cummings

# Overview

- Task Force launched in November 2016
- Charge: *To examine the current state of labs for online students, analyze the current state and offer recommendations (near term and longer term) to ensure the availability of high quality STEM labs for online students enrolled in Florida's SUS programs.*
- Membership and Process
- Observations
- Recommendations
  - Conceptual
  - Tactical

# STEM Labs Task Force Membership

<b>Evangeline Cummings (chair)</b>	Assistant Provost & Director, UF Online	University of Florida
<b>Maurice Edington</b>	Dean, College of Science and Technology	Florida A&M University
<b>Bryan Knuckley</b>	Assistant Professor, Chemistry	University of North Florida
<b>Baiyun Chen</b>	Senior Instructional Designer, Center for Distributed Learning	University of Central Florida
<b>Joseph Clark</b>	Assoc. Director, Office of Distance Learning	Florida State University
<b>Chris Pomory</b>	Professor, Biology Department	University of West Florida
<b>Korey Sorge</b>	Assoc. Scientist, Physics	Florida Atlantic University
<b>Johnny El-Rady</b>	Instructor III, Cell Biology, Microbiology and Molecular Biology	University of South Florida
<b>John Reilly</b>	Chair, Chemistry and Physics	Florida Gulf Coast University
<b>Maureen Walter</b>	Senior Instructor in Biology	Florida International University
<b>Joleen Cannon</b>	Director, Center for Online Innovation and Production	University of Florida
<b>Emma Brady</b>	Lead STEM Instructional Designer, COIP	University of Florida
<b>Glenn Kepic</b>	Associate Director for Academic Advising and Curriculum, UF Online	University of Florida



# Taskforce Observations

1. Statewide STEM labs for online students 2017 Inventory findings:
  - 91 labs for online students exist across the SUS – that’s a success story.
  - The nature of those labs is complex and tied to faculty expertise.
  - Core needed in biology, chemistry, physics.
  - There is a rich spectrum of options and formats: “online” is complex
  - Many faculty using technology in their residential labs.
2. Demand for labs by online populations is not urgent given that most SUS campuses do not offer fully online STEM degrees.
  - UF is the exception in the state with online degrees in fields such as biology, microbiology and cell science; environmental management; communication sciences and disorders. Plus plans to bring online Dietetics, Computer and Electrical Engineering, Applied Kinesiology & Physiology

# Observations, cont'd

3. Chicken and Egg? Demand not urgent but growth in STEM labs will fuel growth in online STEM enrollments
  - Our challenge: these STEM labs must be rigorous, high quality, interactive and collaborative learning environments. Faculty intensive to build.
  - Each a complex design and delivery concept; often comprised of many formats.
4. Perception challenges remain among Medical and other Graduate professional school admissions
  - Must be studied further: What are the concerns and how do they relate to the current state of high quality programs?

# Observations, cont'd

5. Future of labs for online students is bright but not easy and faculty-intensive (no off-the-shelf vendor options meet quality standards)
6. Given what is already in place, there is a great opportunity for Florida to serve our students better and to reach students beyond Florida.
7. Significant resources (including faculty time and effort) will be required for the deployment of a high-quality, statewide network of lab options for online students

# Recommendations on how we approach this:

1. Maintain sophistication in how we approach STEM labs for online students: Focus on quality not quantity, start with objectives and not a mandated format; ensure these remain faculty-driven, academic, high value, adaptable.
2. Use a spectrum framework: how think about labs for online students
3. Establish faculty communities of practice across the system
4. Engage graduate/professional programs to design for them in mind
5. Remain focused on efficiency, keeping costs low, interoperability and truly leveraging the technology

**Simulated**

**In-Home**

**Hybrid**

**Boot camp**

**Proximate**

*Primarily Use Simulations, Remote Interactions*

*Primarily Use On-campus Resources and Spaces*

Simulated and Interactive  
Learning Environments

Hybrid Labs  
*Digital learning environments and F2F*

Campus, Physical Lab  
Learning Environments



# Recommendations to Move us Ahead:

1. Continue the System wide Taskforce
  - Workshops twice a year, face to face at rotating SUS locations
  - Distribute System wide survey ; manage pilots and design system framework for sharing and adapting pilots after successful launch
2. Bring Faculty Together across the System on Online Learning (including STEM and labs for online students)
  - Convene a 2018, 2-day conference for faculty across SUS teaching online
3. Launch a System wide Pilot in Chemistry, summer 2019
  - Led by UF Online, with each SUS institution invited to participate
  - Product: a lab 2045, 2046 series for each campus to adapt locally



University of Florida

# Thank You

On behalf of the entire STEM Labs Taskforce for  
Online Students

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