Supporting Persistent Online Students in the Fundamentals of Engineering Program

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Introduction

Returning to campus after the Covid pandemic, some students have been reluctant to return to in-person learning. In response, the Fundamentals of Engineering Program offered a limited number of online course sections during the 2021-2022 academic year.

Courses Supported

Fall 2021

- 2 online sections ENGR 101
- 1 online section ENGR 102
- 1 online section ENGR 191 Spring 2022
- 2 online sections ENGR 101
- 2 online sections ENGR 102
- · Weekly Matlab Study Group Sessions

Equipment Received

- USB Webcam Kit Setup for Study Group Sessions
- Document Camera Kit Setup for Tutor use in the Virtual Engineering **Learning Center**



Figure 1: ELC Tutor using Document Camera to answer questions



Figure 2: Screenshot of Video for recording data



Figure 3: Screenshot of student getting help from a tutor using the Document Camera.

- **USB Microphone Kit** Voice over of GoPro Videos using DaVinci Resolve software and Zoom recordings
- Action Camera Kit Used to make demonstration videos of things completed by oncampus classes in lab setting



Figure 4: Screenshot from the Microsoft Excel Pivot Chart help video.



Figure 5: Screenshot from configuring the West Point Bridge Designer Software help video.



Figure 6: Screenshot from the West Point Bridge Designer Software simulation help video.

Results

- Over 800 YouTube Channel views
- Over 400 Matlab Study Group Sessions held
- Over 1000 Tutor Visits to Virtual Learning Center

