



**2021 Virtual HBCU-UP/CREST  
PI-PD Meeting**



# **Vitality and sustainability of the Physics and Engineering Majors at Virginia Union University**

**Francis E. Mensah, PhD, PI  
Virginia Union University**

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All findings and opinions are those of the authors, not necessarily of the funding agency or AAAS.

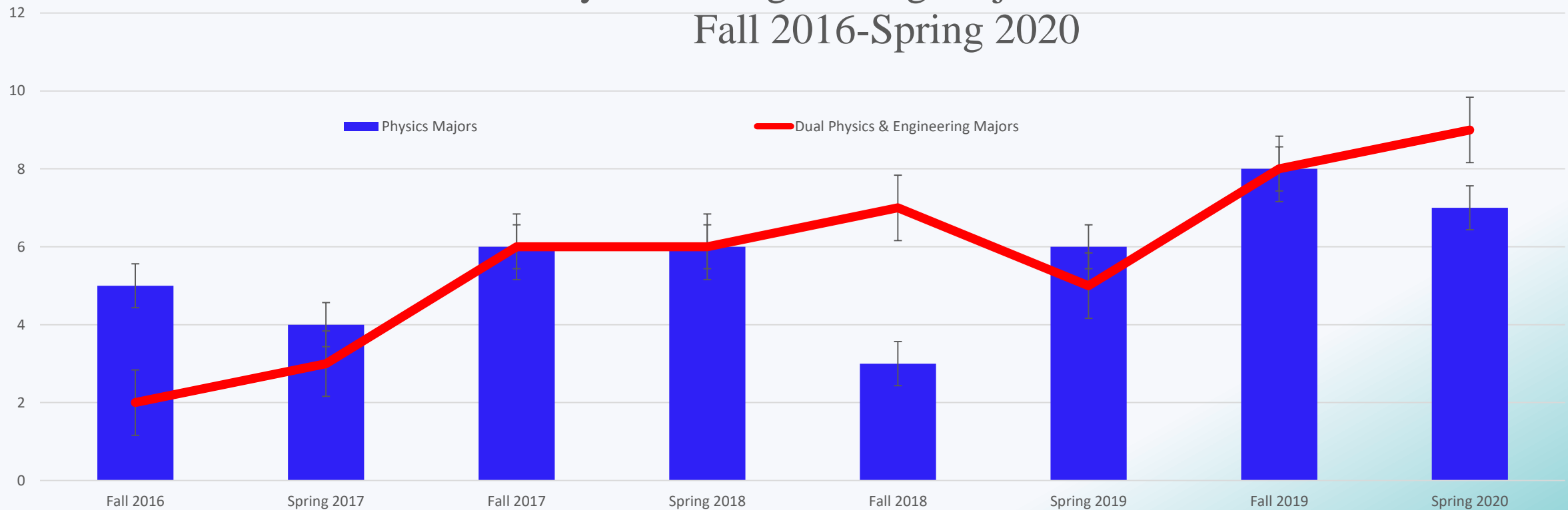
# Project Overview

- The proposed HBCU-UP project aims to implement a comprehensive set of student-centered strategies to
- strengthen VUU Physics and Engineering program and ensure its vitality.
- The proposed project will support faculty development activities
- Ensure that faculty infuses research-based instructional strategies in the physics/engineering curriculum.
- Establish a sophomore summer bridge program to ensure all physics and engineering students have the research and academic experiences necessary to thrive in the discipline.
- Foster student interest in physics and engineering, boost student identity as scientists/engineers, and ensure all students in the major are well-aware of graduate school and career options.
- Finally, plan will aid to disseminate project findings to the benefit of the STEM education community.

# Best Practices/Successes

- **Physics & Physics Engineering Enrollment Data**

Physics & Engineering Majors Evolution  
Fall 2016-Spring 2020



# Implications

- By-weekly Physics Club meetings (internship opportunities information and students and faculty research presentations)
- Registration to Scientific Organizations such as NSBE, NSBP, APS, AAAS (supported by NSF HBCU-UP grant)
- Internships with Howard University, Jefferson Lab and Dominion University.
- PBL first edition was organized at VUU by PBL Consulting. Attendance included 14 VUU STEM Faculty and 11 other Faculty and students and Staff.
- Visit to NOAA Center for Weather and Climate Prediction in Maryland (supported by NSF HBCU-UP grant)
- Sophomore Summer Bridge Program was organized in Summer 2020.
- PI and Co-Pi and students have participated in ERN/AAAS meeting in Feb. 2020 where our students has presented a poster.
- Technology fees of 500.00 /student was provided to 16 students to help students buy electronics tools needed for remote learning courses in the times of covid-19.
- Peer tutoring: 3 Peer students tutors and 148.5 hrs in 2019-2020.
- 4 students tutors providing each 3hrs a week of tutoring Physics and Math in 2020-2021.
- TA and Lab activities in 2019-2020
- Physics Seminar on Monday and physics students presentation at the VUU Journal Club

# Identified Gap(s) for Future Collaboration or Enhancement

- Visit to Howard University on hold due to covid-19
- Visit to Jefferson Lab, VA on hold due to covid-19
- Visit to VUU Weather Station on hold due to covid-19
- Visit to VCU graduate School on hold due to covid-19
- PBL Workshop 2<sup>nd</sup> Edition for the implementation of the PBL in our Curriculum
- External Advisory Committee meeting scheduled to be held in Spring 2021.