

CAN Program Review (Instructional) - Astronomy & Physics (Even Year)

Objective: Building telescope observation platform

Design, construct, and test the new platform, mounts, and housing for our telescopes. This has been an ongoing project for a few years, but the first time included under "objectives" now that there is more certainty about the project being completed. Success will be measured by increased participation and engagement in observations.

Objective Status: 1 - New (PR)

Objective Year: 2019-2020

Please select the college goals with which this objective aligns.: Organizational Development - Focus institutional resources on the structures processes and practices that invest in a diverse student population and prioritize and promote equitable inclusive and transformative learning.

Please select the district goals with which this objective aligns.: District Goal #4 - Ensure Necessary Resources Are Available To Implement This Strategic Plan Through Sound Fiscal Planning And Management Of Allocations. Protect Community-supported Status And Undertake The Development Of Innovative Sources Of Revenue That Support Educational Programs Beyond That Which Is Available From Community And State Allocations.

Objective: Update old equipment: 8" telescopes

Old telescopes that are awkward to setup and operate need to be decommissioned/donated, and replaced by more modern, easy to use equipment.

Objective Status: 2 - Continuing (PR)

Objective Year: 2019-2020

Please select the college goals with which this objective aligns.: Student Completion/Success - Provide educational and student services programs that highlight inclusivity diversity and equity in their mission to help students meet their unique educational goals and minimize logistical and financial barriers to success.

Please select the district goals with which this objective aligns.: District Goal #4 - Ensure Necessary Resources Are Available To Implement This Strategic Plan Through Sound Fiscal Planning And Management Of Allocations. Protect Community-supported Status And Undertake The Development Of Innovative Sources Of Revenue That Support Educational Programs Beyond That Which Is Available From Community And State Allocations.

Action Plans

2018-2019 - Acquire and test new Meade LX 200 telescopes. Free up storage from old, outdated 8" Orion telescopes (perhaps donate them to other schools).

There were three Meade 8" LX200 telescopes approved, the first one of which was acquired and tested in the fall of 2018. The remaining two will be acquired and tested by the end of Spring, 2019. (Active)

Who's Responsible for Completing this Action Plan?: Attila Elteto

Estimated Completion Date: End of Spring, 2019.

Resource Requests

Two Meade LX200 ACF telescopes.

<https://www.meade.com/lx200-acf-8-f-10-with-standard-field-tripod.html> - In 2018 this request was approved for three replacement telescopes for our out-of-date Orion telescopes. Only one was delivered due to delays caused by the increased

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burden of designing the new Astronomy SLAB sheds to accommodate their new storage and use. We are re-filing the request now that the sheds and piers are ready for their use.

Status: Continued Request - Active

Type of Resource: Equipment (Items Over \$5000)

Cost: 5500

One-Time or Recurring Cost?: One-Time Cost

Division/Department Priority: Low Priority

Objective: Increase women/minority participation in Astronomy classes

Astronomy class participation is dominated by white males. In Physics we are already working with the IWITTS program to measure, evaluate, and work on strategies to increase participation by women. Astronomy classes could benefit from similar practices. The measure of success will also be based on the surveys and observations used in that program.

The IWITTS program has a long term plan to first assess class climate (level of comfort, participation rate, etc.) as well as the role of the instructor (what strategies increase or decrease these) for students in the classroom. Some of these strategies (awareness, group work, relatability of content etc.) are already being tested in both physics and astronomy. However we are waiting on results from a more comprehensive student survey on their experiences before taking further steps.

Objective Status: 1 - New (PR)

Objective Year: 2019-2020

Please select the college goals with which this objective aligns.: Student Completion/Success - Provide educational and student services programs that highlight inclusivity diversity and equity in their mission to help students meet their unique educational goals and minimize logistical and financial barriers to success., Community Connections - Build and strengthen collaborative relationships and partnerships that support the needs of reflect and enrich our diverse and vibrant local community., Organizational Development - Focus institutional resources on the structures processes and practices that invest in a diverse student population and prioritize and promote equitable inclusive and transformative learning.

Please select the district goals with which this objective aligns.: District Goal #1 - Develop and Strengthen Educational Offerings Interventions and Support Programs that Increase Student Access & Success

Objective: Academic Support Courses and Other Resources

Explore the need for and effectiveness of an auxiliary physics course or courses to help improve student success in PHYS 210 and PHYS 250. These 1 unit courses could be taken concurrently with PHYS 210 and PHYS 250.

Objective Status: 1 - New (PR)

Objective Year: 2020-2021

Estimated Start Date: 01/14/2019

Please select the college goals with which this objective aligns.: Student Completion/Success - Provide educational and student services programs that highlight inclusivity diversity and equity in their mission to help students meet their unique educational goals and minimize logistical and financial barriers to success.

Please select the district goals with which this objective aligns.: District Goal #1 - Develop and Strengthen Educational Offerings Interventions and Support Programs that Increase Student Access & Success

Objective: Increase retention of women in physics

Physics faculty have been working with IWITTS to assess class climate, and test strategies for increased retention of women in physics. The IWITTS program has a long term plan to first assess class climate (level of comfort, participation rate, etc.) as well as the role of the instructor (what strategies increase or decrease these) for students in the classroom. Some of these strategies (awareness, group work, relatability of content, etc.) are already being tested in both physics and astronomy. However we are

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waiting on results from a more comprehensive student survey on their experiences before taking further steps.

Objective Status: 1 - New (PR)

Objective Year: 2019-2020

Please select the college goals with which this objective aligns.: Student Completion/Success - Provide educational and student services programs that highlight inclusivity diversity and equity in their mission to help students meet their unique educational goals and minimize logistical and financial barriers to success.

Please select the district goals with which this objective aligns.: District Goal #1 - Develop and Strengthen Educational Offerings Interventions and Support Programs that Increase Student Access & Success, District Goal #3 - Increase Program Delivery Options Including the Expanded Use of Instructional Technology to Support Student Learning and Success

Objective: Replace out-dated PASCO equipment for Physics/Astronomy

The PASCO equipment used by Physics/Astronomy is no longer supported by the company and its core, the GLX units are breaking down. We need to update to hardware supported by PASCO. These equipment are used extensively in all our physics classes and some in astronomy.

Objective Status: 1 - New (PR)

Objective Year: 2020-2021

Estimated Start Date: 01/01/2020

Estimated Completion Date: 06/30/2020

Please select the college goals with which this objective aligns.: Organizational Development - Focus institutional resources on the structures, processes, and practices that invest in a diverse student population and prioritize and promote equitable, inclusive, and transformative learning.

Please select the district goals with which this objective aligns.: District Goal #3 - Increase Program Delivery Options, Including the Expanded Use of Instructional Technology, to Support Student Learning and Success, District Goal #4 - Ensure Necessary Resources Are Available To Implement This Strategic Plan Through Sound Fiscal Planning And Management Of Allocations. Protect Community-supported Status And Undertake The Development Of Innovative Sources Of Revenue That Support Educational Programs Beyond That Which Is Available From Community And State Allocations.

Action Plans

2020-2021 - Outsource outdated PASCO equipment that the company no longer supports and replace it with their new core and sensors. (Active)

Who's Responsible for Completing this Action Plan?: Attila Elteto, Martin Partlan

Estimated Completion Date: Summer, 2020

Resource Requests

16 units each

Datalogger

https://www.pasco.com/prodCatalog/PS/PS-3601_spark-lx-datalogger/index.cfm

Sensors: Photo gate, Magnetic field sensor, Motion sensor, Thermometer, Force Acceleration, Voltage, Current, Light - The GLX unit by PASCO at the core of many of our Physics labs (and including some in Astronomy) is being discontinued by the company. We need to update the hardware that supports the new sensors they now produce. It also means we need to acquire the new sensors that are compatible with their new system.

Status: New Request - Active

Type of Resource: Equipment (Items Over \$5000)

Cost: 17000

One-Time or Recurring Cost?: One-Time Cost

Division/Department Priority: High Priority