UNIVERSITY OF LOUISIANA AT LAFAYETTE

STEP Committee

Technology Fee Application

Projectors for Enhanced Instruction in MDD 302 and 309 in the Department of Mathematics

Title

Dr. Bruce Wade & Dr. Ross Chiquet

Name of Submitter

(Faculty or Staff Only)

Department of Mathematics

Organization

Title: Projectors for Enhanced Instruction in MDD 302 and 309 in the Department of Mathematics Date: 1-10-2019

Name (Contact Person): Dr. Bruce Wade
Address: Maxium Doucet Hall room 217
Phone Number: 337-482-5173 Email: bruce.wade@louisiana.edu
Department/College/Org: Department of Mathematics/College of Science

ABSTRACT:

We propose to purchase two multimedia projectors and white boards to be used by the faculty in classrooms that are currently non-mediated. The projectors would be used to enhance the instruction in the Department of Mathematics. These affordable projectors have wireless access and work with any PC, Mac, tablet or smartphone. They allow the use of ordinary whiteboards as interactive devices, in which the instructor writes with an ordinary whiteboard marker to be captured electronically and available for reuse. The projectors would be a crucial tool for our instructors, allowing them to enhance instruction in any mathematics or statistics course by supplementing their lectures with graphical and digital resources. The projectors would help the departmental online and hybrid online course instructors interact with remote students.

Description of the Proposal:

A. Purpose of grant and impact to student body as a whole

This proposal is for the purchase of two multimedia projectors and white boards to be used by the faculty in classrooms that are non-mediated. The projectors would be used to enhance the instruction in the Department of Mathematics. These affordable projectors have wireless access, and work with any PC, Mac, tablet or smartphone. They allow the use of ordinary whiteboards as interactive devices, in which the instructor writes with an ordinary whiteboard marker to be captured electronically and available for reuse. The projectors would be a crucial tool for our instructors, allowing them to enhance instruction in all of our math and statistics courses by supplementing their lectures with graphical and digital resources. The projectors would help the departmental online and hybrid online course instructors interact with remote students.

These projectors will be used in all of our classes with textbooks that have electronic texts, supplements, or resources specifically designed for use in the classroom. Most of our courses, including Math 103/104 (Applied College Algebra), Math 105 (Applied College Algebra), Math 109 (Precalculus Algebra), Math 110 (Precalculus Trig), Math 210 (Practical Mathematics), Math 250 (Survey of Calculus), Math 270 (Calc I), Math 301 (Calc II), Math 302 (Calc III), Math 350 (Differential Equations), Math 362 (Elementary Linear Algebra), and Stat 214 (Elementary Statistics), use technology such as the TI series calculators and have an online homework component with an electronic textbook with electronic resources available to the instructors to use in the classroom. We need to equip our instructors with the proper tools to be able to use every resource available to help our students learn mathematics.

The students who take the classes listed above represent a large percentage of the student body. Even though the Department of Mathematics has incorporated graphing calculators and online homework in the majority of our 100 and 200 level courses, we have seen a significant increase in the number of digital classroom resources available to our instructors. There is specific manufacturer software for the TI graphing calculator and multiple online emulators to aid in the instruction of the graphing calculator. Being able to see the calculator in the front of the classroom is a tremendous benefit to the students. It is for this reason that the majority of our statistics faculty request classrooms with projectors. The majority of our introductory statistics courses use the graphing calculator exclusively, and the calculator syntax can be difficult for most students. Even faculty who use both the graphing calculator and the traditional statistical tables will request classrooms with projectors because it is helpful to project the statistical tables during discussions.

In addition to online homework, many textbook publishers provide digital resources for instructors to use in the classroom. These resources are not just lecture notes or examples. They include representations of large data sets, tables, animated graphics, interactive graphics, and three dimensional visualizations. While many of these resources are available to students online, it is beneficial to the class if the instructor can use these to enhance discussions. Otherwise, students must be directed to the online resource and carry out the investigations independently. Lastly, we have many faculty members who create their own digital resources for their classes. The ability to listen to the teacher present and discuss these resources in class is a positive benefit for all students.

Additionally, with the projectors our online faculty have a better opportunity to innovate in content delivery, such as: To create videos for online consumption, have quality interactive virtual office hours, meet with remote students through skype or Adobe Connect, encourage virtual study groups or homework sessions, or create special online lectures. The device description indicates that … "PC-free whiteboard sharing enables remote collaboration with offsite participants." The instructors who teach dual enrollment online classes could use the projectors to host virtual sessions with the high school students while they are at school.

The Department of Mathematics has been very supportive of Distance Learning by offering courses needed for any online program. We will continue this support and will continue to prepare for the addition of new programs that may call for more courses of online mathematics or hybrid online courses. These projectors will help us to continue supporting Distance Learning.

B. Projected lifetime of enhancement:

The projectors are expected to last between ten and twenty years before needing upgrades or replacement.

C. Persons responsible for:

i. **Implementation:** Dr. Ralph Baker Kearfott, Dr. Jared Guilbeau, and Dr. Bruce Wade
ii. **Installation:** Go Media
iii. **Maintenance:** Ralph Baker Kearfott and Jared Guilbeau
iv. **Operation:** Faculty of the Department of Mathematics
v. **Training:** No training is required

Budget Proposal

1.	**Equipment:**	2 Epson BrightLink 697Ui Wireless Full HD 3LCD Ultra Short-throw Interactive Display	**$7064.00**
2.	**Software:**	No additional software besides the preinstalled or free software required.	**$0.00**
3.	**Supplies:**	2 Quartet Whiteboards $ 272.36 each	**$544.72**
4.	**Maintenance:**	None anticipated	**$0.00**
5.	**Personnel:**	None	**$0.00**
6.	**Other**	Installation Labor approx. 12 hours at $85/hr	**$1020.00**
TOTAL:			**$8628.72**

Quote Number	Math Epson Rooms
Company:	Univ of Louisiana
Contact:	Glenda Broussard
Address	
City, St Zip	
Date	01/09/19

Scope of Work:

Qty.	Catalog #	Manufacturer	Description	Price Each	Extension
1	1059773		Go Media Assembly Kit 7	$ 7,064.00	$ 7,064.00
12.00	1060093		Installation Labor	$ 85.00	$ 1,020.00
1			Assembly Kit Discount Includes	$ (79.38)	$ (79.38)
			697Ui Short throw Interactive projector with mount (Qty 2)		
			Air Media Wireless Presentation (Qty 2)		
			3' HDMI Cable (Qty 2)		

Go Media State Contract #4400014138

Project Total	**$8,004.62**

Shopping Cart

	DESCRIPTION	PRICE	QTY	ITEM TOTAL
	QRTNA4836F Quartet® Fusion Nano-Clean™ Magnetic Whiteboard - 48" (4 ft) Width x 36" (3 ft) Height - White Surface - Silver Aluminum Frame - Horizontal/ Accessories Be the first to write a review	**$272.36** EA	2	$544.72

Subtotal:	$544.72
Tax:	$0.00
Total:	$544.72

NOTES