

UNIVERSITY OF LOUISIANA AT LAFAYETTE

STEP Committee
Technology Fee Application

**MDD 212 Computer Lab
Hardware Upgrade**

Title

**Dr. Jared Guilbeau and
Dr. James Kimball**

Submitter

Department of Mathematics

Organization

Title: MDD 212 Computer Lab Hardware Upgrade Date: 01-12-2024
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Department/College/Org: Department of Mathematics/College of Sciences

ABSTRACT:

The Department of Mathematics is requesting support to upgrade 26 PCs in the computer lab in MDD 212 by replacing their hard disk drives with solid state drives. These PCs were purchased in January 2018, before the widespread adoption of solid-state drives. Hard disk drives have slower read and write times than modern solid-state drives, significantly increasing the time to boot up a machine, log into a machine, or load the specialized software packages used in the lab. The change to solid-state drives on these machines will raise their performance, making them comparable to the machines purchased during the expansion phase of upgrading the classroom. This classroom is currently limited in its usage by the speed and reliability of these 26 machines. Upgrading these machines will allow fuller, smoother, and more reliable utilization of the classroom.

Further, these 26 machines must be provisioned to Windows 10 in their current configuration. Windows 10 is anticipated to reach end-of-life support in October 2025. The transition to solid-state drives will allow installation of Windows 11, providing for software support beyond that date.

These solid-state drives are stocked by PC Depot and are regularly installed by the University's IT services. There will be no additional cost to perform these upgrades beyond the hardware itself.

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

The Department of Mathematics offers multiple computer assisted undergraduate and graduate courses. Courses such as STAT 417, *Biometry*, and STAT 454, *Operations Research*, are taught in MDD 212 and are designed for students outside of the mathematics major. The reliability of these machines limits the teaching modes available in this classroom since students are not able to reliably use all of the computers present. Courses taught in MDD 212 that service multiple majors are Computational Mathematics, Numerical Analysis, Regression Analysis, Biomathematics I and II, Experimental Design, and Statistical Computing. With improved facilities, there are even more mathematics or statistics courses that would take advantage of the teaching/computer lab.

B. Projected lifetime of enhancement:

Solid-state drives are generally recognized as having a lifespan of five to ten years, lasting through the expected end-of-life of these PCs.

C. Persons responsible:

- i. **Implementation:** Dr. Jared Guilbeau
- ii. **Installation:** IT Service Desk
- iii. **Maintenance:** Dr. Jared Guilbeau
- iv. **Operation:** Faculty/Graduate Teaching Assistants in the Department of Mathematics
- v. **Training:** No training is required

Budget Proposal

1.	Equipment: 26 250GB Internal SSD (\$50/unit)	\$1,300
2.	Software: Utilize current computer lab software to new PCs	\$0
3.	Supplies: No additional supplies are needed	\$0
4.	Maintenance: None anticipated	\$0
5.	Personnel: None	\$0
6.	Other, Installation Labor: None	\$0

TOTAL:	\$1,300
MATH DEPARTMENT COST SHARE (COMPUTERS):	(\$0)
TOTAL STEP REQUEST:	\$1,300