

**UNIVERSITY OF LOUISIANA
AT LAFAYETTE**

**STEP Committee
Technology Fee Application**

**Update for Music Technology / Education
Laboratory in the School of Music**

Title

Chris Munson

Name of Submitter

(Faculty or Staff Only)

School of Music / College of the Arts

Organization

Title: Update for Music Technology / Education
Laboratory in the School of Music

Date: January 12,
2018

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Department/College/Org: Music / College of the Arts

ABSTRACT (250 words or less):

The Music Technology / Education Laboratory is a busy classroom that is continually in use, with over one dozen classes in Music, Theater, and Visual Arts using the space. Students in the College of the Arts take courses in this classroom that prepare them for careers in film scoring, electronic music composition, video game scoring, music production, lighting and sound design for theater, marching band direction, music notation, and audio engineering. It is necessary for these students to have a reliable experience with up-to-date computers, software, and peripherals that will prepare them for their careers after graduation. The classroom currently uses a combination of computers purchased in 2002 and 2012 – four of which have failed (including the instructor’s station) and several others expected to fail soon. The software for this lab has not been updated in over six years and is quickly falling behind industry standards. The MIDI controller keyboards used to input notation into various music synthesis programs have not been updated in over ten years. It is for these reasons that we request funding to complete a comprehensive upgrade of the Music Technology / Education Laboratory.

The Music Technology / Education Lab was originally established through a Board of Regents grant in 2005. At that time, 16 student stations, an instructor's station, projector, and sound system were installed in Angelle Hall 125. The lab allows faculty to mix lecture, demonstration, listening, and hands-on experience during class sessions for students taking courses in Music, Theater Production, and Moving Image Arts. The lab originally had iMacs at all 16 student stations; but, by 2011, 7 of those had failed. They were replaced with Mac Minis. By the end of the spring 2017 semester, 4 of those replacements had failed. The lab is currently operating with a combination of computers from 2005, 2011, and repurposed faculty computers. This current situation poses several problems:

- The instructor's station is unreliable, crashes frequently, and requires the user to boot up the computer 20-30 minutes prior to class to make sure it operates properly.
- None of the students' stations are capable of running current music technology, notation, or lighting design software; therefore, students are missing out on valuable experience that will prepare them for their careers.
- The majority of the student computers crash frequently and can no longer handle the demands required to process audio, video, and theater lighting software.

Many of the courses taught in this lab require students to work on individual projects at their assigned computer stations. These projects are intended for students to gain experience recreating the topics, concepts, and scenarios demonstrated by the instructor. When a computer fails it causes a disruption in the class and the student misses out on valuable lab time. If the computer completely fails, it either hinders a student's progress for the remainder of the semester or causes further limitations on the number of seats that are available for registration the following semester. iMacs with the following specifications would be ideal for the classroom:

Retina 4K Display
3.0GHz Processor
1TB Storage

- 3.0GHz quad-core 7th-generation Intel Core i5 processor
- Turbo Boost up to 3.5GHz
- 8GB 2400MHz memory, configurable to 16GB
- 1TB hard drive
- Radeon Pro 555 with 2GB video memory
- Two Thunderbolt 3 ports
- Retina 4K 4096-by-2304 P3 display

Computers and discipline-specific software are essential tools in music production, education, composition, film scoring, theater lighting, and video game production. Macintosh computers are the industry standard when it comes to audio and visual arts. The iMacs chosen are the most cost effective version available that will be capable of handling the storage and processing demands of all the courses being taught in the lab. The M-Audio keyboards were selected for multiple reasons. They are small and low profile, so they will fit easily at each station without causing any obstructions to students sitting on either side of a station. They are known for their reliability and are extremely affordable when compared to similar keyboards. The keyboards also come with multiple programming buttons that will allow students to control software from the keyboard. This type of control is commonly used in studio and live music production. The program *Reason* is currently in used in the lab, and is similarly several versions

behind the most current version. The program provides the user with the ability to record both MIDI and analog/digital audio. It comes outfitted with dozens of virtual instruments, sample libraries, and mixing effects. It essentially provides a fully functional virtual studio, so no additional hardware is needed to operate the program. Digital Performer is an integrated MIDI / Audio recording program that is an industry standard in audio production and film scoring. Students learn to record, edit, mix, and master audio, as well as develop foley and music for video with this program. There is a high demand for individuals with the ability to create on these platforms and if we are unable to prepare students for these opportunities, we will begin struggling to recruit and retain students seeking these skills.

Though the lab is used by students in multiple degree programs, the students who get the most usage of the facility are in the Music Media and Music Business Programs - our two most popular Bachelor of Music degree tracks with steady growth in enrollment. These are emerging fields of study in schools of music across the country and it is believed that interest in these degree tracks will continue to rise in coming years.

The Music Technology / Education Lab is used for the following courses:

THEA352- Scenic Design for the Stage

MUS238- Music Industry (occasional use)

MUS276- Intro to Music Technology, also a course taken by Moving Image Arts majors

MUS277- Music Synthesis

MUS376- Recording Techniques I, over 25 students per section, used for lab assignments

MUS377- Recording Techniques II, over 25 students per section, used for lab assignments

MUS422-Live Sound and Postproduction, over 25 students per section, used for lab assignments

MUS 431- Marching Band Techniques (animated marching band routines)

MUS 438- Film Scoring I (for lab use)

MUS 439- Film Scoring II (for lab use)

MUS 350- Tonal Counterpoint (occasional use for music notation)

MUS 515- Music Research and Bibliography

MUS 578- Analysis of Twentieth Century Music (occasional use)

It is projected that the enhancement will have a lifetime of 5 years.

Person(s) responsible for

Implementation- Chris Munson and IT staff

Installation- Chris Munson

Maintenance- Chris Munson and IT staff

Operation- Chris Munson

Training (with qualifications)- Chris Munson, Music Media Coordinator, Supervisor of Music Technology / Education Lab.

Budget Proposal

1.	Equipment		\$22,916.00
QTY	Equipment	Price	Total Price
17	Apple iMac Computers (with Apple Care)	\$1,249.00	\$21,233.00
17	M-Axion Air Mini 32 Keyboard	\$99.00	\$1,683.00
2.	Software		\$5,508.00
17	Propellerhead Reason 10 (Upgrade)	\$129.00	\$2,193.00
17	Digital Performer 9.5 (Upgrade)	\$195.00	\$3,315.00
TOTAL:			\$28,424.00