

#2
Student Technology Fee
Grant Proposal Request Form
Fiscal Year 2011-12
Northwestern State University of Louisiana

2012.022
PF 5-27602
CT.#1
66

ALL BLANKS MUST BE FILLED COMPLETELY

Prepared by: Reema McMullen For: receiving technology funding to purchase a smartboard and parts of the two symposiums that are already installed.

Department/Unit: Mathematics and Physical Science College: Science, Technology and Business
Campus: Natchitoches

Which NSTEP Goals/Objectives does this project meet? Objective # 2,3,6,7 and 8

Requested equipment will be located/installed/housed? Building: Fournet Hall Room: 124, 123, and 107

Does the department requesting funding receive lab fees? (circle one) YES/NO

Are department property policies and procedures in place for requested equipment? Yes
Which individual will be responsible for property control of the requested equipment? Reema McMullen

Signature: Reema McMullen Date: 10-31-11

Proposal Requested Amount: \$6960.73 Budget Attached (circle one): YES/NO

Proposal delivered to Student Technology located in Watson Library, Room 113. Date 10-31-11
6,165.73

The proposal must include all specifications, description, model number, quotation, cost, state contract number, and vendor for each item. If the proposal does not include all requested information, it will be returned to requestor.

1. Describe target audience.

The target audience includes the students taking general science, chemistry, biology, space science, and physics courses in room number 123, 124, and 107. There are some English, and psychology classes held in some of these rooms as well.

2. Describe project/initiative for which you are requesting funds.

I am requesting funds to buy a smartboard installed in room 124, and to buy the interactive smartpens for symposium systems already installed in room 123 and 107 of the Fournet Hall. I am also requesting funds to buy powerpoint clickers for all three rooms.

3. State measurable objectives that will be used to determine the impact/effectiveness of the project.

1. The use of the smartboard will allow teachers to post the hand-written lecture notes and the problems solved in class on moodle, since the software has the capability to record the lecture notes.

2. The smartboard will allow the teachers to have step-by-step display of the Vernier Software Program that the students use to conduct the experiments in the physics laboratory.

The smartboard will allow the teachers to display how to do calculations on MS Excel that the students use in the physics laboratories to do their calculations. Seeing the actual software in use will make it much easier for the students to learn how to use the software.

The smartboard software will allow us to install the Algodoo Program on the computer. Algodoo is used to learn physics interactively.

3. I also expect the availability of this interactive technology to result in higher student engagement and hence improvement in the students' academic achievement at NSU.

4. Indicate how each project objective will be evaluated.

The following criteria will be used to evaluate the fulfillment of the objectives:

1. The availability of lecture notes and the problems solved in the class on moodle.

2. Display of the steps of the Vernier Software Program on the smartboard in the physics laboratory.

3. Display of the MS Excel calculations and graphs on the smartboard in the physics laboratory.

4. A higher attendance rate because of higher students' engagement in the class.

5. A higher passing rate because of higher student engagement in the class.

6. If funded, which NSTEP <http://www.nsula.edu/nstep/NSTEP.pdf> objective(s) will this funding of this project advance? How will funding of the project advance the University and College/unit technology plan?

The funding will advance the objective number 2,3,6,7, and 8 of NSTEP. These objectives are listed below:

Objective 2: To provide classrooms with updated technology and multimedia.

Objective 3: To upgrade laboratories with modern technology.

Objective 6: To provide a system for maintenance, upgrade, user training, and support of technology that will extend into future.

Objective 7: To encourage technology initiatives by faculty, staff, and students.

Objective 8: To encourage innovation, and research.

This funding will improve the University's technology plan. The use of the smartboard will allow teachers to be able to post the hand-written lecture notes and the problems solved in the class on moodle. This will allow the students to go over the material covered in the class any number of times until they understand it perfectly. The availability of this new technology in the classrooms, and the laboratories will make students aware of it and be able to use it. This will help students prepare for the real world where new technology comes out every day. The use of this technology will result in higher student achievement.

7. Provide a justification for funding of this project. Estimate the number of student that will be served per academic year and in what ways. Please indicate also any unique needs of the

target group.

2012 students have attended classes in rooms 123, 124, and 107 in the last three semesters (spring 2011, summer 2011, and fall 2011). The equipment is expected to last for 5-10 years. The number of students served per year per dollar spent is 0.289. In 5 years, we will have approximately 1.5 students served a year for every dollar spent. So this is extremely cost-effective. I believe that the implementation of this modern technology will immensely improve the teaching by us and the learning by the students. Some of the points that I would like to make to support my statement are as follows:

- We actively write on the board to derive equations and solve problems in physics. The chemistry faculty also actively uses the board. Smartboard will allow us to write on it like a chalkboard does, however, it will allow us to use different colored pens to differentiate between different terms and objects in physics problems. We can also make most of the shapes with accuracy using the smartboard software very easily. These features will be very helpful for the visual learners. Also, writing on smartboard and making shapes and other symbols is much quicker on the smartboard than it is on the traditional chalkboard that we have currently in use. This will save much precious time.
- We can save our lecture notes and post them on moodle for students to review it later, in case they need to do so.
- It will allow us to go back and forth between written pages while solving involved problems that take more than one page.
- In case a student has not understood a previous problem that was solved in the class, we can easily pull it up on the board without having to solve it again.
- We can review the previous period's lecture briefly since it is saved on the computer. This will be very useful in a class like Science 1010. I give daily quizzes in Science 1010. A quick review of the previous period's lecture will improve the quiz score and consequently the passing rate.
- A lot of teachers use PowerPoint to present their lecture. Smartboard software helps instructors to annotate the PowerPoint, or any other document. It can also be used to annotate the web pages.
- We use Vernier software to conduct physics experiment in our labs. Smartboard will allow us to display the process of going through different steps of the software to conduct the experiment. The majority of the students are better visual learners, and it makes a lot more sense for them to actually see the different steps than to receive verbal instructions, or instructions written on the board.
- We also use MS excel in our physics laboratories to do the calculations, and the analysis of the data. Some of these calculations (like linear regression) are extremely involved. Many students are using MS excel for the first time in our labs. It will be very useful to be able to display how to do the calculations on the smartboard. This way the whole class will proceed at the same pace. Now we have to go from one group to another to show them the steps. This keeps many

students waiting for us while we are working with some other students in the lab. Being able to display these steps will save students a lot of time that they now waste waiting for the teacher to come to them and show them what to do.

- It will eliminate the problem of the chalk dust in the air that causes allergy to many students and faculty both. So, in addition to being an excellent learning tool, it will also be good for the health of the people involved.

In summary, having a smartboard in our classrooms will improve the learning and health of the students and the faculty at NSU.

7. List those individuals who will be responsible for the implementation of the project/initiative and indicate their demonstrated abilities to accomplish the objectives of the project.

I am attaching a quote from the Detel Company. The Detel Company will be responsible for the implementation and the installation of the smartboard and the computer. I worked for the Desoto Parish School Board before I started working at NSU. The Detel Company had installed all the smartboards along with their accessories in all the classrooms of the Desoto Parish and they did a great job of doing so.

8. Describe any personnel (technical or otherwise) required to support the project/initiative. Minimal technical support will be required from NSU for the installation. Department has funds for installation should we need any monetary help.

9. Provide a schedule for implementation and evaluation.

The smartboard and the other parts will be installed in December-January following the approval of the grant.

10. Estimate the expected life of hardware and software. Explain any anticipated equipment/software upgrades during the next five years.

The expected life of the hardware and the software is approximately 5-10 years. It comes with a few years of warranty. The software upgrades are available for free at www.smarttech.com.

11. Explain in detail a plan and policy that will be in place to ensure property security/controls for any equipment received through a Student Technology Fee.

If you are requesting equipment that will be either/or checkout to students or moved within the department, you must provide a checkout/loan policy.

The equipment will be installed in room/s that is secured with electronic lock. Only the faculty members and the other authorized university employees have the keys. The equipment will not be checked out/or loaned, so no policy for that is required.

12. Does the department that is requesting equipment receive lab fees? If so, please provide a justification for requesting funds from tech fee funds over using lab fees from your department.

The department of Mathematics and Physical Science does receive lab fees. However, the lab fees is used to buy the consumable items like chemicals, replacing the non-working equipment and to buy the new equipment. The lab fees is used strictly for the purchase of the items that are used directly to conduct the experiment. The smartboard is a non-consumable supply that will improve the teaching of the lectures, and the physics lab. However, it is not directly used to conduct experiments in the lab and hence the lab fees does not cover it or its accessories.

13. Attach a detailed budget: (quotes attached)

Item	Make	Model	Specification and Description	Vendor	State Contract Number	Number of items	Price (dollars)
Smartboard along with accessories	Smartboard Interactive White Board	IWB-SBX885-IX	87" Interactive WB w/ UX 60 Projector 25FT VGA M/M Extension Cable	Detel	405031	1	5772.73
Desktop	Detel	CASE-IW-BL631	CPU-G850, RAM-2GB-DDR3, HD-250GB, 19"wide	Detel	405031	1	795.00
Interactive Pen	Smartboard Interactive White Board	Pen for ID-350	N/A	Detel	405031	2	198
Presentation Remotes	Targus	AMP13US	N/A	Detel	405031	3	195
							Total = 6960.73

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Attach two (2) letters of support for the project from the following individuals: the requesting department's Dean, the appropriate Vice President (for non-academic units), or the SGA President from the requesting campus (for student requests).

Student Technology Fee Grant Proposal Checklist:

- Is all information requested provided (items 1 – 13)?
- Is a detailed budget attached?
- Is all specifications, description, model number, quotation, cost, state contract number, and vendor provided for each item?
- Are your two (2) letters of support attached?
- If equipment is to be checked-out/loaned, is your policy attached?

DETEL Computer Solutions
 6141 Crestmount Drive
 BATON ROUGE LA 70809
 UNITED STATES
 Tel: (225)-952-9430
 Fax: (225)-952-9432

PROPOSAL	
SQ-116961	10/21/2011

Customer	Contact	Ship To
Northwestern State University Business Affairs/Purchasing St. Denis Hall NATCHITOCHES LA 71457 UNITED STATES Tel: (318)-357-5716 Fax: (318)-357-4348	Northwestern State University Reema McMullen Business Affairs/Purchasing St. Denis Hall NATCHITOCHES LA 71457 UNITED STATES Tel: (318)-357-5716 Fax: (318)-357-4348	Northwestern University Central Receiving 998 South Jefferson NATCHITOCHES LA 71497 UNITED STATES

Account	Terms	Due Date	Account Rep	Schedule Date	
579	NET 30	11/20/2011	Brandi Dubea	10/21/2011	
Quotation	PO #	Reference	Ship VIA	Page	Printed
SQ-116961			Company Delivery	1	10/21/2011 10:51:50AM

I	Item	Description	Qty	Price	UM	Discount	Amount
1	DETEL	IMPORTANT DETEL INFORMATION DETEL has SMART Certified Master Technician/Installer's SMART Technologies Super Elite Dealer for the State of Louisiana Microsoft Gold Partner Intel Premier Partner	1	\$0.00	EA		\$0.00
2							
3	IWB-SBX885-IX	87" Interactive WB w/ UX 60 Projector	1	\$4,984.00	EA		\$4,984.00
4	CAB-VGA-MM-25FT	25FT VGA M/M Extension Cable	1	\$26.99	EA		\$26.99
5							
6		Additional cables needed if connecting to a desktop: (ln 7-8)					
7	CAB-2PRT	2 Port Powered VGA splitter	1	\$49.99	EA		\$49.99
8	CAB-VGA-M/F-3FT	3 FT M/F VGA Cable	1	\$8.00	EA		\$8.00
9							
10	IWB-SBA-L	IWB Projection Audio System	1	\$319.00	EA		\$319.00
11	CAB-AUDIO-25	3.5mm M/M Stereo Audio Cable	1	\$5.25	EA		\$5.25
12							
13	INSTALL-UF-OEB	Installation of IWB over an Existing Board (3.3 hrs. @ \$115/hr. per board)	3.3	\$115.00	EA		\$379.50
14							
15	STATE-CONTRACT	LA State Catalog Contract 405031	1	\$0.00	EA		\$0.00

Sales Quotes are valid for 15 days ONLY due to recent Japan disaster.	Tax Details EXEMPT \$0.000	Taxable	\$0.00
To place order, please fax your order to (225) 952-9432.		Total Tax	\$0.00
		Exempt	\$5,772.73
		Total	\$5,772.73
		Balance	\$5,772.73

DETEL Computer Solutions
 6141 Crestmount Drive
 BATON ROUGE LA 70809
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 Fax: (225)-952-9432

PROPOSAL	
SQ-117027	10/25/2011

Customer	Contact	Ship To
Northwestern State University Business Affairs/Purchasing St. Denis Hall NATCHITOCHES LA 71457 UNITED STATES Tel: (318)-357-5716 Fax: (318)-357-4348	Northwestern State University Reema McMullen Business Affairs/Purchasing St. Denis Hall NATCHITOCHES LA 71457 UNITED STATES Tel: (318)-357-5716 Fax: (318)-357-4348	Northwestern University Central Receiving 998 South Jefferson NATCHITOCHES LA 71497 UNITED STATES

Account	Terms	Due Date	Account Rep	Schedule Date	
579	NET 30	11/24/2011	Brandi Dubea	10/25/2011	
Quotation	PO #	Reference	Ship VIA	Page	Printed
SQ-117027			Company Delivery	1	10/25/2011 3:36:47PM

L	Item	Description	Qty	Price	UM	Discount	Amount
1	DETEL	IMPORTANT DETEL INFORMATION DETEL has SMART Certified Master Technician/Installer's SMART Technologies Super Elite Dealer for the State of Louisiana Microsoft Gold Partner Intel Premier Partner	1	\$0.00	EA		\$0.00
2							
3		- State Contract Items -					
4	QUOTE	Pen for ID250, ID350 and ID370 (comes with spare pen tips)	1	\$99.00	EA		\$99.00
5							
6							
7	CASE-IW-BL631	DETEL Standard PC(s) Desktop Slimline 300W	1	\$795.00	EA		\$795.00
8	CASE-FAN-80MM	Case Fan 80MM	1	\$0.00	EA		\$0.00
9	MB-DH61CR	DH61CR System Board uATX LGA1155 10PK DDR3 1333 Classic Series	1	\$0.00	EA		\$0.00
10	CPU-G850	Pentium G850 2.90GB3MB Dual CoreLGA1155	1	\$0.00	EA		\$0.00
11	RAM-2GB-DDR3	2GB DDR3 1333	1	\$0.00	EA		\$0.00
12	HD-250GB	250 GB Sata Hard Drive	1	\$0.00	EA		\$0.00
13	DVD-DVDRW-Black	Black 22x DVDRW Sata	1	\$0.00	EA		\$0.00
14	KB-MS-USB	USB Black Mouse & Keyboard Combo	1	\$0.00	EA		\$0.00
15	MON-19WWS	19" Wide With Speakers	1	\$0.00	EA		\$0.00
16	SOFT-LIC-OS7	License OS 7	1	\$0.00	EA		\$0.00
17	SOFT-COA	COA Desktops OS 7	1	\$0.00	EA		\$0.00
18	SRG-Trip-TLP404	Tripp Lite 4 Socket Surge Protector	1	\$0.00	EA		\$0.00

Sales Quotes are valid for 15 days ONLY due to recent Japan disaster.			Page	1
To place order, please fax your order to (225) 952-9432.			Sub Total	\$894.00

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 Fax: (225)-952-9432

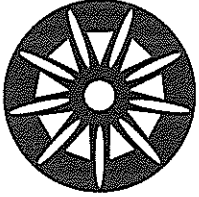
PROPOSAL	
SQ-117027	10/25/2011

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Northwestern State University Business Affairs/Purchasing St. Denis Hall NATCHITOCHES LA 71457 UNITED STATES Tel: (318)-357-5716 Fax: (318)-357-4348	Northwestern State University Reema McMullen Business Affairs/Purchasing St. Denis Hall NATCHITOCHES LA 71457 UNITED STATES Tel: (318)-357-5716 Fax: (318)-357-4348	Northwestern University Central Receiving 998 South Jefferson NATCHITOCHES LA 71497 UNITED STATES

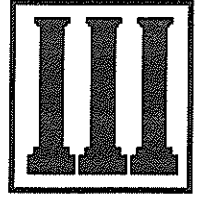
Account	Terms	Due Date	Account Rep	Schedule Date	
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Quotation	PO #	Reference	Ship VIA	Page	Printed
SQ-117027			Company Delivery	2	10/25/2011 3:36:47PM

L	Item	Description	Qty	Price	UM	Discount	Amount
19	War-4yr-P/L	Four Years on-Site Parts and Labor	1	\$0.00	EA		\$0.00
20							
21	NB-SP-15	DETEL Notebook Spring Peak 15.6" Processor: Core i3-2310 2.1 GHz Memory: 2 GB Ram Hard Drive: 250/5400 Operating System: Windows 7 DVDRW Wireless Nic Integrated Blue Tooth Integrated 1.3 Camera 6 cell battery 3 Year Onsite Parts and Labor Warranty	1	\$1,018.00	EA		\$1,018.00
22							
23	STATE-CONTRACT	LA State Catalog Contract 405031	1	\$0.00	EA		\$0.00
24		- Non-State Contract Items -					
25							
26							
27	QUOTE	Laser Presentation Remote - Presentation remote control ColorBlack/Gray Exterior Dimensions 4.75" x 1.5" x 1.0"	1	\$65.00	EA		\$65.00
28							

Sales Quotes are valid for 15 days ONLY due to recent Japan disaster. To place order, please fax your order to (225) 952-9432.	Tax Details EXEMPT \$0.000	Taxable Total Tax Exempt Total Balance	\$0.00 195 \$0.00 \$1,977.00 \$1,977.00 195 \$1,977.00
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COLLEGE OF SCIENCE, TECHNOLOGY, & BUSINESS
OFFICE OF THE DEAN



October 26, 2011

Dear Committee Members:

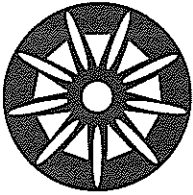
I am pleased to recommend the proposal to you submitted by Mrs. Reema McMullen. Science 1010, Science 2010, and Chemistry 1070 and Chemistry 1030-1040 have large enrollments each semester. This semester there are over 700 students in these classes. Visual aids in the classrooms where these courses are taught consist of primarily chalkboards. Mrs. McMullen is requesting a Smartboard in Room 124 Fournet Hall and other pieces of equipment that will increase the visual interaction between the instructors and the students. This allows more flexibility in the way concepts are introduced and explained. I believe that the purchase of this equipment will have an immediate impact on the way students learn introductory science and this should improve grades in these classes.

I appreciate your consideration of this proposal and I know of no better way to make a difference in this academic department than to purchase this much needed equipment.

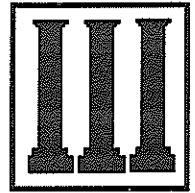
Very truly yours,

Austin L. Temple Jr., Ph.D.

Dean, College of Science, Technology, Technology , and Business



DEPARTMENT OF MATHEMATICS AND PHYSICAL SCIENCES
COLLEGE OF SCIENCE, TECHNOLOGY & BUSINESS



Dr. Frank Serio, Jr.
Head, Department of Mathematics
and Physical Sciences
Northwestern State University
Natchitoches, LA 71497
serio@nsula.edu

October 26, 2011

Student Technology Fee Grant Committee

Subject: Letter of Support for Reema McMullen's Grant Proposal

Members of the Selection Committee,

I am writing to give my full support to the project Reema McMullen has proposed to install a smart board in Fournet 124 and to enhance the functions of the systems in Fournet 107 and 123. I believe this project will improve the quality of instruction in the Physical Sciences and enhance the student learning experience as well. Further since approximately 200 students per year take physics lab classes which are taught in 124 and approximately 1200 students per year take SCI 1010 which is taught in 107 and 123, this project will have an impact on a large number of students. Here are some of the ways that this project will have a positive impact:

- Smartboards will allow the lecture notes to be preserved. This will make it easy to answer questions about something that was written on the board even if it was from a much earlier point in the day's lecture or even a previous class meeting. Further, the notes can be posted on Moodle allowing students access to these materials for review. I have had great success with these strategies in classes I have taught in our smaller classrooms in Kyser which have this sort of technology.
- Smartboards allow for the effective usage of multiple colors and previously prepared materials. Rather than constructing a complex diagram from scratch, it can be done in advance and then written on during the lecture. This has been very effective in mathematics classes I have taught using smartboards.
- Smartboard produce neither the dust that chalkboards do nor the fumes that white-board cleaners do. This will make for a much healthier environment in Fournet 124.

In closing, I again recommend this project to you. I think it will have a profound positive effect on instruction and learning in the Physical Sciences.

Sincerely,

Frank Serio, Jr.