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2012.016

5-27599

ct.# 1

71.6

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

ALL BLANKS MUST BE FILLED COMPLETELY

Prepared by: Samuel Marshall For: _____

Department/Unit: Biological Sciences College: S, T, & B Campus: Natchitoches

Which NSTEP Goals/Objectives does this project meet? NSTEP 1, 3

Requested equipment will be located/installed/housed? Building 90 Room 126

Are department property policies and procedures in place for requested equipment? Not applicable

Which individual will be responsible for property control of the requested equipment?

Signature:  Date: 10/31/11

Grant Proposal Requested Amount: \$ 11,907.55 Budget Attached (circle one): YES/NO

Grant delivered to Student Technology located in Watson Library, Room 113. Date 10/31/11

The grant 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.

Students enrolled in General Ecology Lab (Biol 4401), Entomology lab (Biol 3011), Invertebrate Zoology Lab (Biol 2051), Forensic Entomology Lab (Biol 2071), and Biology III lab (Biol 2021).

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

I am requesting funding for a combined digital camera-stereomicroscope. The stereomicroscope is generally used at a much lower magnification (10-50X) than the typical teaching laboratory microscope, which can magnify up to 1000X. By design the stereomicroscope is used to magnify structures either too small to see with the naked eye, or too small to see clearly. This equipment will be a great enhancement for teaching the identification and anatomy of insects and other invertebrates. It will allow me to show the students live images of organs and structures. Learning how to recognize these small anatomical features is one of the most difficult parts of studying the biology of these small organisms. The scope and camera combo will not just allow

me to show the students live images projected on to a large screen, but it will allow me to record images and share them with future classes. Students will also be able to use this equipment for independent projects requiring the recording of small anatomical features, take measurements, and record behavior.

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

1. Student learning and understanding of the microanatomy of invertebrates.
2. Student facility in identifying small invertebrates
3. The degree to which students employ this technology in class projects as well as independent projects undertaken in my lab.

4. Indicate how each project objective will be evaluated.

1. Laboratory exam grades will be used to assess the first two objectives.
2. How often students use this equipment for research projects and for generating visual documentation for papers and presentations.

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

This equipment will greatly enhance my ability to clearly communicate basic information on invertebrate anatomy and identification to the students. Having the ability to view and record these images will be far more efficient and effective than the current system where I go microscope to microscope and point out structures by hand. Based on past enrollments, I can anticipate approximately 120 students (Biol 4401, 2021, 2051) benefiting from this technology in 112 and an additional 120 students in 212 (Biol 2021, 3011, 2071). This equipment will also support the Forensic Science program at NSU as it will be used to teach the identification of insects used in forensic investigations.

6. Description of how project/initiative will advance University and unit technology plan.

This equipment package will enhance the quality of the educational experience of students in a range of courses and equip one of the teaching laboratories in Bienvenu Hall with state-of-the-art imaging capability.

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 will be responsible for the care and use of this equipment. I have both used and cared for similar equipment in the past.

8. Describe any personnel (technical or otherwise) required to support the project/initiative.

No additional personnel will be required.

9. Provide a schedule for implementation and evaluation.

I will be offering related courses in the spring semester 2012 (Biol 4401 & Biol 2051) and fall semester 2012 (Biol 2071 & 3011).

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

I can anticipate updating firmware and software drivers for the digital camera. These are provided free by the manufacturer. The stereomicroscope may require professional cleaning within 5 years. Apart from maintenance, the microscope itself will be useable for decades.

11. Budget for project/initiative (cost-effectiveness [student impact per dollar spent per year], 10 pts.; realistic to meet project/initiative objectives, 5 pts; estimated lifespan of hardware/software and anticipated upgrades, 5 pts).

\$11,500 for purchase. Maintenance negligible. Impact 120 students/year. Estimated lifespan indefinite.

12. Justification for requesting funds if department receives lab fees

This equipment is too expensive to be purchased using lab fees. Its utility extends well beyond the boundaries of any single class.

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 – 11)?
- 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?



R-123016

**** Optics ** Imaging ** Confocals ****

**490 Lowries Run Road
Pittsburgh, PA 15237**

Phone: 800-448-3929

Fax: 877-768-1984

Quote No: 2011-JMR-1619 - 1

10/26/2011

Samuel Marshall
Northwestern State University
317 Bienvenu Hall
Natchitoches, LA

Sales Rep: Miller Rountree
Phone: (800) 448-3929 Ext. 839
Email: miller.rountree@hoi-inc.com

Phone:
Fax:
E-Mail:

*Email all Purchase Orders to
Orders@BBMicro.com*

Olympus SZX7 stereo microscope

Catalog No.	Product Description	Qty	Price	Extension
1 SZX-ZB7	SZX-ZB7; SZX7 STEREO ZOOM BODY,ZOOM 0.8-5.6X, ZM RAT 7	1	\$1,373.00✓	\$1,373.00
2 2-S110	WHSZ10X;EYEPiece 10X W/OUT DIOPTER ADJUSTMENT IN ESD CAPA	1	\$101.00✓	\$101.00
3 2-S110H	WHSZ10X-H;EYEPiece 10X WITH ES D CAPABILITY, FN22, FOCUSABLE	1	\$123.00✓	\$123.00
4 COVER015	COVER015: DUST COVER, HOOD TYPE FOR CX2 MICROSCOPES	1	\$10.00✓	\$10.00
5 1-SX2104	DFPLAPO1X-4;1X PLAN APO OBJ FOR SZX9, NA 0.10, WD 81MM	1	\$912.00✓	\$912.00
6 S-X430	SZX2-TR30;TRINOCULAR OBSERVATION TUBE FOR SZX10&16	1	\$2,421.00✓	\$2,421.00
7 S-01305	SZ2-ILST5;TRANSMITTED & REFLECTED LIGHT LED ILL STAND, ROHS	1	\$910.00✓	\$910.00
8 UYCP-11	UYCP-11;US STYLE 3-PRONG POWER CORD	1	\$13.00✓	\$13.00
9 U-V1127	U-TV1X-2-7;CCD CAMERA ADAPTER, 1X, REQ CAMERA MOUNT, BX/IX	1	\$69.00✓	\$69.00
10 U-V3127	U-CMAD3-1-7;C-MOUNT CAMERA ADAPTER FOR BX/IX2	1	\$142.00✓	\$142.00
11 7-DP26-CU	DP26-CU;5MP DIGITAL COLOR CAMERA HEAD UNIT, NON-COOLED	1	\$5,660.00✓	\$5,660.00
12 7-DCS-ETY	CS-EN;CELLSENS ENTRY IMAGING SOFTWARE	1	\$695.00✓	\$695.00



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Phone: (800) 448-3929 Ext. 839
Email: miller.rountree@hoi-inc.com

*Email all Purchase Orders to
Orders@BBMicro.com*

Phone:
Fax:
E-Mail:

Olympus SZX7 stereo microscope

Catalog No.	Product Description	Qty	Price	Extension
13	shipping	1	\$100.00	\$100.00
			Subtotal:	\$12,529.00
			Discount:	\$621.45
			TOTAL:	\$11,907.55



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Phone:
Fax:
E-Mail:

Olympus SZX7 stereo microscope

Catalog No.	Product Description	Qty	Price	Extension
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Terms & Conditions:

9.19R
Biological

Price is Valid for 30 Days.

Price Does Not Include Shipping, Handling or Taxes.

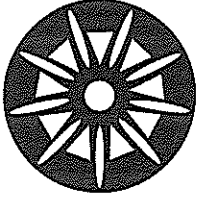
Please Add Where Applicable.

A Minimum of 20% Restocking Fee May Apply on Any Returned Items.

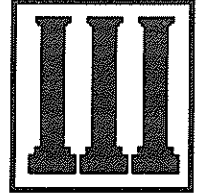
Olympus Microscope Product Warranty:
Five Years on Mechanics & Optics
One Year on Electrical
As Specified by Olympus Manufacture Warranty

This is an official price quotation for the products which you have shown an interest to purchase. The prices listed in this quotation as well as any package pricing, apply to the entire quote as presented. Changes, additions or deletions from this quotation may result in pricing adjustments. Catalog numbers may change from time to time.

This quotation is valid until 11/25/2011



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 Dr. Samuel Marshall. The stereomicroscope will greatly enhance the laboratory experiences for students enrolled in Biology 4401, 3011, 2051, 2071, and 2021. These laboratories serve approximately 120 students per year. The acquisition of this scope would enable Dr. Marshall to expand his laboratories and more closely align his lectures with the laboratories.

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 BIOLOGICAL SCIENCES
COLLEGE OF SCIENCE, TECHNOLOGY, AND BUSINESS
Phone (318) 357-5323, Fax (318) 357-4518, Email: Bio_Sci@nsula.edu, URL: biology.nsula.edu



October 27, 2011

Mrs. Jennifer Long Martin
Student Technology Fee Office
Watson Library

Dear Committee Members,

It is with pleasure that I write in support of Dr. Samuel Marshall's grant application to purchase a stereomicroscope/digital camera setup. As you are aware, modern instruments are indispensable tools in science education. Our department has been the beneficiary of many generous awards from the student tech fee program, and these awards have made a very strong impact on our technology infrastructure, curriculum and student success.

A stereo microscope/digital camera set up is critical for studying certain types of organisms and documenting the results. I should point out that stereo microscopes are distinct from compound light microscopes and do not overlap much in function. The department currently has two digital cameras attached to compound light microscope but none attached to stereo microscopes.

I am certain that funding of this grant will improve our curriculum and enable Dr. Marshall and his students to accomplish more in teaching and research activities.

Thank you.

A handwritten signature in black ink, appearing to read "Zafer Hatahet".

Zafer Hatahet, Ph.D.
Professor and Department Head