



Student Technology Fee

Grant Proposal

2011.006

2010-11

Tracy Brown

Comment: None

Alan Henry

Comment: \_\_\_\_\_

Gary Gatch

Comment: \_\_\_\_\_

Mike McDonald

Comment: \_\_\_\_\_

Dale Martin

Comment: \_\_\_\_\_

G#1 2011.006  
FF

Student Technology Fee  
Grant Proposal Request Form  
Fiscal Year 2010-11  
Northwestern State University of Louisiana

**ALL BLANKS MUST BE FILLED COMPLETELY**

Prepared by: Dr. Wanda L. Goleman For: 8 microscopes to allow more active student participation

Department/Unit: Biological Sciences College: Sci, Tech, & Bus Campus: NSU Main Campus

Which NSTEP Goals/Objectives does this project meet? Goals 1 and 2; Objectives 1, 2, and 3

Requested equipment will be located/installed/housed? Building Bienvenu Hall Room 304

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? Drs. Goleman and Hatahet

Signature: Wanda L. Goleman Date: 10/26/10

Proposal Requested Amount: \$14596.40 Budget Attached (circle one): YES/NO

Proposal delivered to Student Technology located in Watson Library, Room 113. Date \_\_\_\_\_

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.

**Primarily Courses: BIOL 2231, 3311, 3321, reaching over 350 students the last three semesters (Fall 2010, Summer 2010, and Spring 2010).**

Biology 2231 Human Physiology: This course is taken primarily by pre-nursing, psychology, and health and human performance majors. Some education majors also opt to take this course. Biology 3311 & 3312 Human Anatomy and Physiology Laboratory I & II: This is a two-semester course aimed at upper level biology students, specifically students in the Biological Sciences biomedical, pre-physical therapy, pre-occupational therapy, pre-pharmacy, pre-med, and pre-vet concentrations. Additionally, some health and human performance majors also take these courses.

**Secondary Courses: BIOL 2221, 2081, 4221, 3251, reaching over 1100 students the last three semesters (Fall 2010, Summer 2010, and Spring 2010).**

These courses are Human Anatomy Laboratory, Comparative Anatomy Laboratory, Comparative Vertebrate Physiology, and Cellular Biology Laboratory.

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

I would like to purchase eight Nikon E200 compound light microscopes for our anatomy/physiology laboratories. This purchase will increase the number of available microscopes so that each group of four students will have access to at least two good quality microscopes. We use the microscopes multiple times in each course for studying histological specimens as well as cellular processes such as diffusion and osmosis. An increased number of microscopes will allow more students to be directly involved with hands-on study.

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

- 1) Students will be able to identify histological sections with greater accuracy by having more individual active viewing time.
- 2) An increased number of students will be able to actively participate in diffusion and osmosis experiments.
- 3) Student retention will increase as their understanding of the subject matter increases through greater active participation.

4. Indicate how each project objective will be evaluated.

Objectives 1 and 2) Students will demonstrate a greater understanding of physiological mechanisms through more active learning opportunities and improved test scores.  
Objective 3) Retention of students will be reflected by a decrease in student withdrawals.

5. 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 upgrade of equipment for biology students will advance the following NSU technology enrichment goals:

Goal 1: Northwestern State University will endeavor to create and maintain a responsive, student-oriented environment.

Goal 2: Northwestern State University will provide programs, services, and operations throughout the University of high quality and effectiveness.

NSTEP objectives accomplished through this upgrade based on the above stated goals are:

- 1) To improve access to technology by students, faculty, and staff at Northwestern State University.
- 2) To provide classrooms with updated technology and multimedia.
- 3) To upgrade laboratories with modern technology.

6. 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.

Students need to be involved through active hands-on learning, especially in laboratory settings. I would like to purchase eight Nikon E200 compound light microscopes for these three courses. It will increase the number of available microscopes so that students can work in pairs rather than groups of four. We currently have only 8 fairly decent microscopes in this laboratory and use them multiple times in each course every semester for studying histological specimens as well as cellular processes such as diffusion and osmosis. With our current equipment available, most students have to simply observe while a few actually perform laboratory activities. For students taking Biology 2231, 3311, and 3312, the increase in available microscopes will allow more students to actively participate in our laboratory exercises. This alone should increase student motivation and engage active learning processes resulting in higher retention and improved test scores.

Biology 2231 Human Physiology: This course has had an average enrollment of 250 students per year.

Biology 3311 & 3312 Human Anatomy and Physiology Laboratory I & II: Enrollment for Biology 3311 for the last two fall semesters has been 33-34 biology students, with a current enrollment of 49 students, an increase of 15.

Biology 3312 had an enrollment of 12 students during the 2009 spring semester (the first semester it was taught) and more than doubled in the 2009 spring semester to 26 students. An increase in enrolled students is again expected for the 2011 spring semester, to approximately 50 students.

Thus, on a yearly basis, this equipment would serve approximately 350 students in the primary courses (BIOL 2231, 3311, and 3321).

Secondary Courses: BIOL 2221, 2081, 4221, 3251, reaching over 1100 students the last three semesters (Fall 2010, Summer 2010, and Spring 2010).

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.

Dr. Wanda L. Goleman

I have been teaching anatomy and physiology laboratories for 15 years. Additionally, both my thesis and dissertation work were heavily concentrated with microscopy.

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

Both Drs. Goleman and Hatahet have the necessary experience to be will be able to set up and maintain microscopes.

9. Provide a schedule for implementation and evaluation.

Microscopes will be set up for use the semester they are received. Within a semester, I expect to have more student involvement in laboratory exercises with a concurrent increase in test scores and student retention. Evaluations every semester.

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

When properly cared for, microscopes have an extended lifetime of use and functionality, well beyond five years. Therefore, I anticipate no upgrades or repairs to these microscopes for many years. Nikon covers all products with a one-year electrical warranty plus a five-year mechanical warranty.

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.

All instruments will be maintained in the laboratory. Checkout of equipment from the laboratories is not allowed. Doors to the laboratory remain locked unless an instructor is present.

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.

Lab fees are received for Biology 2231. These monies fund various disposable supplies and sundries.

There are no fees associated with Biology 3311 or Biology 3321.

13. Attach a detailed budget.

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).

Attachments:

Budget

Nikon Instruments quote

Letters of Support (2)

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?

**PROPOSED BUDGET:**

5-2-7485  
R 112386

Student Technology  
Fee Money Requested

	Product #	Cost per unit	No. of units	Total
Nikon E200 Microscope Package	MCA74201	\$1966.00	8	\$14312.48
E2-EP Eyepiece Pointer	MCM78500	\$8.00	8	\$58.24
Cord Hanger	MXA20415	\$15.00	8	\$109.20
6V/20W QH Bulb, FHE 7388	79099	\$16.00	8	\$116.48
Shipping				\$200.00
Total costs				\$14796.40

7280  
7282  
7282  
7282  
4410

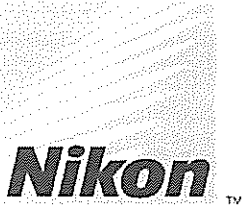
Microscopes  
\$14796.40

I am requesting funding to purchase eight Nikon E200 microscopes with the necessary accessories for our anatomy and physiology laboratory for student use. The increase in the number of microscopes will allow more students to have hands-on experience than is currently possible. Life expectancy for microscopes with normal use is much greater than five years. However, calculating their usefulness at only five years, the financial impact to approximately 350 BIOL 2231, 3311, and 3321 students per year is expected to be approximately \$8.46 per year per student. If calculated with secondary courses of BIOL 2221, 2081, 4221, 3251 included, at approximately 1100 students per year, the cost is reduced to \$2.04 per year per student for five years

Sales representative: Eldon J Granier Jr.  
Advanced Imaging Specialist

Vendor: Nikon Instruments, Inc.  
1846 East Rosemeade Parkway  
Suite 229  
Carrollton TX 75007

Office: 888-424-0880  
Fax: 631-944-9377  
Email: [egranier@nikon.net](mailto:egranier@nikon.net)  
[www.nikoninstruments.com](http://www.nikoninstruments.com)



# Nikon Instruments, Inc

1846 East Rosemeade Pkwy - Suite 229 - Carrollton, TX 75007 -  
 Phone: 504-330-2280 - Email: egranier@nikon.net

## QUOTATION

Date	Quote #
10/12/10	ERJQR1305

**Sold To:** Northwestern State University  
 Wanda Goleman, PhD  
 350 Sam Sibley Rd  
 Natchitoches, La 71497

Phone: 318-357-5329  
 Fax: 318-357-4518  
 Email: golemanw@nsula.edu

**Ship To:** Northwestern State University

350 Sam Sibley Rd  
 Natchitoches, la 71497

Phone:  
 Fax:  
 Email:

**Your Sales Account Manager is:**

Eldon Granier

504-330-2280

Terms	Delivery	FOB	Ship Via
Net 30 days	60-90 Days	Origin	UPS

**Nikon E200 Microscope Package (w oil immersion objective) w Optional Accessories**

Qty	Product #	Description	Unit Price	Ext. Price
8	MCA74201	E200 Basic Set R (120V) - Right handed Model, E Plan 4, 10, 40, 100x, Binocular Set Includes: E200 Main Body (120V) Right side fine focus, left side coarse & fine focus with tension adjust knob Quadruple nosepiece, mechanical stage right handle , Exclusive push-to drop refocusing mechanism, halogen illuminator base, field lens unit without diaphragm, halogen lamp 6V-20W, vinyl cover, instruction manual, hex key (to remove shipping clamps) Power Cord 120v E2-TB Binocular Eyepiece Tube (exclusive-binocular rotates 180 degrees to adjust height) Anti-mold Eyepiece CFI E 10X (Field No. 20) - two eyepieces provided E2-C Abbe Condenser N.A. 1.25 with aperture diaphragm marked in objective magnifications, filter holder (33mm) Blue filter 33mm CFI E Plan Achromat 4X, N.A. 0.10, W.D. 30mm CFI E Plan Achromat 10X, N.A. 0.25, W.D. 7mm CFI E Plan Achromat 40X, N.A. 0.65, W.D. 0.65mm , spring-loaded CFI E Plan Achromat 100X oil, N.A. 1.25, W.D. 0.23mm, oil-immersion, spring-loaded Immersion Oil A, 8cc	\$1,966.00	\$14,312.48
<b>Optional Items</b>				
8	MCM78500	E2-EP Eyepiece Pointer for E100	\$8.00	\$58.24
8	MXA20415	Cord Hanger for E200	\$15.00	\$109.20
8	79099	6V/20W QH Bulb, FHE 7388	\$16.00	\$116.48
			<b>SubTotal</b>	<b>\$14,596.40</b>
			<b>Total</b>	<b>\$14,596.40</b>

Qty	Product #	Description	Unit Price	Ext. Price
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Please Fax PO, along with copy of this quote, to NIKON INSTRUMENTS, INC @ 631-944-9377

Quote is valid for 30 days. - Nikon Federal Tax ID #11-3554845 - DUNS 038740051

This quotation is subject to the attached Terms and Conditions for Quotation accessible at [www.niitandc.com](http://www.niitandc.com)

Please note the following:

PRICES SUBJECT TO CHANGE WITHOUT NOTICE. NIKON WILL ENDEAVOR TO SHIP TO YOU FOR YOUR ACCEPTANCE, YOUR SUBSTANTIALLY COMPLETE WORKING SYSTEM AS SOON AS POSSIBLE. WE WILL SHIP THE ENTIRE ORDER WITHIN THE STATED DELIVERY TIME ON THIS QUOTATION. ALL NIKON PRODUCTS ARE COVERED BY A LIMITED ONE YEAR WARRANTY ELECTRICAL - 5 YEAR WARRANTY MECHANICAL - WE SPECIFICALLY DISCLAIM ANY AND ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OR WITH REGARD TO ANY LICENSED PRODUCTS. WE SHALL NOT BE LIABLE FOR ANY LOSS OF PROFITS, BUSINESS, GOODWILL, DATA, INTERRUPTION OF BUSINESS, NOR FOR INCIDENTAL OR CONSEQUENTIAL MERCHANTABILITY OR FITNESS OF PURPOSE, DAMAGES RELATED TO THIS AGREEMENT. MINIMUM 15% RESTOCKING FEE WITH ORIGINAL PACKAGING.



**Nikon**

## FIVE YEAR LIMITED WARRANTY

This Nikon Product is warranted by Nikon Inc., Instrument Group, to be free from defects in material and workmanship for a period of five (5) years from the date of purchase. During this period, Nikon Inc., Instrument Group, or its authorized service station will, at its option and without charge, either repair or replace any part or assembly of parts found to be defective in material or workmanship, subject to the following limitations and exclusions:

This warranty extends to the original consumer purchaser only and is not assignable or transferable.

This warranty shall not apply to the following:

1. Product which has been subjected to misuse, abuse, negligence, accident, or which has had its serial numbers, names, functions or applications altered or obliterated.
2. Defects or damage directly or indirectly caused by the installation or service of the Product by unauthorized personnel and/or the use of unauthorized replacement parts.
3. Lamps, bulbs, flash tubes, batteries, charts, rubber feet and rubber eyecups.
4. All electrical and electronic components. (These components, except for those listed in exclusion 3 above, have a one year limited warranty.)

**ALL WARRANTIES IMPLIED BY LAW INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE SHALL BE OF A DURATION OF FIVE (5) YEARS FROM THE DATE OF PURCHASE. THE WARRANTIES HEREIN ARE EXPRESSLY IN LIEU OF ALL OTHER EXPRESS WARRANTIES INCLUDING THE PAYMENT OF CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR THE BREACH OF ANY WARRANTY.**

**SOME STATES DO NOT ALLOW (A) LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS OR (B) THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.**

In order to obtain performance of the warranty obligations, the original customer purchaser must return this NIKON product either in person or addressed to the warranty department of Nikon Inc., Instrument Group, Operations Center, 336 South Service Road, Melville, NY 11747, or to any authorized Nikon Instrument service station, the location of which may be obtained by contacting Nikon Instrument Group at the above address. The consumer should provide a brief written description of the problem that is sought to be remedied. THE ORIGINAL CONSUMER PURCHASER IN RETURNING THIS NIKON PRODUCT, MUST PREPAY ALL POSTAGE, SHIPPING, TRANSPORTATION, AND DELIVERY COSTS TO REPAIR FACILITY.

INSTRUMENT MODEL \_\_\_\_\_ SERIAL NO. \_\_\_\_\_

PURCHASE BY \_\_\_\_\_

ADDRESS \_\_\_\_\_ DATE \_\_\_\_\_

PURCHASER'S COPY

## REGISTRATION CARD

To protect your warranty, please fill in this card and return immediately.

Name \_\_\_\_\_

Title \_\_\_\_\_

Affiliation \_\_\_\_\_

Department \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone A/C ( ) \_\_\_\_\_

Date Purchased \_\_\_\_\_

1 Instrument Model \_\_\_\_\_ Serial # \_\_\_\_\_

Accessory \_\_\_\_\_ Serial # \_\_\_\_\_

Accessory \_\_\_\_\_ Serial # \_\_\_\_\_

2 Purchased from \_\_\_\_\_

3 Introduced to instrument by

Colleague  Direct Mail

Salesperson  Magazine Ad

Convention/Trade Show Specify \_\_\_\_\_

Other Source Specify \_\_\_\_\_

4 The main reason this instrument was selected was:

Optical performance  Operational ease  Past experience with Nikon

Versatility  Warranty  Price

Other \_\_\_\_\_

5 Primary Application

Agriculture

Biology

Botany

Chemistry

Electrical & Electronics

Fabricated Metals

Geology

Medicine

Non-Electrical Machinery

Pharmacology

Primary Metals

Rubber & Plastics

Transportation Equipment

Veterinary Medicine

Other \_\_\_\_\_

Primary Area of Use:

Hospital

Government

College/University

INDUSTRIAL

Research & Development

Quality Control/Assurance

Production

PRIVATE LABORATORY

Clinical

Industrial

PERSONAL

Student

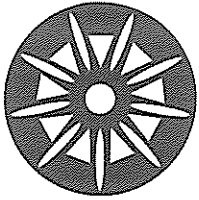
Hobbyist

OPHTHALMIC

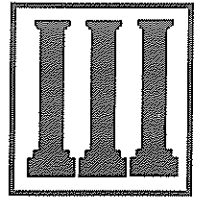
Optometrist

Optician

Ophthalmologist



**COLLEGE OF SCIENCE, TECHNOLOGY, & BUSINESS**  
**OFFICE OF THE DEAN**



October 18, 2010

To the Members of the Student Technology Review Committee:

I have been asked to write a letter in support of two grant proposals. Since both proposals involve the same classes and I am combining support into a single letter. Dr. Wanda Goleman is proposing to purchase eight NikonE200 compound light microscopes and Dr. Wanda Goleman and Dr. Leeann Sticker are requesting eight new computers. The computers and the scopes are to be used in Biol 2231(human physiology,3311(anatomy and physiology I) and 3321 (anatomy and physiology II). There are approximately 350 students enrolled in these classes per year. The computers in these labs are old and are not suitable to run the latest version of neither Windows nor Biopac. There is also no internet connection. These old computers will not run the new software for these courses. The purchase of the Nikon scopes would decrease the number of students in the labs that must share the scopes. The approval of the two grant proposal would greatly enhance these courses.

Thank you for serving on this most important committee and if there are any questions, please call 357-6699.

Very truly yours,

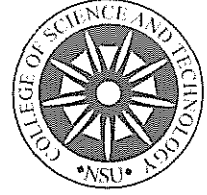
Austin L. Temple Jr., Ph.D.  
Dean, College of science, Technology, and business



## 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 28, 2010

Ms. Jennifer Long Martin  
Student Technology Office  
Watson Library

Ms. Long,

I am writing to strongly support Dr. Wanda Goleman's Student Tech Fee grant proposal to update equipment in the physiology lab of the Department of Biological Sciences. This lab serves a very large number of students from several colleges and departments including nursing, biology, health and human performance and psychology. An average of close to 200 students use this lab every semester, including summer. Dr. Goleman seeks funds to purchase microscopes that currently have to be borrowed from introductory biology lab (which is used equally extensively). Needless to say, scheduling issues always arise as the microscopes are needed by both labs at the same time. Further, moving a large number of microscopes back and forth between labs located on different floors of the building is not good practice and increases the risk of damaging them. Funding of this grant would significantly enhance the learning experience of our students and I urge you to give it your highest consideration.

Sincerely,

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

Zafer Hatahet, Ph.D.  
Professor and Department Head