TRACY BROWN: ACCEPTED ______________  OPPOSED: ________________________

COMMENTS: _______________________

SIGNATURE: ______________________  DATE: 12/2/19

HEATH FITTS: ACCEPTED __________  OPPOSED: ________________________

COMMENTS: _______________________

SIGNATURE: ______________________  DATE: 10/4/19

SHAWN PARR: ACCEPTED ____________  OPPOSED: ________________________

COMMENTS: _______________________

SIGNATURE: ______________________  DATE: 12/3/19

BLAYNE HENSON: ACCEPTED __________  OPPOSED: ________________________

COMMENTS: _______________________

SIGNATURE: ______________________  DATE: 12/4/19

PHILLIP MARTIN: ACCEPTED __________  OPPOSED: ________________________

COMMENTS: _______________________

SIGNATURE: ______________________  DATE: 12/3/19
Please Complete the Entire Application

Prepared by: Dr. Wanda L. Goleman For: School of Biological and Physical Sciences

Department/Unit: BMVT College: AS Campus: Natchitoches

Which NSTEP Goals/Objectives does this project meet? Goals 1 and 2; Objectives 1, 2, 3, 5, 9

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

Does the department 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? Dr. Chris Lyles

Signature: Dr. Wanda L. Goleman Date: 11/21/19

Proposal Requested Amount: $9163.44 Budget Attached (circle one): YES/NO

Proposal delivered to Student Technology located in Watson Library, Room 113. Date 11/21/2019

Please be sure to include detailed specifications, vendor information, state contract information, descriptions, and quantities in the application.

1. Describe the target audience.
Primarily Courses: BIOL 2251, 2261, 3311, 3321, reaching approximately 400 students over the course of an academic year.

Biology 2251 & 2261 Human Anatomy & Physiology for Nursing & Allied Health Majors I & II: This is a two-semester course is taken primarily by pre-nursing, psychology, and exercise physiology majors. Some education majors also opt to take these courses.

Biology 3311 & 3321 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 Concentration (pre-medicine, pre-physical therapy, pre-occupational therapy, pre-pharmacy, pre-physician assistant, and pre-dental. Additionally, Scholar’s College majors frequently take these courses.

Occasionally, workshops are also held for high school students using this equipment.

2. Describe the project/initiative.
To purchase 8 laboratory computers to replace the current computers purchased approximately 10 years ago with Student Technology Fees.
3. State measurable objectives that will be used to determine the impact/effectiveness of the project.
To be able to continue to allow more students hands-on personal experiences (such as measures of their own muscle, heart and lung activates) with computer software, simulation programs.

4. Please explain the evaluation process for each objective.
Continued use of the computers in laboratory classes will provide evaluative evidence of the aforementioned objective.

5. Which NSTEP [http://www.nsula.edu/nstep/NSTEP.pdf](http://www.nsula.edu/nstep/NSTEP.pdf) objective(s) will this funding of this project advance? How will the funding of the project advance the University and College/unit technology plan?
Funding of this proposal will advance the following NSU technology enrichment goals:

Goal 1) To create an environment that supports Individual efforts toward academic, career, social, and civic success.
Goal 2) To make Northwestern State University the premier regional university in the state.

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.
5) To upgrade and maintain the campus communication network and infrastructure.
9) To provide and support hardware and software upgrades, new hardware and software for specialized functions, training for technical support personnel.

In addition, the following key areas of the College of Arts and Sciences Plan with be advanced:
- Maintenance and Support
- Laboratory Equipment
- Computer Accessibility

6. Please justify funding for the project. Provide the number of students that will be served per academic year and in what ways. Please also indicate any unique needs of the target group.
Approximately ten years ago, a grant was funded via the Student Technology Fees for the purchase of 8 laboratory computers along with a physiology software program upgrade (Biopac) for laboratory 304 in Bienvenu Hall. This hardware-software system allows for students to collect real-time measurements of multiple body functions such as cardiovascular physiology, electromyograms, pulmonary function studies, nerve physiology, reaction times, and digestive physiology. The lifespan of the computers purchased at that time has expired (expected lifespan of computer technology is approximately five years), although the software remains viable. In general, the computers are beginning to malfunction during data collection and are not expected to survive much longer.

The laboratory computers will be available for the numerous stimulation programs that are currently utilized in the variety of anatomy and physiology courses. In addition, upgraded computers will allow for expanded abilities to use updated programs including online programs and web sites that are available. These programs provide students with creative, interesting and innovative ways for learning. The majority of biology students using this equipment have career goals in some area of healthcare. Being able to collect and analyze actual human physiological data in these courses offers many of them their first real hands-on experience in attaining this goal. The students also have the opportunity to compare different data sets which gives them a better understanding of human variation. Additionally, many of the nursing and allied health students enrolled in these courses are at an introductory level and are more vulnerable to
dropping courses. Being able to collect and analyze live data using hands-on learning techniques aids in the retention of these vulnerable students by keeping learning fresh and interesting.

Primarily Courses: BIOL 2251, 2261, 3311, 3321, reaching approximately 400 students over the course of an academic year.

7. List the 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 – many years of computer use and collection of physiological data.

8. Describe any personnel (technical or otherwise) required to support the project/initiative.
Other support will come from Student Technology.

9. Provide a schedule for implementation and evaluation.
Immediately upon arrival, computers will be set up equipment and incorporated into all listed classes. Evaluation of their effectiveness is completed each semester via student assessments of understanding.

10. Estimate the expected life of hardware and software. Explain any anticipated equipment/software upgrades during the next five years.
Expected life of computer technology is approximately 5 years.

11. Explain in detail a plan and policy that will be in place to ensure property security/controls for any equipment received through Student Technology Fee. If requested equipment that will be either/or checkout to students or moved within the department, please provide a checkout/loan policy.
All equipment will be maintained in the laboratory. Students are not allowed to check out the either hardware. Doors to the laboratory remain locked unless an instructor is present.

12. Does the department receive lab fees? If so, please explain the need for Student Technology Fee funds.
This department does have laboratory fees available, however the total cost of $9163.44 for the purchase of eight new computers would reduce funds needed to maintain and operate this laboratory as well as many others.

13. Attach a detailed budget.

14. Attach two (2) letters of support for the project from the following individuals: the requesting department’s Dean, the appropriate Vice President, or for student request, the SGA President from the requesting campus.
**Project:** Replacement of Laboratory Computers used for the Study of Human Physiology

**Proposed Budget**

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Student Tech Fee Money Requested</th>
<th>Number of Units</th>
<th>Project Total</th>
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<tr>
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<td>$1145.43</td>
<td>8</td>
<td>$9163.44</td>
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**Your Shopping Cart**

https://www.dell.com/premier/checkou/#/cart/view

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**Cart**

Dell Contract Code: C000000010742
Customer agreement number: -440002525

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**OptiPlex 7470 All-in-One - Build your own**

Discounted unit price: $1,145.43
Dell Contract Code: C000000010742

**Estimated Ship Date**
12/04/2019

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Premier discount

Catalog Number: 84 / xctoo7470aiousr

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<td>OptiPlex 7470 All-in-One XCTO</td>
<td>G4YRXE</td>
<td>[210-ASEV]</td>
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<td>Processor</td>
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<td>G3TKEM</td>
<td>[338-8SRY]</td>
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<td>Windows 10 Pro 64bit English, French, Spanish</td>
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**Savings** $6,108.96
**Subtotal (8)** $9,163.44

1 of 3

11/11/19, 10:39 AM
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<td>LCD</td>
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<td>GP3NLIA</td>
<td>[391-BBDM]</td>
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<td>Image Restore</td>
<td>Dell Backup and Recovery</td>
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<td>Intel® Integrated Graphics</td>
<td>GZQDA24</td>
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<td>Placemat</td>
<td>Setup and feature guide for 7470AIO</td>
<td>G26BFX4</td>
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<td>Documentation</td>
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<td>TPM Security</td>
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<td>Intel Responsiveness Technologies</td>
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Savings: $6,108.96
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Subtotal (8): $9,163.44

Savings $6,108.96

Subtotal (8) $9,163.44

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To the selection committee,

Please accept this letter of support for the proposal submitted by Dr. Wanda Goleman. The requested computers are an integral part of our anatomy and physiology curriculum and they impact approximately 400 students an academic year and will replace the existing units that are ~10 years old. The computers are used to operate Biopac software that allows for students to collect real-time measurements of multiple body functions such as cardiovascular physiology, electromyograms, pulmonary function studies, nerve physiology, reaction times, and digestive physiology.

This proposal has the School of Biological and Physical Sciences full support.

Thank you,

Christofer N. Lyles, Ph.D.
Interim Director and Assistant Professor
Northwestern State University
Bienvenu Hall, rm 137
Northwestern State University of Louisiana
Natchitoches, LA 71497
Dear Student Technology Grant Committee:

I am writing this letter in support of Dr. Wanda Goleman’s proposal to replace the computers in the human anatomy and physiology laboratory located in Bienvenu Hall Room 304. This replacement is essential to allow the continued use of the Biopac technologies typically utilized in this laboratory. The Biopac system allows students to conduct physiology-experiments such as electrocardiogram and blood pressure analyses. The experiences gained from using such equipment will help these students better prepare for careers in the medical field.

The School of Biological and Physical Sciences does currently collect lab fees for some courses, but those fees are used to purchase consumables that are used in educational laboratories, and those fees have not been adjusted for inflation in over 15 years. The funds are not sufficient to purchase larger pieces of equipment like computers. Additional funding sources are required to keep our laboratories outfitted with current technologies to provide our students with the best educational experience.

Dr. Goleman has my full support in the submission of this grant proposal. I trust that you will give her every consideration as she works diligently to improve the student experience in the School of Biological and Physical Sciences. If you have any questions regarding my recommendation or support, please do not hesitate to contact me.

Sincerely,

Francene J. Lemoine, Ph.D.
Interim Dean and Professor
College of Arts and Sciences
Northwestern State University of Louisiana
Natchitoches, LA 71497
Phone (318)357-5805
Fax (318)357-4255
Email lemoinef@nsula.edu