1. Project Short Title

5-8 Word Project Title
Computerized Human Patient Simulator with Pediatric Patient Simulator Option

2. Total Requested Amount (reference to funding for “Years Following” removed)

Fiscal Year 2003
$ 249,535.00

3. Executive Summary

Project Description (Three or four sentences)
The Computerized Human Patient Simulator with Pediatric Patient Simulator Option is a full body instrumented adult mannequin that emulates heart sounds, airway resistance, gas exchange, lung compliance, and other emulations for the training of nurses. The proposed emulator has trauma features, ECG options, multiple patient profiles, drug recognition system, and a pediatric simulator option. Also included is an instructor’s hand-held pc, monitor interface, and a single-year warranty. This simulator will allow nursing students to be trained on a state-of-the-art training system that emulates a variety of commonly experienced patient conditions and trauma conditions. Options included on this simulator can also be used in the training of students of Physical Therapy and students of Cardiopulmonary Care Sciences (Respiratory Therapy).

4. Project Description

This proposal is for the purchase of a sophisticated human patient simulator for the purpose of nurse education and training of nursing students. The goal is to give student nurses a wide variety of experiences in treating common and traumatic conditions that they are likely to experience in practice, and to provide this training (using the simulator) prior to the practicum training in hospitals and clinics. This proposal is for the purchase a single simulator with multiple options, including a drug recognition system, instructors hand-held PC, monitor interface, pharmacology editor, pericardiocentesis, pediatric options, gas accessory kit, and warranty. It will be used in the newly updated nursing lab for use by all nursing students, students studying respiratory therapy, and students of physical therapy.

5. Relevance to Regents Guidelines

[1] Technology fee revenues should be used primarily for the direct benefit of students to assist them in meeting the educational objectives of their academic programs.
[3] Technology fee revenues should be used for hardware and Network related expenditures that
include support of general purpose or special purpose laboratories used by students for body productivity and more discipline related activities.

6. Relevance to Strategic Plan(s)

The Strategic Plan of the University states that its vision is to provide an academic environment conducive to effective and inspired teaching, learning, and scholarship and to be recognized as one of the leading national state-assisted research universities located in an urban setting. This entails [among other factors] providing a learning-centered environment, and exploration and use of new learning methods. The strategic plan also accept the idea that network-delivered, computer-mediated learning experiences will probably dominate post-secondary learning in the decades ahead.

The College Strategic Plan has as a major goal, “To obtain and maintain needed physical space and equipment to support the specialized laboratory and clinical simulation needs for effective teaching of students in the health care professions.”

This proposal targets stated elements in both the University and College Strategic plans.

7. Impact on Students Served

Students in nursing will all benefit from the described simulator. In addition, other students in Respiratory Therapy, Nutrition, and Physical Therapy may also use the simulator. The approximate number of students in nursing is 500, all of whom will be required to access the requested simulator. The simulator will be placed in the newly updated nursing lab in Kell Hall, and will be accessed by students as part of regular classes that are required for nursing degrees. This purchase will greatly enhance the readiness of student nurses to begin their hospital/clinic rotations.

8. Justification of Funding Requirements for Fiscal Year 2003

<table>
<thead>
<tr>
<th>Object of Expense</th>
<th>Itemized Descriptions</th>
<th>Quantity</th>
<th>Extended $ Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computerized Simulator</td>
<td>HPS-020 Version D Full Body Instrumented Adult Mannequin</td>
<td>1</td>
<td>$ 153,000</td>
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<tr>
<td></td>
<td>MI-002 Monitor Emulator (included)</td>
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<tr>
<td></td>
<td>TF-200 Trauma Features (included)</td>
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<tr>
<td></td>
<td>AF-100 ACLS Features (included)</td>
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<tr>
<td></td>
<td>SS-100 Version 6 HPS Software (included)</td>
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</tr>
<tr>
<td></td>
<td>US-200 HPS User Utility Software (included)</td>
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<tr>
<td></td>
<td>Warranty Program (included)</td>
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<td></td>
<td>Installation &amp; Training (included)</td>
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<td></td>
<td>HPS-401 Drug Recognition System</td>
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<td>HPS-500 Instructor’s Hand-held PC</td>
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<td></td>
<td>MI-001 Full function monitor interface</td>
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<td>US-004 Pharmacology Editor</td>
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<td>TF-004 Pericardiocentesis</td>
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<td></td>
<td>PED-100 Pediasim Plug &amp; Play Mannequin</td>
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<td>HPS-202 Portable Configuration</td>
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<td>TOL-001 Tool Kit</td>
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<td>GAS-001 Gas accessory kit – standard</td>
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<td></td>
<td>Air-001 Air Compressor Kit – external</td>
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9. Consequences of Partial Funding

Only 75% funded: The project would remain viable, but eliminate the following options: full-function monitor interface ($17,000), pediasim plug & play mannequin ($35,000), portable configuration ($19,035)

Only 50% funded: The project would not remain viable

10. Standard Dollar Amounts

N/A

11. Standard Replacement Thresholds

N/A

12. Prerequisite, Non-Technology Fee, Funding

N/A

13. Matching Funds

N/A

14. Staffing and Other Support Availability

N/A

15. Space Availability

Space for the mannequin with all attachments is available in the current nursing lab (Kell Hall).

16. Impact on Facilities

N/A

17. Impact on Computing/Network Infrastructure

This is stand-alone product that does not access the University’s computer and networking infrastructure. Therefore, there is not expected to be any impact on the infrastructure created by this project.

18. Post-Project Assessment Criteria

All nursing faculty using the nursing lab will receive training provided by Medical Education
Technologies, Inc. The effectiveness of this unit will be assessed by students as part of the normal course assessment process and by faculty using the unit.

19. Review and Acknowledgements

This project has been reviewed and approved by:

- Dr. Susan Kelley, Dean, College of Health and Human Sciences
- Mr. Anthony Roberts, Business Manager, College of Health and Human Sciences
- Dr. Alice Demi, Acting Director, School of Nursing

This project was developed by Dr. Dan Benardot, Associate Dean, College of Health and Human Sciences

This is priority 1 of 4 for proposals submitted by the College of Health and Human Sciences