Project Title:  Parks Hall 108 Behavior Research Lab

Department /Organization  College of Business and Economics

Applicant Name/s:  Dean Brian Burton  Mail Stop: 9072  Phone: x3896
Dr. Steve Ross  Mail Stop: 9077  Phone: x4890
Mr. David Auer  Mail Stop: 9072  Phone: x2904

Amount Requested for Project:  $ 25,478.67

Contribution from Applicant’s Department/Unit (if applicable):  $ 35,000

Date of Submission:  December 21st, 2009 REVISED January 29th, 2010

APPROVAL SIGNATURES:

________________________________________
Department Chair

________________________________________
College Dean

________________________________________
Space Administration

________________________________________
Vice Provost for Information Technology

________________________________________
AS President  Provost

Authorization for Contribution Resources:  

Project’s Strategic Priority by College:  1
2010 Student Technology Fee (STF) Proposal Form

Title of Project: Parks Hall 108 Behavior Research Lab

Department/Organization: CBE

Name(s) of Project Applicant(s)

Name Dean Brian Burton MS 9072 Phone x3896
Name Dr. Steve Ross MS 9077 Phone x4890
Name Mr. David Auer MS 9072 Phone x2904

Principal Contact person:

Name Mr. David Auer Phone x2904

Amount Requested for Project: $25,478.67
Contribution by Requesting Organization: $35,000.00

Important notes:

• Before completing this form, please read the Proposal Form Instructions on the STF website: http://www.wwu.edu/stf/

• Beginning this year (2009-10), the Student Technology Fee Committee will no longer accept proposals for computer lab upgrades. Existing computer labs will now be upgraded on a rolling schedule, and the Student Technology Fee will continue to fund these upgrades. (The schedule for upgrading computer labs, when approved, will be posted on the STF website.)

I. Project Abstract

Give an overview of the existing environment, and summarize the items being requested. Briefly explain how the requested technology will:

• improve student access to technological resources, and/or
• enhance the quality of the student academic experiences through the use of technology, and/or
• increase the integration of technology into the curriculum.

The modern Business Administration, Accounting, and Economics curriculum makes extensive use of technology for both delivery of instruction as well as an object of the instruction. The computer laboratory, which was once the domain of Computer Science and Management Information Systems (MIS) faculty, has been invaded by all disciplines as instructors endeavor to prepare their students for the challenges of the 21st Century. Students majoring in Economics, for instance, must learn how to search public government databases, for the U.S. and other countries, as well as use those data in arguing for a particular monetary policy. Students of Manufacturing and Operations Management must learn how to use software as a critical aid for tasks ranging from facility design to production planning; for these students, using professional-quality
software enables them to work with larger, more realistic problems once they have mastered the basic principles.

Technology is not the only pervasive feature of the modern business world. Virtually every significant project requires the efforts of multiple persons. Many business classes include group projects in an effort to prepare our students to function as effective team leaders and members. MIS students work in teams to analyze and design information systems. Management students work in teams to determine proper responses to union/management situations. Teams of Marketing students plan, conduct, and analyze consumer research projects. Instructors coach the teams in both teamwork (process) as well as the qualities of a good product. Teams often meet both during class hours and outside of class. More and more, these teams are dependent on the use of technology to prepare their work.

Neither the modern classroom nor the traditional computer laboratory provide an ideal venue for these types of instruction. Classrooms with projection technology allow the instructor to demonstrate technology but do not afford students the opportunity to immediately practice the technique, nor to interact, via technology, with either the instructor or with each other. Instructors need a facility that allows the students to participate collaboratively, on a real-time basis, with computers, the local network, and the worldwide web. Computer laboratories, on the other hand, are typically designed as individual workstations with limited support for instruction with learning teams. The design of the stations is optimized for one-person/one-computer situations and the use of the lab by student groups results in congestion around work stations as well as unused resources. This is especially true of Parks Hall 210, the primary computer laboratory for the College of Business and Economics.

The purpose of this project is to enable use and instruction of information technology in settings other than computer laboratories and provide a facility more amenable to instruction about group process. This project will create a technology-mediated Behavior Research Lab (BRL) and classroom facility in the College of Business and Economics in the Parks Hall 108 room complex.

The College of Business and Economics is developing the Parks Hall 108 Behavior Research Lab (which consists of the PH 108 classroom, five associated breakout/observation rooms, and the PH 106 South control room) into a team computing and interactive multimedia facility to enhance role-playing and team exercises in business classes.

Uses include (1) audio and video recording, playback and assessment of student role-playing assignments; (2) live phone-conferencing and video-conferencing; (3) live email exchange; (4) team-computing (for example, during computer simulation exercises); and (4) other related uses.

Although Parks Hall 108 is not a General University Classroom (GUC) (it is scheduled by the College of Business and Economics), a large number of students from many CBE concentrations use the classroom. CBE has already been able to obtain some resources to help create the facility, however the facility still requires improvement to fully satisfy the educational needs of students.

This project will:
(1) Create a BRL VLAN using WWU networking equipment (no separate LAN equipment is required). While the computers in the BRL will also still be connected to and access the WWU LAN, the BRL VLAN will an isolated VLAN such that network traffic on the BRL VLAN will not be seen on the WWU LAN. This project requires an insulated VLAN to protect the WWU LAN from any possible disruption.
(2) Acquire and install audio-video observation/monitoring equipment for both halves of PH 108 and the five breakout rooms.
(3) Acquire audio, video and business communication computer hardware and software for use in the PH 106 South Control Room. This equipment will allow real-time monitoring and recording from systems installed in the PH 108 complex.

The total cost of the project is $60,478.67. CBE has received and has available $35,000.00 in funding for this project. Therefore, CBE is requesting $25,478.67 as an STF grant.

II. Relationship to STF Objectives and Impact on Existing Academic Programs

Describe your proposed project in detail. Tell us how it will provide positive benefits to specific courses or instructional programs.

1. From a student perspective:
   a. How would this project provide additional student access to technological resources?

      The equipment in the PH 108 Behavior Research Lab is used to directly support curriculum by providing in class technology access for class instruction and individual/team work on class assignments. This project will broaden and enhance the quality of the student’s experience by giving them access to current business technology, together with current business software for student use and familiarization. This project will provide hardware and software necessary for satisfactory operation of the PH 108 Behavior Research Lab.

   b. How would this project broaden or enhance the quality of the student’s academic experience through the proposed technology?

      Up-to-date, efficient technology contributes to efficient use of technological resources by allowing students to accomplish the same work more efficiently. This translates into a higher quality experience for students. It also means less time per student on the equipment, which allows greater numbers of students to use the equipment.

   c. How would this project integrate technology into coursework?

      This project will give instructors the tools needed to integrate such technology as video-conferencing, phone-conferencing, email exchange and similar methodology into coursework. Up-to-date, efficient computer hardware and software allows the integration of work with the Internet, multimedia CD-ROM supplements, and data files from software such as Microsoft Power Point, Microsoft Visio, Microsoft Project, Microsoft SQL Server, and various web servers.
2. From a **faculty perspective**, explain how this project will enhance your ability to help students meet their educational goals.

CBE classes use course specific technology and software that is supported in PH 108 for class use, such as video conference and simulation software intended for team use. Such technology and software is installed, maintained and used in direct support of the educational goals of students taking CBE courses. The performance of PH 108 thus directly affects the educational experience of students taking CBE courses.

3. Will other departments be involved with this project? If so, please describe.

No

4. Has any part of this project previously been funded by STF?

   No ☐   Yes ☑   Please describe:

   The only STF funds were for the initial installation of PH 108 computer workstations, which were funded by an STF 2002 grant.

   CBE has funded or co-funded (with non-STF funding) some other improvements in the PH 108 Behavior Research Lab, including an upgrade of the computer workstations in 2007.

III. **Utilization**

1. Please list the anticipated number of times and duration per each use, per quarter, that the proposed technology will be used by students.

   This equipment may be used whenever classes being taught in PH 108. Of these classes, however, generally only the MGMT and MBA classes marked with an asterisk (*) in the lists below would use the BRL equipment. None the less, other non-MGMT classes such as MIS classes would have potential uses for the equipment

   Thus, the best estimate of use is the classes that may use the classroom together with the number of hours the class will use the classroom during the quarter (class enrollments are shown for reference). The following classes use the room one or more quarters per year. The room is heavily scheduled for use each quarter.

<table>
<thead>
<tr>
<th>Course Using PH 108</th>
<th>ApproxTotal Qtrly Enrollment (each section)</th>
<th>Total Number of Classroom Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 343</td>
<td>25</td>
<td>40</td>
</tr>
<tr>
<td>ACCT 451</td>
<td>25</td>
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</tr>
<tr>
<td>MIS 313</td>
<td>10</td>
<td>10</td>
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<tr>
<td>MIS 323</td>
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<td>10</td>
</tr>
<tr>
<td>OPS 461</td>
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<td>40</td>
</tr>
<tr>
<td>OPS 465</td>
<td>30</td>
<td>40</td>
</tr>
</tbody>
</table>
The following MGMT and MBA classes currently do not use the room, but could be scheduled into it and would use the equipment.

<table>
<thead>
<tr>
<th>Course Using</th>
<th>Approx Total Qtrly Enrollment</th>
<th>Total Number of Classroom Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PH 108</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MGMT 108 (*)</td>
<td>25</td>
<td>40</td>
</tr>
<tr>
<td>MGMT 425 (*)</td>
<td>25</td>
<td>40</td>
</tr>
<tr>
<td>MGMT 474 (*)</td>
<td>25</td>
<td>40</td>
</tr>
<tr>
<td>MGMT 481 (*)</td>
<td>25</td>
<td>40</td>
</tr>
<tr>
<td>MBA 507 (*)</td>
<td>20</td>
<td>40</td>
</tr>
</tbody>
</table>

IV. Project Budget

This section details the estimated cost of the project. Include costs that will be covered—by your department or another source—for ongoing costs such as personnel or operating expenses.

To assist you in preparing your budget, please consult with relevant campus support departments (ATUS, Purchasing, Space Administration, etc.). For more information, see this page on our website: [http://www.wwu.edu/stf/instructions.shtml](http://www.wwu.edu/stf/instructions.shtml)

Please complete all of the following sections (attach Excel spreadsheet for any additional details).

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Item Cost</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLEASE SEE ATTACHED SPREADSHEET</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

We recognize your proposed budget as an estimate. Final funding for successful projects will be established after thorough technical review; some costs may need adjusting due to price changes. The STF Committee may impose special conditions on a project; see the [STF Program Description](http://www.wwu.edu/stf/instructions.shtml).

1. What funding is available from your department or other sources?

CBE has received and has available $35,000.00 in funding for this project. The total cost of the project is $60,478.67. Therefore, CBE is requesting $25,478.67 as an STF grant.
2. Could this project be divided into discrete elements that could be funded separately?

No ☑ Yes ☐ Please summarize and prioritize project segments with cost estimate for each segment.

3. Are lab fees charged for any of the courses that will use this equipment?

No ☑ Yes ☐ If yes, please note: The total funding requested from the STF must reflect the amount collected from course fees for equipment replacement and/or equipment acquisition. All proposals asking for course fees will be reviewed by the Academic Budget Office.

V. Impact on Existing Resources

The proposal should address your project’s potential impact on existing resources. Special attention should be given to impact on data transmission networks (e.g., sources accessed, networking equipment, etc.), and personnel (e.g., staffing, administrative support, faculty support, etc.).

Any proposal that includes the replacement of computers should specifically address the feasibility and cost effectiveness of upgrading the computers rather than replacing the computers.

1. Describe how existing equipment is used. Contrast this to projected use if your project was funded.

Not Applicable

2. Is similar equipment or technology available elsewhere on campus—such as the Student Technology Center, Classroom Services, Video Services, Western Libraries, a college lab? If so, please describe why the existing equipment does not meet the needs outlined in this proposal.

This equipment may be similar to equipment in other WWU facilities. The equipment in other WWU facilities cannot be used because:

(1) CBE software needs to available in PH 108 for instructional purposes
(2) Some CBE software is licensed only for use in CBE, and may be installed in CBE PH 108 (for example, Microsoft MSDNAA software).
(3) This facility is uniquely suited to group instruction, including private breakout rooms that are not available in most classroom settings.
(4) Isolation of the BRL VLAN is necessary to keep BRL netwrok traffic only on and within the BRL VLAN.
3. If this project involves the replacement of equipment:
   a. Describe the “before and after” configuration changes. A spreadsheet reflecting these changes may be attached.

   This project will add technology, not replace it with the exception of the rerouting of some cabling from the former Control Room (PH 106N) to the new Control Room (PH 106S).

   b. Describe the costs and benefits of replacing vs. upgrading (if applicable).

      Not Applicable

4. Will this equipment be available to students outside your department?
   
   No ☐     Yes ☑ If the proposed technology will be used by students outside of your department, please describe how they would gain access, how the availability of the equipment will be publicized, the hours/week when the equipment will be available, and any costs that would apply.

   Non-CBE students take classes in PH 108

5. Does this project involve the check-out of equipment to students?
   
   No ☑     Yes ☐ If yes, please discuss whether or not the Student Technology Center could be assigned this task.

6. Does the department have adequate operating funds to provide ongoing maintenance and support?
   
   No ☐     Yes ☑ Please describe.

7. Does the department have adequate personnel funds to provide ongoing staff support for this project?
   
   No ☐     Yes ☑ Please describe.
VI. Space and Site Information

This section addresses any space alteration or site preparation necessary for the proposed project. Site alterations include painting, holes in walls, security systems, carpeting, construction, lighting changes, or conversion of a lab or office.

Special Note: If this project requires any site preparation, or if this project uses any space not currently under your department’s control, you must submit a draft proposal to Space Administration by November 25, 2009. Space Administration and Facilities Management will conduct a site survey and respond back to you concerning project feasibility, cost, and schedule. This information must be included in the final project proposal.

Proposals for projects that involve any site preparation will be considered only after the required site surveys by Space Administration and Facilities Management have been completed.

1. Location for installation of equipment or technology.
   PH 108 Behavior Research Lab suite (7 rooms)

2. Is site modification required?
   No ☐ Yes ☑ If yes, please describe (electrical, air, painting, lighting, security, network access, etc.).
   Reroute existing microphone cables, install any new required cabling, etc.

3. Will this project use space not currently assigned to your department or area?
   No ☐ Yes ☑ Please describe.

VII. Project Schedule

This section describes your overall implementation schedule. Project awards will be announced by the end of spring quarter. It is anticipated that projects would be substantially completed by the end of the calendar year. If there is any site preparation involved, please align your project schedule with the schedule provided by Space Administration and Facilities Management.

August-September 2010  Begin installation in PH 108 during summer break.

This project requires coordination with WWU Telecommunications upgrades to WWU network technology, and cannot be completed until the WWU upgrades are completed. Therefore, this project may not be completed by the end of the 2010 calendar year, but should be completed by the end the 2010-2011 Academic Year, and ready for use on the first day of classes Fall quarter 2011.
VIII. Constraints

This section should list any external or internal factors that could affect your project schedule, project objectives, or the project budget (e.g., if external approval is required for curricular changes, or if funding must be received by a certain date).

1. Please describe any constraints to this project.

Funds must be available by August 1st, 2010 for all payments. The approved proposal includes security upgrades, and this project will require coordination and scheduling with Facilities Management and ATUS.

This project requires coordination with WWU Telecommunications upgrades to WWU network technology, and cannot be completed until the WWU upgrades are completed. Therefore, this project may not be completed by the end of the 2010 calendar year, but should be completed by the end the 2010-2011 Academic Year, and ready for use on the first day of classes Fall quarter 2011.

IX. External Funding

This section must be completed for any projects over $100,000. For project budgets of this scale, the applicant should investigate opportunities for obtaining external funding for all or part of the proposed project.

1. Describe the external organization(s) able to provide funding in support of this project.
   
   Not Applicable

2. Describe the funding cycle for these requests (submission dates, projected award dates).

   Not Applicable

3. Indicate the amount of external funding that would be requested.

   Not Applicable

4. In cases where joint funding is requested, what will happen if the STF award is made and the external grant is not awarded?

   Not Applicable

5. Has a grant proposal already been submitted for all or part of the proposed STF project?

   Not Applicable
## PH 108 BRLab Estimated Costs - BRL Video Observation System

<table>
<thead>
<tr>
<th>Item</th>
<th>Model</th>
<th>Manufacturer</th>
<th>Description</th>
<th>Quantity</th>
<th>Est Price</th>
<th>Ext</th>
</tr>
</thead>
<tbody>
<tr>
<td>216 FD</td>
<td>Axis</td>
<td></td>
<td>IP Network Video Camera with Audio / power over ethernet [PoE]</td>
<td>8</td>
<td>699.00</td>
<td>5,592.00</td>
</tr>
<tr>
<td>Standard</td>
<td>WWU</td>
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<td>WWU Network Connections</td>
<td>8</td>
<td>100.00</td>
<td>800.00</td>
</tr>
<tr>
<td>NetDVMS</td>
<td>OnSSI</td>
<td></td>
<td>IP Network Video Recorder Software</td>
<td>1</td>
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</tr>
<tr>
<td>NetDVMS-1C</td>
<td>OnSSI</td>
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<td>per camera License</td>
<td>8</td>
<td>269.00</td>
<td>2,152.00</td>
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<tr>
<td>Proliant DL380 G6</td>
<td>HP</td>
<td></td>
<td>CBE BRL Network Linux Server [Video Observation]</td>
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<td>9,549.01</td>
</tr>
<tr>
<td>Windows Server 2008R2</td>
<td>Microsoft</td>
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<td>Windows Server Operating System [Video Observation] - Standard Version</td>
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<td>98.00</td>
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<tr>
<td>Windows Server CAL</td>
<td>Microsoft</td>
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<td>Client Access Licenses - NOW IN WWU ENTERPRISE AGREEMENT</td>
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<td>-</td>
<td>-</td>
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<tr>
<td>SuperLoader 3 LTO-4/8</td>
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<td>Backup Tape Autoloader</td>
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<td>4,099.00</td>
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<td>Smart-UPS XL 3000 VA</td>
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<td>1,598.00</td>
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</tr>
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</table>

### PH 108 BRLab Estimated Costs - BRL Microphone System

<table>
<thead>
<tr>
<th>Item</th>
<th>Model</th>
<th>Manufacturer</th>
<th>Description</th>
<th>Quantity</th>
<th>Est Price</th>
<th>Ext</th>
</tr>
</thead>
</table>

**NOTE:** WWU Facilities Management costs ONLY - cable rerouting

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### Equipment Subtotal
$ 25,887.01

### Equipment Sales Tax 8.8%
$ 2,278.06

### Equipment Total
$ 28,165.07

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### Additional material and Cost

**NOTE:** Space Administration (Francis Halle) WWU Facilities Management (Jeff Maurer) provided this estimate, and it should be considered accurate.

**NOTE:** Included in the Facilities Management estimate.

**NOTE:** Estimate

**NOTE:** The network connections will be provided via a WWU VLAN - no additional LAN switches are necessary.

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### Additional Cost Subtotal
$ 29,700.00

### Additional Cost Sales Tax 8.8%
$ 2,613.60

### Additional Cost Total
$ 32,313.60

### Project Grand Total
$ 60,478.67

### LESS CBE Contribution
$ 35,000.00

### SFT Request Total
$ 25,478.67