Proposal for the Use of the FY2001 Technology Fee

Submitting Organization(s): Department of Biology
Contact Person: Dr. P.C. Tai, biopct@langate.gsu.edu, 651-3109
Dr. Teryl Frey, biotkf@langate.gsu.edu, 651-3941

1. Executive Summary

<table>
<thead>
<tr>
<th>25 Word Project Description</th>
<th>One-time Costs</th>
<th>Ongoing Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology Department Discipline-Specific Instructional Computer Lab</td>
<td>$120,000</td>
<td>$80,000</td>
</tr>
</tbody>
</table>

2. Project Description

The goal of the project is to establish a supervised computer lab (35 workstations) in the Biology Department where students enrolled in Biology courses can access discipline-specific software. The lab will be supervised by personnel knowledgeable in biology as well as computers allowing students to ask questions about the subject material as well as to get help with the computers and to learn to use the software.

The Department of Biology is one of the largest departments at GSU with over 1200 majors, 200 Master’s students, and 70 full time Ph.D. students. In addition, the department instructs Freshman level Area courses that enroll 2400 students per semester. The Department also instructs Physiology and Anatomy courses that enroll 500 students per semester in nursing and allied health.

Computerization and networking has revolutionized instruction in Biology. Internet access has vastly increased available information. Most instructors have used the Web to facilitate instruction of their courses, either through their home pages and WebCT and many require Internet based assignments. Increasingly, textbook publishers have added software as instructional aids, however often this software too expensive to be part of the individual textbook package and thus site licenses are required. Among the types of software available in addition to study guides are “virtual anatomy” programs and programs that allow students to run simulated experiments. In this regard, some biology professors and instructors have designed their own software for use by students in their courses.

Therefore, to enable Biology majors and other students enrolled in Biology courses to utilize this wealth of discipline-specific software, it proposed that a supervised computer lab be established. The lab would be serviced by a dedicated server on which discipline-specific software, including commercially available software requiring site licensing, would be placed. Additionally, connection to the Internet would be available. This would allow 1). Instructors to make out-of-class assignments requiring both specialized software and the Internet, and 2). Student to study using both textbook-related and instructor-written software. In the process, many questions will arise on the part of the students using the computer lab, both in terms of the software and
computers themselves, but also with regards to the subject matter. We therefore propose to have the computer lab staffed by a full time coordinator with training in Biology. To keep the lab open for extended hours (8:00 AM to 10:00 PM on weekdays and 8:00 AM to 6:00 PM on weekends when classes are in session), Biology graduate students or upper level undergraduate student assistants will be employed.

3. Relevance to Regents Guidelines

This proposal is entirely responsive to the Regent’s Guidelines. With respect to each of these guidelines:

[1]. The requested funds will be used solely for instructional development and will allow for integration of computer technology for instructional enhancement in Biology courses at all levels of instruction.

[2]. A specific ongoing request is for software licensing and site fees for biology programs. Productivity tools such as Microsoft Office suites will also be available for student use only.

[3]. The budget is entirely for development of a computer lab to allow biology students to pursue discipline-specific endeavors in the presence of discipline-knowledgeable personnel. To a more limited extent, general tasks can be performed.

[4] The express goal of the proposal is to allow students in courses at all levels of instruction in the biology department access, and thereby training, in computer-based resources. Concomitantly, all of the biology professors and instructors will become trained in the same resources which will increase their instructional capability.

[5] While the main goal of this proposal is not to leverage additional funds, having the system in place will allow for professors and instructors to develop course-based software which could lead to instructional grants or development of textbooks.

[6]. Because of the size of the Biology Department’s instructional program, a full time professional coordinator is justified. As emphasized, this individual’s expertise will be in biology, rather than computers.

[7]. Funds are requested in this proposal solely for hardware and software for instructional use and for personnel to facilitate its implementation.

[8]. Funds for administrative software have not been requested.

4. Justification of One-time Funding Requirements

One-time costs: $120,000 for workstations and a server to set up the computer lab

Two rooms on the fifth floor of the Science Annex have already been remodeled and designated for the purpose of a discipline-specific computer lab. These rooms will accommodate 35 workstations. At an initial cost of $4,000 per workstation (including the workstation itself, networking, and security furniture) and $10,000 for a server, this would allow installation of 27 workstations plus the server during the first year.
5. Continuing Funding Requirements: $80,000 per year

Software: $20,000

These funds would provide for site and licensing fees for commercial software available with texts used in Biology courses (which can range from $250 to $1000; the Biology Department teaches 60 different courses)

Personnel: $40,000

A permanent staff person is requested to facilitate the operation. Considering the goal of providing discipline-knowledgeable personnel in the computer lab, a person with a biology background would be recruited and trained by our departmental computer personnel in the necessary technical aspects of the computer network. Suggested salary is $30,000.

Student assistants (graduate students or advanced undergraduate biology majors) would be recruited to man the computer lab during extended hours. Total request is $10,000.

Hardware: $20,000

During the first and second years, these funds will be used to install the full complement of workstations (35) and 4 networked printers. In subsequent years, these funds will be used for replacement and upgrading (at $2,500 per workstation without furniture and networking, this would allow upgrading at the rate of eight workstations per year, or complete replacement every 4-5 years.)

6. Accountability of Funds

No specialized procedures will be necessary. Ie. Standard university procedures for administering and tracking inventory will be employed and personnel will be handled through Human Resources.

7. Additional Funding Required, Non-Technology Fee

No additional funding is requested. However, it should be pointed out that the Biology Department has already expended roughly $40,000 on remodeling the two rooms to be used for the computer lab.

8. Impact on Computing/Network Infrastructure

Since most of the work will be localized between workstations and the dedicated server, impact on the computing/network infrastructure will be minimal. Students will be utilizing the Internet, however this will be done individually in small groups.