Department of Agricultural & Biosystems Engineering

FY10 Summary

The 3-D printer/scanner high definition system purchased this year is used in multiple departmental courses and has started impacting 150 CALS students/yr. The Solidworks software is used by students enrolled in various courses and will impact 60 – 80 CALS students/yr. The new networked computers and network access for the CNC machining centers will impact about 110 CALS students/yr.

As in past years, the cash balance and new computer fee funds will be used based on faculty proposals. ABE faculty members will be invited to submit proposals to the ABE-Computer Education Committee. Funding decisions will be made by the committee based on an evaluation of the impact of the proposed purchases on CALS students in ABE. This process has worked very well in the past and we expect it to be successful in the new fiscal year.

A. SUMMARY OF ACCOUNT BALANCE

<table>
<thead>
<tr>
<th>FY 10</th>
<th>FY 10</th>
<th>FY 10</th>
<th>FY 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>STARTING BALANCE</td>
<td>STUDENT</td>
<td>EXPENDITURES</td>
<td>CASH BALANCE</td>
</tr>
<tr>
<td>7/1/2009</td>
<td>COMPUTER FEES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$40,500.37</td>
<td>$22,823.68</td>
<td>$54,863.72</td>
<td>$8,460.33</td>
</tr>
</tbody>
</table>

B. DETAILS OF PURCHASED ITEMS

All items were purchased for the Department of Agricultural & Biosystems Engineering. These included computers (Dell) for departmental teaching labs in I Ed II room 117 as well as the computer controlled CNC rapid machining centers, a high definition upgrade for 3-D scanners (NextEngine), and a laser printer for the computer the I Ed II room 117 lab (Hewlett Packard). An additional laboratory computer technology expansion was completed which added valuable network connectivity for the CNC rapid machining centers. This included internet connectivity support (network switch, CDW), Ethernet cable (Anixter), real time control sensors (Sauer-Danfoss), and computer connectivity devices (Ladd). Additional funds were used to provide a standalone software license for three dimensional CAD software (SolidWorks).

C. DETAILS OF PERSONNEL EXPENDITURES

Personnel expenditures included partial support for a System Support Specialist (salaries and benefits total of $13,690.09).
D. EXPENDITURE LIST

All FY 09 expenditures related to the ABE-CALS student computer fee account are summarized below:

<table>
<thead>
<tr>
<th>Category</th>
<th>Dept</th>
<th>Location</th>
<th>For Use</th>
<th>Item</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel</td>
<td>ABE</td>
<td>I ED II</td>
<td>Students</td>
<td>Tec Support - P&amp;S</td>
<td>$13,690.09</td>
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<tr>
<td>Hardware Purchase</td>
<td>ABE</td>
<td>Rm 213</td>
<td>Students</td>
<td>3D scanner high definition upgrade</td>
<td>$2,013.00</td>
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<tr>
<td></td>
<td>ABE</td>
<td>Rm 117, 040</td>
<td>Students</td>
<td>3D scanner</td>
<td>$8,454.00</td>
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<tr>
<td></td>
<td>ABE</td>
<td>Davidson &amp; I ED II</td>
<td>Students</td>
<td>Teaching laboratory computers</td>
<td>$24,931.75</td>
</tr>
<tr>
<td></td>
<td>ABE</td>
<td>Davidson &amp; I ED II</td>
<td>Students</td>
<td>Teaching lab network connectivity upgrade</td>
<td>$1,973.69</td>
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<tr>
<td></td>
<td>ABE</td>
<td>Room 150</td>
<td>Students</td>
<td>Teaching lab laser printer</td>
<td>$1905.45</td>
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<tr>
<td></td>
<td>ABE</td>
<td>Davidson &amp; I ED II</td>
<td>Students</td>
<td>Computer based temperature control lab</td>
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<tr>
<td></td>
<td>ABE</td>
<td>Davidson &amp; I ED II</td>
<td>Students</td>
<td>Hazardous Materials Fee</td>
<td>$654.21</td>
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<tr>
<td></td>
<td>ABE</td>
<td>I ED II</td>
<td>Students</td>
<td>Solidworks</td>
<td>$300.00</td>
</tr>
<tr>
<td></td>
<td>ABE</td>
<td>I Ed II</td>
<td>Students</td>
<td>Recurring data service</td>
<td>$84.00</td>
</tr>
<tr>
<td><strong>TOTAL=</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>$54,863.72</strong></td>
</tr>
</tbody>
</table>
Department of Agricultural Education and Studies

FY10 Summary

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 1, 2009 Balance</td>
<td>$60,264</td>
</tr>
<tr>
<td>Income</td>
<td>$37,480</td>
</tr>
<tr>
<td>Expenses</td>
<td>$42,062</td>
</tr>
<tr>
<td>July 1, 2010 Balance</td>
<td>$55,683</td>
</tr>
</tbody>
</table>

Several areas received new technology and other upgrades during this year. The undergrad computer lab in 206 Curtiss was updated to replace systems that were almost 6 years old. This upgrade consisted of twelve new systems with 20” LCD monitors and current software. The Ag Mech shop at the AG450 Farm received new technology to enhance teaching for courses being taught to Teacher Education students. This technology will allow the class to meet in the new classroom area of the shop rather than the 450 Classroom. The AG450 Classroom and AG450 Computer Lab received updates for printers, laptop, and scanner. Additional supplies were purchased for presentation capture in the AG450 Classroom and 224 Classroom. The Teacher Education area received computer systems upgrades along with hardware that will allow for the opportunity to visit student teachers via Video IP Conferencing while they are student teaching. Additional upgrades are planned for the future in this area. Software and Maintenance upgrades were accomplished along with the necessary expendable supplies needed for the labs, classrooms, and teacher education areas.

July 1, 2010 to June 30, 2011 Future Plans

Additional enhancements will be done in the Teacher Education and AgMech areas to improve educational offerings. Technology will play a bigger role in student teacher visits due to budget reductions and the number of visits now required. A new faculty has been hired to work with the AgMech courses for the Teacher Education students. Additional technology items may be required in this area to enhance student learning experiences. Technology for student presentations in both classrooms will be upgraded as well. Software replacement and maintenance upgrades will continue. Printing solutions will be evaluated to replace 5 year old printers. The need for a student file server will be evaluated. The 224 Classroom will need a technology upgrade during this year. Computer systems in the graduate area will also be due for upgrades. We will continue to maintain a suitable cash reserve to cover any unplanned maintenance or equipment needs.

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Income</td>
<td>$37,000</td>
</tr>
<tr>
<td>Estimated Hardware Purchases / Repairs</td>
<td>$35,000</td>
</tr>
<tr>
<td>Estimated Software &amp; Maintenance Upgrades</td>
<td>$2,500</td>
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<tr>
<td>Estimated Expendable Supplies</td>
<td>$3,500</td>
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<tr>
<td>Estimated Administrative Fees</td>
<td>$1,000</td>
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<tr>
<td>Estimated Security &amp; Protection</td>
<td>$1,000</td>
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<tr>
<td>Total Estimated Expenses</td>
<td>$43,000</td>
</tr>
</tbody>
</table>

Estimated Balance June 30, 2011 $49,682
Department of Agronomy

Student Computer Fees helped to support a number of areas within the Department of Agronomy in FY10. Our open computer lab in G528 utilized this source of funding to replace the aging black and white and color laser printers in the room with one new highly efficient Dell color laser printer. Additionally, student computer fees provided printing paper, toner and supplies for the printers, as well as a student lab monitor position for staffing the lab during the evening hours of the semesters. Software licenses for the computers in G528, including MatLab, were also purchased using student computer fees. The computers in this lab were replaced last summer (2009) and required replacement cable locks, which were furnished on FY09’s student computing funds as well.

Student Computer Fees enabled our Department to replace the printer in the Agronomy Library (3020 Agron) with new Dell color laser printer. This printer was supplied with toner, paper, and other expendable supplies by student computing fees.

The largest purchases on the Department of Agronomy’s student computing fees account came in the replacement of two labs of student use computers. The first lab, G525 Agronomy, is utilized as the “Plant Center” – the lab that is used for the Agron 114 course. The content for this course is driven by an interactive web application that students use to learn course material. The old computers in this lab were outdated and had been out of warranty for a number of years and were replaced with 25 Dell Optiplex 980 computers with monitors. The lab also received a replacement Dell laser printer.

The second lab of computers replaced were for the Agronomy Soils Lab (1102 Agronomy Hall), which supports the Agronomy 154, 155, and 156 courses. This lab provides students with access to interactive materials required to learn the content for each of these classes. The course also uses the WinSoils program, which is a custom soil mapping program that is installed on each machine in the lab. The old computers were failing and out of warranty and were replaced with 35 Dell Optiplex 980 PCs with monitors.

The department of Agronomy was excited to utilize Student Computing Fees to fund a project to provide students with a Dell PowerEdge computer to allow remote access to applications such as SAS, the ArcGIS suite of programs, and custom written applications that are utilized for many courses in the department. Many Agronomy courses, including those in the distance Masters of Agronomy program, have utilized the applications on this computer to expand course learning materials to include interactive applications in the classroom and access to these applications for students off campus.

Various classroom PCs were replaced using Student Computing Fees funds, including G541,
1022, and the Agronomy student room in 1124.

The network switch in the G528 Computer Lab failed and was replaced.
Student Computer fees have also provided money for other necessary expenditures, such as the recurring data and telephone charges for our open computer lab (G528 Agronomy Hall).

**Department of Agronomy Student Computer Fees Future Expenditures FY10**

Looking ahead to the 2011 fiscal year, there are a few computational areas that the Department of Agronomy plans to fund using Student Computer Fees.

First and foremost, we will continue the funding of the hardware and software in our student labs in G525, G528, 1102, and the Agronomy library (3020). In addition, we will continue to support the technology resources in our Agronomy classrooms (G533, G541, 1022, 1026).

A large project currently underway is a complete technology upgrade in G533 Agron, the classroom used for the Agron 212 course. The classroom did not previously have any technology resources installed. The upgrade will include the installation of a projector, powered speakers, projection screen, necessary control equipment, a computer, and an Elmo device. The upgrades are currently underway and pending installation of equipment by Classroom Technology.

Support of Agronomy’s application server, initially implemented last year, will continue, as it has become a very integral part of course learning materials used for a wide array of Agronomy classes. Its use will extend beyond the physical classrooms and will be used increasingly by our Masters Distance education program to provide students with access to required programs and files. Programs such as SAS and ArcGIS will continue to be licensed for use on the computer and we are investigating the addition of other programs such as AgLeader’s SMS. The cart of HP thin client laptops that are utilized in conjunction with the application server will continue to be supported through the use of Student Computing Fees.

Consistent with CAC Appropriate Expenditures, Agronomy is investigating the displacement of a portion of our department’s IT support hourly wages and salary expenditures onto student computing fees. As deemed appropriate by CAC, Department Chair Dr. Kendall Lamkey and our department’s computing committee will determine a reasonable percentage of these expenses based on the support of instructional technology.
Department of Animal Science

Beginning Balance (July 1, 2009): $ 109,227.13
Income from AGLS transfers: $ 72,554.35
Income from printing: $ 1,786.27
Total expenditures: $ 58,047.64
Ending Balance (June 30, 2010): $ 125,520.11

Narrative Reports:
FY 2009-2010 Summary:
The largest expense category ($21,856.34) was the combined graduate student stipend ($18,498.34) and tuition charges ($3,358) for a computer science graduate student working on a software development project in Animal Science. The simulation project should be completed in the next fiscal year.
The second largest category was for hardware purchases ($20,097.34). Hardware expenses included:
  • Two portable computers for faculty or student presentations within the teaching section ($4,125.34).
  • Cost sharing for 3 new computers for teaching faculty (3 x $1,000 each = $3,000).
  • Upgrading of our network switch for the computer lab from 10Mb to 100Mb speed ($2,933.89).
  • Video cameras for the production of classroom resources for our judging classes ($2,769.11).
  • A new black and white printer was purchased for 124 Kildee ($2,651.62).
  • Extended warranty protection on 43 computers in the student lab ($2,404.92) which was accidentally omitted when the computers were purchased.
  • A classroom projector for 203 Kildee was purchased ($1,547).
  • Other miscellaneous expenses included wireless microphones to record classroom presentations and a replacement DVD/VCR for a classroom ($665.46).

The third largest category of expenses was expendable supplies ($6,213.37). Most of the expendable supplies were related to maintaining the printers and supplying paper for the student labs ($5,817.60). Note: Based upon student input we had deliberately kept the cost of printing below the cost of supplies to help reduce our account balance. The remaining expenses involved replacement batteries for uninterruptable power supplies, UPS, for servers needed for the student lab ($395.77).
The fourth largest category for the year was work-study students that help with security and maintenance of the student computer labs ($3,521.18).
The fifth largest category was for software purchases or licensing ($3,204.93). Almost all of this expense was for software used directly in the student computer lab ($3,108.08). One software package was installed on a faculty computer to facilitate the editing of recorded lectures for an undergraduate class ($96.85).
The sixth largest category was fees for services ($2,608.48). The largest expense in this category was for the installation of the LCD projector in 203 Kildee ($1,530.20). A virtual server is being rented from ITS to run a simulation program for class ($417). A pilot project with the Brenton Center for the use of Camtasia Relay was funded to deliver recordings of on-campus classes for later student access ($350). The Camtasia Relay service will be offered without charge this year to the entire college after a grant from the college student computer fee account. Other miscellaneous expenses include the repair of a lock on a cabinet in the computer lab ($53.90) and charges from ISU for overhead and hazardous materials ($257.38). The monthly network access for the student computer labs was the smallest category at $546.

**Plans for next year:**
We have already received delivery of 2 new servers to support our student computer lab at a cost of over $12,000. A departmental committee with half of the members being students met in spring semester to brainstorm ideas and establish priority uses for student computer fees. The top priority that emerged was wireless access in Kildee Hall. IT Services has made a proposal to distribute a number of the fast wireless access points around the building at a cost of almost $9,000/year. We are reviewing that proposal and hope to make a decision before the beginning of fall semester. We have initiated a $20/semester print subsidy through Papercut for all of our undergraduate and graduate majors (total costs could theoretically reach as much as $40,000/year). We are considering the deployment of three multifunction (print, scan, copy) devices around the department for student access through Papercut. These multifunction devices ($6,000 - $8,000/each) are more expensive than standard printers that we have previously placed in the computer labs but provide much greater functionality. We have decided to equip another of our departmental classrooms with a ceiling mounted projector for digital projection. We have decided to continue our program of offering cost sharing dollars for computer purchases by teaching faculty when it can be justified to the department chair. We have experienced a significant increase in student enrollment over the past few years and have significantly underestimated revenues from student computer fees for the past few years. We are continuing to identify appropriate expenses that will benefit students without spending the student computer fees unwisely.
Department of Biochemistry, Biophysics & Molecular Biology

As stated in our FY2009 report, “The mission of the department of BBMB is to maximize the learning experience of our students in the molecular biosciences. Increasingly, this training relies on sophisticated instrumentation controlled by workstations with software tools that allow students to ask smarter questions that connect concepts in chemistry, biology, physics and mathematics.” Therefore in FY2010 we utilized our funds to purchase the items we proposed.

We purchased a biotek plate reader, multi channel micro volume and related software located in 1256 MBB (Fisher Scientific). Analysis of multiple samples/replicate samples and statistical analysis are an integral part of high throughput biochemistry. It allows measurements on 96 samples at a time and provides the flexibility to manipulate and analyze data. It replaced a system purchased in 1996. The on-board diagnostic self-test and calibration test plate make it easy to confirm and document reader performance. All calculations are performed automatically.

Funds were also used to replace 9 keyboards in the teaching lab (room 1236 MBB) (Syx*Tigerdirect.com). Funds were used to purchase a 500GB hard drive to add disk space to the net cam (1236 MBB, Syx*Tigerdirect.com).

We upgraded the 13” monitors on the Cary spectrophotometer workstations by purchasing nine Inland Pro 200 Full Motion Wall mounted HP L1710 17” LCD monitors (with wall mounts) located in the teaching lab - 1236 MBB (Syx*Tigerdirect.com).

A Dell Optiplex 780 with 17”LCD monitor and a HP Duplexer (CB519A) for P4014n were purchased for Nanodrop replacement (Room MBB 1256, Vendor: DMI Dell and CDW Government). A HP laser jet P401n network printer and wireless bridge/access point was purchased for the microplate and nanodrop. These PC workstations have advanced graphics capabilities and are for student use in the undergraduate teaching labs (Room MBB 1256). Funds were used to increase security by purchasing a security surveillance system for monitoring two IP Webcam (Lux Riot Professional) for the computer lab (Room 1340 MBB; Vendor: Bluecherry) and replacing the surveillance camera with a Panasonic BB-HCM511A (PoE) Network Camera (for better resolution), the monitoring software, and Ethernet switch (Vendor: B&H Photovideo.com). This will assist with the protection and security of the items being purchased for the computer lab as well as students and staff should an incident occur.
Balance carried forward from previous fiscal year $38,983.83

Income
College Pool allocation $19,724.96
Augmented fee income $ -
Total Income $19,724.96

Expenditures
Hardware $11,482.27
Software $ 2,314.00
Expendables $84.43
Network Access $ -
Security and Protection $ 1,244.95
Support Personnel $ -
Course Development Personnel $ -
Total Expenditures $15,125.65
Less EEOB Transfer 4/21/2010 $321.20

Balance carried forward to next fiscal year $43,261.94

Plans for 2010-2011

We plan on purchasing:

1) A new Cary 50 and pc to bring our total to 9 units which will enable us to accommodate 18 students per section.
   Cost ~ $12,000

2) A second Nano-drop to reduce the waiting time, Cost ~ $10,500

3) Image capture, storage and analysis are integral to experiments in molecular biology.
   We will upgrade the undergraduate teaching lab (Room 1237, Molecular Biology Building) with a modern, computer-driven imaging system ($9739) that will replace a system installed in 1995.
Department of Ecology, Evolution & Organismal Biology

1. Account Details:
   a. 2009-2010 Account Balance:

   Beginning balance (July 1, 2009): $11,604.92
   Income: 11,808.31
   Expenditures: 12,306.41
   Ending Balance (June 30, 2010): 11,106.82

   b. Detail for purchased items
      (see attached spreadsheet)

2. Narrative Report:
   a. Impact on student learning:
      EEOB maintains a collection of portable computers (presently about 85) and desktop machines (about 15) for student use in Biology and EEOB classes, provides public access computers (6) in the lobby of Bessey Hall, provides some desktop machines for EEOB students, and maintains an array of wireless network access points throughout the classrooms and public areas of Bessey Hall.

   b. Planned 2010-2011 expenditures:
      We have developed a long-term plan for updating the collections of computers that are heavily used in our classes, particularly biology laboratory classes. In accordance with that plan, we plan to purchase additional portable computers to augment our present collections and to continue replacement of our oldest machines (now 6+ years old). In 2010-2011, we plan to purchase approximately 20 computers @ ~$1000 each, plus some miscellaneous equipment totaling $500-1000. To simplify maintenance, we prefer to purchase these computers in groups of at least 12.
Department of Economics

2009-2010

During FY10 Economics used funds to purchase new clients and servers, as well as software, networking, printing, and other products.

FY10 Beginning Balance $54,075.25

New fees in FY08 $30,030.65

Hardware Expenditures
Linux servers $19,073.72
Wyse thin clients 894.69
Printer 625.60

Software Expenditures
Scientific Workplace $2,526.90
Matlab 2,032.00
Windows Server 2007 1,789.00
Gauss 995.00
SAS 168.00
Stata 169.14

Networking Expenditures
Wireless Access Points $1,072.44
Recurring Data Service 504.00
Recurring Telecomm Service 228.00

Printing Expenditures
Paper $355.57
Toner 173.29
Administrative Charges 70.98
Disk usage/rental 20.49

Other Expenditures
Hazardous Materials Surcharges $436.45
$61,503.42

Total Expenditures -$33,263.27

FY10 Ending Balance $50,842.63
2010-2011 Plan

During FY11 Economics will continue to upgrade server capabilities. Both windows and Linux servers will be purchased. Additionally thin-client computers will be purchased to access these new servers.

<table>
<thead>
<tr>
<th>Beginning balance</th>
<th>$50,842.63</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticipated FY11 fees</td>
<td>$30,000.00</td>
</tr>
<tr>
<td><strong>Anticipated Expenses</strong></td>
<td></td>
</tr>
<tr>
<td>3 new servers</td>
<td>$15,000.00</td>
</tr>
<tr>
<td>20 thin clients</td>
<td>6,000.00</td>
</tr>
<tr>
<td>software licenses</td>
<td>2,000.00</td>
</tr>
<tr>
<td>Hourly lab monitors (salary &amp; benefits)</td>
<td>3,000.00</td>
</tr>
<tr>
<td>Networking</td>
<td>750.00</td>
</tr>
<tr>
<td>Printing</td>
<td>2,000.00</td>
</tr>
<tr>
<td><strong>Anticipated Expenses in FY11</strong></td>
<td>-$28,750.00</td>
</tr>
<tr>
<td><strong>Anticipated FY11 balance</strong></td>
<td>$52,092.63</td>
</tr>
</tbody>
</table>

In FY12 student lab in Heady 64 and 68 is expected to be upgraded. A great amount of FY11 remaining balances will be spent in this upgrade.
Department of Entomology

FY09-10 Summary

We used student computer fees to maintain and upgrade our student computing laboratory and teaching laboratory. Purchases included an Intuo electronic drawing tablet to be used with Adobe Illustrator and an omnidirectional microphone to enable remote participation in small classes. A new 24-inch monitor was purchased for the student computing laboratory. Maintenance costs for the student computing laboratory included paper and toner, licenses for SAS, Adobe Creative Suite 4, and SigmaPlot 11. Intel solid state hard drives were purchased to extend the life of older computers in the teaching lab, student lab and the laptops that are checked out.

Although our grant proposal to Ag-TAC to provide backup services as a common good for all ENT/PLP/NREM students was not funded, we did proceed with this pilot project for ENT only as mentioned in last year’s report. Subsequently, one of the students had her laptop stolen and we were able to recover all of her data. Not only that, but information collected by the backup software led to the identification of the thieves, and the laptop was recovered with help from the Ames police department.

A Xerox Phaser color printer was purchased to provide color printing to students. The printer is located in 110 Insectary and usage is monitored by the departmental secretary (in addition to PaperCut).

FY10-11 Plans

We plan to use funds from student computer fees to maintain and improve the software and hardware in our student computing laboratory and teaching laboratory. We plan to purchase a new Mac to replace the one that will go out of warranty this year. And we plan to explore efficiency gains through collaboration in the area of concurrent software licensing for student labs in ENT, PLP, MICRO and NREM.

Carryover Balance

Entomology has a relatively small carryover balance ($7,259), which we are holding in preparation for a refresh of hardware in the entomology student computing laboratory in FY11-12.
Department of Food Science & Human Nutrition

Expenditures - July 2009 – June 2010
Projects completed this past year included the installation of ceiling mounted projectors with laptop connections in departmental rooms. The FSHN Computer committee met and prioritized the rooms in terms of amount of student use. Rooms were also chosen to give accessibility to students in multiple buildings; Food Science Building, Human Nutritional Science Building and MacKay Hall. Impact on student learning; upgrade of multimedia equipment for collaborative learning for student groups, student clubs such as the food product development team, college bowl team, and for student presentations. The 206 MacKay classroom multimedia projector and audio equipment were also upgraded. This upgrade improved equipment used for classroom student presentations and for faculty instructional use for multiple FSHN courses.
A Mac Mini and MacBook Pro were purchased to evaluate and test the possibility of podcasts and video capture of classroom lectures for distance education purposes. The evaluation is continuing.

Plans for next year
The general plan for next year is to evaluate any need for future equipment upgrades or locations for new installations, explore distance education needs and software needs for courses taught in FSHN. More detailed plans will be made when the FSHN Computer committee meets in the fall.

Plans for unspent balance
Software and connection hardware for Texture Analyzer equipment used by students in multiple FSHN courses such as 406, 411 and 412; estimate $6500.
Department of Horticulture

During these years of budgetary reductions, we are very grateful to receive student computer fee monies that are essential to our continued support of extensive student computation activities in the Department of Horticulture.

This year, we are deploying Windows 7 and Snow Leopard on this department’s student computers to accommodate additional resource requirements mandated by students’ software/technology requests and needs. These new deployments on existing student computers have required significant hardware and software upgrades and their attendant costs.

Students have requested and received new technologies and software programs to assist them with internship reporting and e-portfolio creation. After receiving 52 student requests for Photoshop licensing in our departmental computer lab, we purchased and installed Adobe Photoshop CS4 on student computers in that location. We also added color printing technology in our student reading room.

By purchasing our printing consumables, such as toners and paper, in bulk quantities, we were able to save 16% versus single unit purchases. By implementing Papercut printer queues on the departmental printers that are used by students, we were able to decrease printing consumables expenditures by 19%.

Request 1: Expenditures of CAC Fees in FY10 by Department of Horticulture

<table>
<thead>
<tr>
<th>Purchase Category</th>
<th>FY10 Expenditure Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardware</td>
<td>$ 20,619.63</td>
</tr>
<tr>
<td>Software</td>
<td>$  5,739.73</td>
</tr>
<tr>
<td>Expendables</td>
<td>$  5,791.62</td>
</tr>
<tr>
<td>Network Access</td>
<td>$    70.50</td>
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<tr>
<td>Security and Protection</td>
<td>$  2,238.35</td>
</tr>
<tr>
<td>Support Personnel (includes Training Materials)</td>
<td>$  2,146.77</td>
</tr>
<tr>
<td>Course Development Personnel</td>
<td>$    0.00</td>
</tr>
<tr>
<td><strong>Total FY10 Expenses</strong></td>
<td><strong>$ 36,606.60</strong></td>
</tr>
</tbody>
</table>

Please see the attached spreadsheet that itemizes Department of Horticulture expenditures for FY10.
Request 2: How CAC Fees Were Used in FY10 by Department of Horticulture

This year the department is upgrading its student computers to Microsoft Windows 7 and Macintosh Snow Leopard. However, the newest versions of these operating systems require much more robust hardware resources, so RAM and hard drive upgrades were purchased and installed in existing student computers to extend their useful operational life spans.

We used the monies from the FY09 CAC grant award to purchase and install components for the mobile videoconferencing cart. The cart is currently operational. This cart’s design is so innovative that it is being used as a template for future videoconferencing carts built by ITC Classroom Services.

We set up a server for use by students when sharing large CAD files created as classroom assignments in three horticulture classes: HORT 280, HORT 381, and HORT 481.

In response to student input, we purchased a camcorder and ipod nanos for checkout to students, during their internships and other educational activities, for use in developing electronic reports and e-portfolio content. These technologies were well-received by the students and are in constant use.

We purchased licenses for Malwarebytes Antimalware software to install on a test group of student computers, so that our student customers can be assured of a safe and secure computing environment for their academic, extension, and research endeavors.

Expenditures’ impact on student learning: During FY10, the department purchased new technology and software to assist students with digital media content used in their internship reports and e-portfolios. These new technologies and software programs have also enabled students to work effectively with the social networking technologies and other digital content services currently offered on campus.

Request 3: How CAC Fees Will Be Used in FY11 by Department of Horticulture

Our June 30, 2010 ending balance was $3,603.53.

We will be paying $2,000.00 to activate the multipoint feature on our polycom device, which is part of our videoconferencing cart, whose assembly was funded with CAC grant monies awarded in FY09. This activation cost will enable us to finish our preparations for a seminar presentation on using the videoconferencing cart. We intend to present this seminar in FY11.

We plan to renew the existing software licenses for our student computers. We plan to pay for new software and software upgrades for our student computers. We plan on paying for license renewals for software programs, such as Symantec Ghost and Centurion Technologies’ Smart Shield and Mac Shield, that are used to image and to secure our student computers.
We plan to purchase additional licenses for Malwarebyte Antimalware software to install on the remainder of our student computers, so that our student customers can be assured of a safe and secure computing environment for their academic, extension, and research endeavors.

Expenditures’ impact on student learning: During FY11, we plan to expand our support of our student customers’ eportfolio and electronic reporting needs with the purchase of additional video editing software and technology. We plan to create a digital video processing station in 260 Horticulture Hall for use by students for their academic, extension, and research endeavors.
Department of Natural Resource Ecology and Management

1. Expenditures (July 1, 2009-June 30, 2010)

   See attached excel spreadsheet

2. Expenditure Narrative

   The largest portion ($11,346.27) of NREM’s computer fees were expended for hardware purchases during 2009-2010. Of that total, $8,143.49 was used to upgrade hardware in the undergraduate computing room, $275.64 was used to purchase scanners for the undergraduate reading room and the graduate computing lab, and $2927.14 was spent to upgrade servers supporting student activities and to purchase laptops available for student checkout. An additional $4845.24 was spent for software purchase and expendable supplies for use by both undergraduate and graduate students. $108.63 was spent for network access. Completing the total expenditure for the year was $2,888.09 for computer lab monitor salaries.

3. Planned Expenditures (July 1, 2010-June 2011)

   Student Lab Monitors Salary $3000.00
   SPSS License renewal (grad lab) $75.00
   Toner cartridges (classroom printers) $1500.00
   SAS License renewal (grad lab) $25.00
   20 computers for Computer labs $25,000.00
   48 laptops to replacing existing laptops $57,600.00
   Estimated total expenditure $87,200.00

4. Planned Expenditure Narrative

   Plans for the 2010-2011 include purchase of 20 desktop computers to upgrade computing facilities in the undergraduate and graduate computer labs ($25,000), and purchase of 48 laptops to replace aging laptops in our computer carts that are used extensively in a number of different NREM classrooms ($47,600). Student lab monitors will account for approximately $3,000, and expendables and software licensing is expected to account for the final $1,600 for a total expenditure of $87,200.
Department of Plant Pathology

1. New Apple laptop for student use. Allows students who don’t own a laptop to have access to laptop computing for projects, presentations, and trips.
2. Tablet PC for interactive teaching. Allows faculty to interact with students in teaching environment through real-time visual cues and diagrams. Only used for teaching situations.
3. Upgrade of Sherlock & Chemstation software for student computer labs. This allows students housed in the Science I building use the programs that otherwise may not have access to the software.
4. Patch cables for student use.
5. Netgear 8 port switch box for use in students housed in Bessey Hall.
6. Printer toner for student computer labs. This allows our students to print documents in the student computer lab.
7. MagSafe Power Adapter Replacement for student laptop.
9. Backup battery for Apple laptop for student use

2010/11

1. Continued funding of student labs and SAS software for students.
2. Payment of charges for Ethernet service to graduate student lab.
3. Maintain emergency reserve of at least $3000.00.
   1. Funding for hourly student tech support position (10 hours/week). Was not done in previous fiscal year due to current system support specialist not having time to initiate.
   2. Purchase new projector for teaching and student use.
   3. Maintain emergency reserve of at least $3000.00.
   4. Purchase additional wireless routers for Bessey Hall and Science I buildings to provide better network access for students.
   5. Purchase licenses for End Note software for student lab computers.
   6. Purchase license for Adobe Design Premium software for student lab computers.
   7. Purchase license for Sigma Plot software for student lab computers.
   8. Purchase license for Vector NTI software for student lab computer.
   9. Expand backup system to provide fixed amount of backup space for every student in department.
Department of Sociology

2010 - 2011 Expenditure Narrative:

Funding, as usual, was expended primarily to support the 409 East Hall Graduate Lab and the 64/68 Heady Hall Computer Lab. Monies were used for printing, software licensing and maintenance costs. We continued support for “free” printing in the 4th Floor East Hall Graduate Computer Lab.

Beyond the usual software licensing and maintenance half of one copy of Mplus was purchased using CALS CAC funds; the other half was purchased by the department. This is being used by one of our methods faculty to investigate the program for use in future methods classes.

This year’s report reflects updates to our teaching/seminar room in 113 East Hall as mentioned in last year’s report. A new high-end multimedia capable computer was installed.

Due to the recent budgetary situation and other departmental changes, upgrades - as mentioned in previous reports - to the 64 Heady Hall lab have been put on hold.

Future Plans Narrative:

Future funds will serve two main purposes in the next fiscal year. Our primary goal for CAC funds is, as usual, to maintain and supply our existing facilities.

Any carry-over funds are for replacing equipment in the 409 East Hall Lab in the future. We will be purchasing a new printer for this lab soon. The rest will be used to replace the six computers in this lab. These machines were purchased in the spring of 2006 and have less than one year of warranty remaining.
Microbiology

The purchases that were made with the student computer fee funds last year (FY 10) were determined based on:

1) the results of a meeting of an *ad hoc* microbiology computer committee in the fall of 2010. The computer committee consisted of two undergraduate students, two graduate students, two faculty members.

2) An on-line survey which was conducted (May-June, 2010) in order to get feedback from students (majors and non-majors) previously enrolled in microbiology classes to evaluate the computer facilities in Science 1, especially the student computing lab.

1) Summary of account balance

<table>
<thead>
<tr>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Beginning fiscal year balance (July 1, 2009)</strong></td>
</tr>
<tr>
<td><strong>Income for fiscal year (July 1, 2009 – June 30, 2010)</strong></td>
</tr>
<tr>
<td><strong>Total expenditures for fiscal year (July 1, 2009 – June 30, 2010)</strong></td>
</tr>
<tr>
<td><strong>Ending Balance (June 30, 2010)</strong></td>
</tr>
</tbody>
</table>

**The total expenditures reported here are based on the spreadsheet provided by D. Acker. The actual expenditures are $18,842.95. The difference is due to an insurance disbursement of $878 due to water damage during remodeling and ~$167 that were charged to the wrong account and will be CVed to the computing account. These items are highlighted in yellow on the attached spreadsheet.**

2) Attached please find a spread sheet that identifies the purchases that were made with the student computer fees during the fiscal year 2009-2010.

3) Narrative 2009-2010 expenditures:
   - Adobe software to edit pictures for graduate student papers. This software was installed on one of the student computers located in room 205 Science 1.
   - Projector for undergraduate and graduate student presentations for required seminar classes (such as Micro 450 for undergraduates and Micro 604 for graduate students) and work in progress meetings. A wireless presentation device was also purchased so students can give professional presentations.
   - Tablet lap top computer for presentations in classes. The tablet function has been well received by students in the microbiology classes based on course reviews. This laptop is available to loan out to students or faculty for classes, and has served as a temporary replacement when faculty specific tablet laptops are in need of repair.
• A second tablet PC was purchased (50% from Microbiology computer fees/50% from Plant Pathology student computer funds) for one of our major teaching faculty to use in class. The faculty member teaches a high level required class in the spring and fall that benefit greatly from the stylus writing on screen during lecture.

• A new desk top PC (no monitor) was purchased to run equipment and software in the advanced microbiology lab classes in room 108 Science 1. This computer runs the Gel Doc so students can take pictures of their gels for lab reports, and the nanodrop to generate readouts and graphs for lab reports. Both machines are student run and used extensively by students during the required Micro 440 lab. Note that the equipment (Gel Doc and Nanodrop were not purchased with computer fees).

• A new desktop PC was purchased for a faculty member who is 100% teaching. The desk top computer will support on-line delivery of courses and for development of teaching materials for a new microbiology course emphasizing Microbes in Society.

• Two high speed wireless routers were purchased and installed in room 108 and room 305. These new high speed wireless routers will supply wireless signal to undergraduates on first floor in the teaching labs and seminar room and to graduate students on the third floor. Due to the nature of the Science 1 building, these areas had weak to non-existent wireless signal. This will facilitate note taking during lab classes and seminar classes.

• Using money from a TAC grant, funds from the Microbiology Computer Fund and the Plant Pathology Computer Fund, we purchased hardware and software for fatty acid analysis to use with Micro 440 lab. This purchase includes all items listed as MIS & located in room 305. It will permit students individual access to analysis. During the summer, the data base of lipid analysis has been constructed by microbiology undergraduate students and demonstrates the usability and versatility of the purchase. The previous software was complicated, could only be used by instructor, and was unreliable. It actually broke down prior to use in the class in fall 2010. This state of the art software should prepare students for jobs and research in modern microbiology facilities.

4) Anticipated Expenditures for FY 11, based upon the on-line survey of computer use by students in microbiology courses.

• A portion of the funds have been saved to fund a computer lab renovation that we estimate will need approximately $15,000. This renovation is based on the computer survey which was collected May-June 2010 and is described above.

• Options that have been identified include
  • A new flat bed scanner
  • Higher speed connection for student computer lab (change from 10Mbps to 100 Mbps) along with cables and router for networking computers to single high speed ethernet hub
  • New iMacs (2) due to increasing preferences
  • New PCs (8-9) to be purchased in Spring 2011 and set up over summer 2011 for use in FY 12.