Department of Agricultural & Biosystems Engineering

FY09 Summary

The 3-D printer/scanner system purchased this year is used in multiple departmental courses and has started impacting 150 CALS students/yr. The Moldflow, Solidworks and Surveying software are used by students enrolled in various courses and will impact 60 – 80 CALS students/yr. The five new laptops for our laptop lending program will impact about 150 CALS students/yr.

Purchase of the 3-D scanning/printing system has facilitated upgrading the technical graphics classes (TSM 116, TSM 216) into a ‘concurrent engineering’ model and allowed students to experience reverse engineering, analysis, and design optimization. The 3-D printer has enabled students to turn CAD models into physical prototypes, and use the prototypes to test / present design changes made to the objects being studied. The laptop lending program that allows ABE students to check out laptops for course-related uses has been very successful.

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 09 STARTING BALANCE 7/1/2009</th>
<th>FY 09 STUDENT COMPUTER FEES</th>
<th>FY 09 EXPENDITURES</th>
<th>FY 09 CASH BALANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>$41,022.22</td>
<td>$45,454.49</td>
<td>$46,819.20</td>
<td>$39,657.51</td>
</tr>
</tbody>
</table>

B. DETAILS OF PURCHASED ITEMS

All items were purchased for the Department of Agricultural & Biosystems Engineering. These included three computers (Dell), a 3-D scanner (NextEngine), a 3-D printer (Dimension 3-D, Mid-West Tech), and an uninterrupted power supply (CDW) purchased for a total of $18,964.12. These items are located in 213 I Ed II. A data acquisition equipment was purchased for $12,809.11 for the Geographical Information System Lab in Davidson Hall. Five laptop computers ($1342.74/each) were purchased for student checkout from Dell and are located in I Ed II. DatMemory upgrade was purchased for $254.62 for system support computer from Newegg and was added to the System Support Specialist’s computer located in 207 Davidson.
Software purchased for student course related computing included Moldflow, Solidworks and Survey Monkey for $5,500.00. These were installed in computer laboratories in Davidson Hall and I Ed II Building.

C. DETAILS OF PERSONNEL EXPENDITURES

Personnel expenditures included partial support for a System Support Specialist (salaries and benefits total of $1554.96) and support for student employee (salaries and benefits total of $938.67) for a total of $2,496.63.
Department of Agricultural Education and Studies

FY09 Summary

The Agricultural Education & Studies department maintains three computer labs, two teaching labs/classrooms, and several graduate student workstations for student use. The 206 Curtiss Undergrad lab is open 8am to 5pm Monday to Friday and is available to the public. The grad lab is available 24 hrs only to AGEDS graduate students. The 450 Lab is available only to students taking AGEDS 450 or 488.

The majority of our expenses were to update the AG450 Lab and Teaching Lab/Classroom. Ten new workstations with 19” LCD monitors were installed in the Class Room / AG450 LAB / AG450 Office for student use. This is an increase of three additional workstations for students to use in a typical class size of 40. Our project also updated other classroom technology features for student presentations. This includes the ability to capture lectures and student committee presentations so they can be made available to students who are not in class or for future classes to review. The classroom update included new Elmo, USB Capture device, Video Capture Camera, Ceiling Microphones, mounting brackets, cables and other materials necessary to complete the project.

Funds were combined from a College Technology Grant, AGEDS Student Computer Fees, and AG450 Class Funds to further enhance this project beyond the original scope of $21,683.
Department of Agronomy

Student Computer Fees helped to support a number of areas within the Department of Agronomy in FY09. Our open computer lab in G528 utilized this funding to provide a technology update, including replacing all 23 computers with new Dell Optiplex 960 computers and flat panel monitors. Additionally, funding from 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 SAS and MatLab, were also purchased using student computer fees.

Student Computer Fees enabled our Department to replace the six computers in the Agronomy Library (3020 Agron) with new Dell Optiplex 760 units with flat panel monitors. The color laser printer in the library was supplied with toner, paper, and other expendable supplies.

Another greatly needed upgrade within the Agronomy Department was completed due to Student Computer Fees in the form of new HP Thin Client laptops. Our Department’s previous cart of laptops used for interactive classroom learning was over four years old and out of warranty with failing components. We purchased a set of HP thin client laptops to deploy in a client/terminal server environment. This will afford Agronomy’s IT Support group efficient manageability of the software utilized by the laptops and higher speed computing for the analysis software used by the students in class and for research outside of class.

Two items available for student checkout and use in Agronomy classes were purchased utilizing Student Computer Fees: a Dell M209x portable projector and a Dell E5400 laptop. Our previous projector failed outside of warranty, and the laptop was also out of warranty and not able to keep up with the applications installed on it.

The network switch in one of the classrooms (1022 Agronomy Hall) 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 2010 fiscal year there are many items that the Department of Agronomy plans to purchase using Student Computer Fees. As of June 30, 2009, the Department’s Student Computer Fees account had a balance of $54,962.35. Some of these carryover funds have already been spent, as equipment ordered during the FY09 year arrived and was accounted for after the 6/30/09. Included in these purchases was a Dell PowerEdge R905 server to be used in conjunction with our thin client laptops. This computer will provide access to software utilized by Agronomy classes and will also provide students inside and outside Agronomy with an environment in which to run analytical software such as SAS and GIS applications. Software licenses for this computer will also be purchased on Student Computer Fees, including the Windows Server Client Access licenses and SAS. These purchases will benefit a large number of students.

- PowerEdge Computer: $11,161.80
- Software licensing costs: $7,515
- Subtotal: $18,676.80

Student computer fees will continue to provide upkeep to currently provided resources for students. This includes expendable supplies for printers, repairs and upgrades for computer equipment, support personnel for our open computer lab (lab monitor), software, and telecommunications. The values below are estimated using the amounts spent during FY09.

- Expendables: $6,000
- Support Personnel: $4,300
- Software: $2,610
- Network Access: $372
- Subtotal: $13,282

Additional anticipated expenditures from Student Computer Fees include miscellaneous expenses such as replacement of projector lamps and other failed hardware, such as the Dell M209x projector and Dell E5400 laptop purchased in FY09.

- Subtotal: $2,200

Within FY10 we will replace the 25 computers in G525 Agronomy Hall. This room is the computer lab used for access to course materials for Agronomy 114. The lab is used heavily and the computers currently in the lab have had their warranties expire and are due for replacement.

- $779 per computer x 25 computers = $19,475

Total expected expenditures for FY10: $53,633.80
Additional anticipated expenditures from Student Computer Fees include miscellaneous expenses such as replacement of projector lamps and other failed hardware, such as
the slide scanner that was purchased during FY 07-08. These expenses are not able to be easily foreseen, so the minimum projected amount for this fiscal year’s expenditures last year are based off of last year’s requirements.

<table>
<thead>
<tr>
<th>Projector Lamp Replacements:</th>
<th>$629.21</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nikon CoolScan 5000ED Scanner</td>
<td>$1052.26</td>
</tr>
<tr>
<td><strong>TOTAL:</strong></td>
<td><strong>$1681.47</strong></td>
</tr>
</tbody>
</table>

According to these figures, total anticipated expenditures for maintaining our labs in G528 and 2216 are $9303.58. A safer estimate would include a small buffer for variance. **With this in mind, budgeted expenditures for our labs in G528 and 2216 Agronomy Hall are $12,000 for FY10.**
Department of Animal Science

FY09 Summary
The major expense ($24,139.69) for this year was a half-time graduate student working on a software development project for a required undergraduate class that will replace software originally developed over 40 years ago. We also employed 3 undergraduate students ($4,869.34) to monitor and maintain our two student computer labs. The second biggest expenditure ($7,489.72) was for a variety of hardware purchased during the year. More than half of this expenditure ($5,338.38) was for a video display system for the classroom in 104 Kildee which includes 2 large screen TVs. The video system in another classroom (2310 Kildee) required an upgrade ($1,103) in the electronic switching equipment. Another project at the ISU horse barn ($750) involved installing a couple of web cams so that students could monitor mares during foaling. As a result of student input, we lowered print costs last year to $0.005/page for monochrome printing and $0.05/page for full color. Students began to print more so paper and toner supply costs increased to $4,469.58 for the year. Other expendable supplies ($1,816.51) included supplies to connect new classroom video switch, repair of classroom projector, a classroom projector lamp, batteries for UPS power supply for lab server and miscellaneous supplies for the computer lab. Software purchases ($788.96) included updated licenses for Camtasia and Video Studio which provide student editing of video in the computer lab. Ghost software is used to configure and maintain our base software images for the computer labs. The Sassafras software allows us to meter a variety of software titles across all computers without purchasing a full copy for every computer in our computer lab. Internet access for the student computer labs cost $546 for the year. We also had to purchase ($103.48) a new wireless access point for a classroom after the previous equipment had been stolen. Finally, ISU charges administrative fees which totaled $84.83 for the year.

FY10 Plans
The ending balance in the student computer account for FY09 was $109,227.13 and represents a significant increase in our ending balance over the previous fiscal year. We had anticipated income of $50,449.21 but realized income of $94,212.16. Had income been equal to initial projections, our balance would have increased only slightly. Faculty and students have met multiple times to generate new projects to utilize these student computer fees. Most projects that were identified involved significant inputs of faculty/staff time which is currently very limited because of our record enrollment. With such a significant ending balance, we will need to continue to search for additional projects in instruction that can benefit from these funds. Three new laptops have already been purchased since the end of the fiscal year. Three new digital video cameras and related peripherals were purchased to enable faculty to develop visual content for their classes. A new color printer has been purchased and installed for student use in the computer lab. Another classroom is in the process of being setup with a video projection system. We are exploring how to improve wireless access in our building for students and possibly provide additional printing locations. Some discipline specific software has been purchased and additional software is under consideration.
We will continue to employ a graduate student on the software project for most of this year. Funds have been designated to support additional student employees to work on a variety of instructional related IT projects. Matching funds were designated to support computer purchases by faculty when the computers are intended for instructional activities. A new portable projector has been approved for the teaching office. IT projects such as additional webcams are being considered for our teaching farms so that students can view animals remotely. It is unlikely that we will be able to reduce the ending balance much this year but we are hopeful that we can limit any further increases in the balance. We currently maintain 44 computers in our student labs and will need significant funds when we decide how to replace them in a couple of years.
Department of Biochemistry, Biophysics & Molecular Biology

FY09 Summary
The major expense ($24,139.69) for this year was a half-time graduate student working on a software development project for a required undergraduate class that will replace software originally developed over 40 years ago. We also employed 3 undergraduate students ($4,869.34) to monitor and maintain our two student computer labs. The second biggest expenditure ($7,489.72) was for a variety of hardware purchased during the year. More than half of this expenditure ($5,338.38) was for a video display system for the classroom in 104 Kildee which includes 2 large screen TVs. The video system in another classroom (2310 Kildee) required an upgrade ($1,103) in the electronic switching equipment. Another project at the ISU horse barn ($750) involved installing a couple of web cams so that students could monitor mares during foaling. As a result of student input, we lowered print costs last year to $0.005/page for monochrome printing and $0.05/page for full color. Students began to print more so paper and toner supply costs increased to $4,469.58 for the year. Other expendable supplies ($1,816.51) included supplies to connect new classroom video switch, repair of classroom projector, a classroom projector lamp, batteries for UPS power supply for lab server and miscellaneous supplies for the computer lab. Software purchases ($788.96) included updated licenses for Camtasia and Video Studio which provide student editing of video in the computer lab. Ghost software is used to configure and maintain our base software images for the computer labs. The Sassafras software allows us to meter a variety of software titles across all computers without purchasing a full copy for every computer in our computer lab. Internet access for the student computer labs cost $546 for the year. We also had to purchase ($103.48) a new wireless access point for a classroom after the previous equipment had been stolen. Finally, ISU charges administrative fees which totaled $84.83 for the year.

FY10 Plans
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Department of Ecology, Evolution & Organismal Biology

EEOB maintains a collection of portable computers for student use in Biology and EEOB classes, provides public access computers 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.

2008-2009 expenditures:

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 MacBook computers</td>
<td>$9518.44</td>
</tr>
<tr>
<td>memory upgrades for MacBooks</td>
<td>1019.95</td>
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<tr>
<td>misc. supplies</td>
<td>40.94</td>
</tr>
<tr>
<td>Total</td>
<td>$10579.33</td>
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</tbody>
</table>

In 2008-2009, we added 10 MacBook computers to our collection of portable computers primarily used in Biology classes. Our other main expense was additional memory for the MacBook computers. The accompanying spreadsheet lists the details for these expenses.

Planned 2009-2010 expenditures:

Our July 1, 2008 balance was $11,604.92. We have developed a long-term plan for updating the collections of portable 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 2009-2010, we plan to purchase approximately 15 computers @ ~$1100 each, plus some external hard drives and other miscellaneous equipment totalling $500-1000. To simplify maintenance, we prefer to purchase these in groups of at least 12. Also, rather than buying more machines late in the 2008 fiscal year, we deferred purchase until this September in anticipation of the new Snow Leopard operating system being released by Apple.
In FY09 we spent allocated funds on the purchase of new LDC TV displays for the Room 68 Heady Hall lab. In addition we purchased a video camera, software, telecom charges, printing supplies, and other one time expenses for the lab.

**2008-2009**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY09 Beginning Balance</td>
<td>$34,712</td>
</tr>
<tr>
<td>New fees received in FY09</td>
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<tr>
<td>Printing Revenue</td>
<td>$1,511</td>
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<tr>
<td><strong>Expenditures</strong></td>
<td></td>
</tr>
<tr>
<td>Paper</td>
<td>369</td>
</tr>
<tr>
<td>Administrative Charges</td>
<td>45</td>
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<tr>
<td>Printing Charges</td>
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<tr>
<td>Recurring Telecomm Service</td>
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<tr>
<td>Recurring Data Service</td>
<td>504</td>
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<tr>
<td>Video Cable for 68 Heady Lab</td>
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<tr>
<td>Video Camera for 68 Heady Lab</td>
<td>294</td>
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<tr>
<td>Graphics card</td>
<td>120</td>
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<tr>
<td>3 Dell work stations for 280 Heady Lab</td>
<td>10,064</td>
</tr>
<tr>
<td>4 42-Inch LCD TV Displays, 68 Heady Lab</td>
<td>4,622</td>
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<tr>
<td>Installation &amp; parts for LCD TV Displays</td>
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<tr>
<td>Software licenses</td>
<td>750</td>
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<tr>
<td>Hazardous Materials Surcharge</td>
<td>215</td>
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<tr>
<td><strong>Total Expenditures</strong></td>
<td>$26,132</td>
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<tr>
<td>FY09 Ending Balance</td>
<td>$54,075</td>
</tr>
</tbody>
</table>

**2009-2010 Plan**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning balance</td>
<td>$54,075</td>
</tr>
<tr>
<td>Anticipated FY10 fees</td>
<td>$22,000</td>
</tr>
<tr>
<td><strong>Anticipated FY10 Expenses</strong></td>
<td></td>
</tr>
<tr>
<td>Software licensing</td>
<td>10,000</td>
</tr>
<tr>
<td>3 Laptop computers</td>
<td>3,000</td>
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<tr>
<td>Paper, toner, misc. supplies</td>
<td>8,750</td>
</tr>
<tr>
<td>Recurring Telecomm Service</td>
<td>228</td>
</tr>
<tr>
<td>Recurring Data Service</td>
<td>4,500</td>
</tr>
</tbody>
</table>
Total Anticipated Expenses in FY10 $26,478

Anticipated FY10 balance $49,597

During FY10 we plan to increase software availability for students, increase our printing allocation to graduate students, purchase three laptops for dedicated instructional purposes, cover telecom and data service charges for all students, as well as continue to purchase miscellaneous supplies for computer lab printing and maintenance. In July of 2012 we anticipate spending the accumulated balance to replace the lab computers which will be four years old.
Department of Entomology

FY09 Summary

We used student computer fees to maintain and upgrade our student computing laboratory and teaching laboratory. Purchases included a new computer for the teaching laboratory, paper and toner and new computers and a scanner for the entomology student computing laboratory. Licenses for SAS, Adobe Creative Suite, Endnote and other software were maintained to keep them current. An additional laptop was purchased for student checkout to replace an out-of-warranty laptop with failed video.

We received a grant from Ag-TAC to upgrade the entomology teaching laboratory for digital image acquisition from the compound and dissecting microscopes and replaced the multimedia projector to provide higher resolution presentations. This enables professors and teaching assistants to provide greater resolution from start to finish when teaching morphology and physiology.

FY10 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 are currently exploring the possibility (with EGSO) of offering online backup to all entomology students.
Department of Food Science & Human Nutrition

1. Last Fiscal Year spending

Last year we used unspent and current funds to upgrade and replace and increase the number of laptops used by faculty for teaching, add printers in the food chemistry and MacKay classrooms (food product development course and others), purchase toner cartridges and papers for all classroom printers, purchase presentation remotes for the teaching laptops, and upgrade 4 computers in 210 Mackay classroom. We also began the process of upgrading and equipping 4 rooms with media equipment for student presentations. 3 of the rooms have been completed over the summer (some of the charges will be in the next fiscal year) and an estimate has been requested for the 4th room.

2. Plans for current fiscal year

Plans for the current year include: continuing upgrade of media equipped rooms for student presentations/use with the addition of projectors, screens, etc., add wireless access to first floor of the food science building (request from central CAC to switch take over payment for access point), continue with software maintenance agreement fees for software installed in teaching and computer labs (Genesis Research & Development, Food Analysis, NUTST), purchasing more laptops for classroom/instructional use, possible purchase of more computers for the MacKay teaching labs – dependent on space available.

3. Student Learning Impact

Creation of media equipped rooms in 1121 Human Nutritional Sciences Building, 2259 Food Sciences Building, 3342 Food Sciences Building. The rooms were prioritized and done in order of amount of student use. – Used by students daily. Presentations by instructors and students are enhanced by ceiling mounted projectors and screens. Increase and upgrade of teaching laptops – Laptops for instructor checkout (daily) are upgraded for increased speed and capacity. Advanced technology presentations are available for use in lecture classes. Addition of computer and printer in Food Chemistry lab – Student data can be recorded and analyzed during class enhancing understanding. Used by approx. 30 students/week. Addition of printers and printer supplies in 210 MacKay – Increased speed and quality of student data reports and presentations. Used by approx. 60 students/week. ChemDraw and NTSR software license – Student access to professional software.

4. Plans for unspent balance

Unspent balances will be used for completion of media equipped rooms.
Department of Genetics Development and Cell Biology

2008/09
We purchased a number of purchases to expand or upgrade computer use in courses taught by GDCB, including some replacement computers for the Biol 211L/212L and 312 laboratories (expenses shared with EEOB), some Apple/Dell Laptops for a mobile lab serving BCBio and Biol classes (cost shared with a LASCAC grant to purchase most of the machines) and a mobile security cart for the laptops to facilitate their secure sharing over multiple courses. We also purchased a new computer for the Electron Microscope courses for use by students in evaluation of their data and images, and an Apple Desktop computer used in the GDCB Science II satellite office for student access (both as replacements for older, failing computers), as well as upgrades for teaching computers in Biol 313L.

2009/10 Plan
We currently are working on plans to continue replacements and upgrades for computers in courses that have not yet benefitted from new technology.
Department of Horticulture

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

This year, we were excited to receive funding for a grant that will empower the Departments of Entomology, Horticulture, and Plan Pathology to integrate mobile video conferencing into their curricula. In accordance with the wishes of the College of Agriculture and Life Sciences’ Technology Advisory Committee, a college-wide demonstration of our project accomplishments will occur in 2010.

Request 1: Expenditures of CAC Fees in FY09 by Department of Horticulture

<table>
<thead>
<tr>
<th>Purchase Category</th>
<th>FY09 Expenditure Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software Purchases/Maintenance/Upgrades</td>
<td>$ 4,530.70</td>
</tr>
<tr>
<td>Expendable Supplies</td>
<td>$ 4,569.20</td>
</tr>
<tr>
<td>Hardware Purchases</td>
<td>$ 2,988.47</td>
</tr>
<tr>
<td>Network Access</td>
<td>$ 552.00</td>
</tr>
<tr>
<td>Support Personnel</td>
<td>$ 209.95</td>
</tr>
<tr>
<td>Total FY09 Expenses</td>
<td>$12,850.32</td>
</tr>
</tbody>
</table>

Please see the attached spreadsheet that itemizes Department of Horticulture expenditures for FY09. It is in pdf format for ease of viewing and printing.

Request 2: How CAC Fees Were Used in FY09 by Department of Horticulture

During the past five years, students visiting the computer labs in Horticulture Hall have been very vocal concerning their requests for computational services and how they feel “fee’d to death”. They want visible evidence of how their computer fees are being spent by the university. Historically, one way that we have supported our student customers over the years is to offer free printing in the computer locations in Horticulture Hall.

However, we take the recommendations of the College of Agriculture and Life Sciences’ Technology Advisory Committee very seriously. So, when we were told that we are spending too much for our students’ free printing needs, we made major changes in how printing is handled in our department: We changed our open computer labs to departmental computer labs, which reduced student traffic substantially. Furthermore, departmental faculty are now asked to pay for the printing costs in their respective graduate student office areas. These policy changes have significantly reduced our printing-related expenditures from CAC monies.

The Department of Horticulture hopes that these actions will “keep the door open” for consideration of future grant applications that are submitted to the Technology Advisory Committee, since budgetary cutbacks have the potential to limit our computer technology offerings to our student customers.
Expenditures’ impact on student learning: During FY09 and FY10, all of our software licenses used on student computers come due for renewal. One of the largest expenditures in FY09 was for the three year renewal of the Apple operating system software licenses currently used on the department’s dual-boot imac student computers. These computer systems are being used by students to work on their eportfolios as well as for classroom teaching. We also purchased technology that facilitates large file transfers by students taking our CAD courses and for the video processing needs of students working on their eportfolios. Finally, we continued to purchase upgrades to extend the useful life and functionality of our older student computer technology, which empowers the department to assign each of our graduate students a computer system to work with during the duration of his/her studies. This technology enhances the students’ educational experience at ISU by providing a means to access the campus networks and online educational resources twenty-four hours a day.

Request 3: How CAC Fees Will Be Used in FY10 by Department of Horticulture

Our June 30, 2009 ending balance was $24,538.91, due to the addition of monies awarded for our CAC grant proposal. We are currently working with ITC personnel to spec and purchase the equipment and software outlined in our grant proposal. Our intent is to have this equipment purchased and assembled by the end of this year.

We plan to renew software licenses for student computers. We plan to pay for new software and software upgrades for student computers. We plan on paying for license renewals for essential software, such as Symantec Ghost and Centurian Technologies Cornerstone and Driveshield.

We will continue to purchase hardware upgrades to extend the useful life and functionality of the department’s older student computer systems. Due to budgetary constraints, student computer technology is now being kept operational for longer lengths of time before replacements are purchased.

Expenditures’ impact on student learning: We plan to expand our support of our student customers’ eportfolio and video processing needs with the purchase of additional video camcorder(s) that are available for students to check out and use. We are also promoting the use of various technology items for “checkout” as students work with the social networking technologies and services currently offered on campus.

During FY10, we will investigate how PaperCut might further reduce our printing-related expenditures from CAC monies.
Computer fees were used in three general areas during the 2008-2009 year.

Expendables amounted, $564.95. That amount was used to purchase toner cartridges for undergraduate printers.

License renewals and software accounted for $3105.00. Of that amount, $555.00 supported statistical analysis packages for graduate students and the remaining $2,550.00 supported licensing for Iowa Tiger, a timber analysis program used by undergraduate students.

Computer hardware accounted for $32,854.29. Printers were upgraded in three classrooms. Those printers are used primarily by undergraduate students who are using wireless laptop computers in various classes to complete in-class assignments. Eight laptop computers were purchased to complement laptops purchased through central CAC funds. Those computers are used either by undergraduates or graduate students in smaller classroom settings. Two scanners were purchased to replace aging scanners in the student computer room in 241 Science II. The scanners are available for use by anyone in NREM, but receive most of their use from undergraduates. Wireless access points were purchased to upgrade the wireless system in rooms 233 and 128 Science II. Usage in these rooms is primarily undergraduate. Sixteen new computers with monitors were purchased to upgrade the computer layout in the undergraduate computing room in 241 Science II. One computer was purchased to service the large screen monitor that provides student information in the hallway outside the Student Services office.

**Planned Expenditures (July 1, 2009-June 2010)**

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Lab Monitors Salary</td>
<td>$5000</td>
</tr>
<tr>
<td>SPSS License renewal (grad lab)</td>
<td>$75.00</td>
</tr>
<tr>
<td>Toner cartridges (classroom printers)</td>
<td>$1000.00</td>
</tr>
<tr>
<td>SAS License renewal (grad lab)</td>
<td>$480.00</td>
</tr>
<tr>
<td>2 Networked LaserJet printers for computer lab (2011)</td>
<td>$2000.00</td>
</tr>
<tr>
<td>1 Printer/copier—NREM Club usage (2011)</td>
<td>$4000.00</td>
</tr>
<tr>
<td>11 computers for Computer labs (2011)</td>
<td>$12,500.00</td>
</tr>
<tr>
<td>2 laser jet printers (computer lab replacements) (2011)</td>
<td>$2,000.00</td>
</tr>
<tr>
<td><strong>Estimated expenditure for 2010</strong></td>
<td><strong>$27,055.00</strong></td>
</tr>
<tr>
<td>Carryover from 09/10 for laptops in 2011</td>
<td>$25,000.00</td>
</tr>
<tr>
<td>Carryover from 08/09 for laptops in 2011</td>
<td>$20,000.00</td>
</tr>
<tr>
<td><strong>Estimated carryover from 2010 to 2011</strong></td>
<td><strong>$45,000.00</strong></td>
</tr>
</tbody>
</table>

Plans for the 2009-2010 period include upgrading of 8 desktop computers in room 241, Science II as well as upgrade of the laser printers in that room. Three desktop computers will be replaced in room 312 Science II. We plan to purchase a printer/copier to be installed in the student reading room for both undergraduate and graduate student usage. We will hire computer lab monitors in the evening for 4 days per week, 4 hours each night for 15 weeks per semester for a total of $5000. Those
monitors will make it possible to have our undergraduate computations room open until 9 p.m. Monday through Thursday. We also plan to continue to accumulate $60,000 in carryover ($20,000 carryover from 08/09, $25,000 carryover from 09/10, and $15,000 from the 10/11 allocation) to do a complete replacement of laptops for classroom usage in 2011.
Department of Plant Pathology

2008/09
1. Renewal of SAS licenses for student computer labs. This allows students to use the SAS package that otherwise may not have access to the software.
2. Printer toner for student computer labs. This allows our students to print documents in the student computer lab.
3. New printer for student computer lab in Seed Science building. Allows students in Seed Science building access to printing services.
4. Purchase of wireless access point for testing feasibility of improving wireless service for students in Bessey Hall and Science 1 buildings. Our plan is to provide better wireless access in Bessey Hall and Science 1 for the growing number of students who have personal laptops with wireless functionality.
6. Replacement power adapter for student laptop.
7. Mice for student laptops.
8. New Dell laptop for student use. Allows students who don’t own a laptop to have access to laptop computing for projects, presentations, and trips.
9. Ethernet cables for student use.
10. Additional drives for Apple Xserve RAID to provide space for student data backups. Will allow expandability of departmental backup system to hold student data so students will have a safe secure place for data storage.
11. 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.
13. Locking storage cabinet to house student laptops and projectors. Protects investment in student laptops and will eliminate downtime in availability of student laptops due to replacement time if there is a theft.
15. Lenovo tablet computer for interactive teaching. Allows faculty to interact with students in teaching environment through real-time visual cues and diagrams. Only used for teaching situations.

2009/10
1. Continued funding of student labs and SAS software for students.
2. Payment of charges for Ethernet service to graduate student lab.
3. 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.
4. Purchase new projector for teaching and student use.
5. Maintain emergency reserve of at least $3000.00.
6. Purchase additional wireless routers for Bessey Hall and Science I buildings to provide better network access for students.

7. Purchase licenses for End Note software for student lab computers.

8. Purchase license for Adobe Design Premium software for student lab computers.

9. Purchase license for Sigma Plot software for student lab computers.

10. Purchase license for Vector NTI software for student lab computer.

11. Expand backup system to provide fixed amount of backup space for every student in department.
Department of Sociology

FY 2009 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.

There was only one nontraditional item purchased this fiscal year. An unexpected expense to replace the LCD projector’s bulb in our teaching/seminar room in 113 East Hall.

Future Plans Narrative:

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

As stated on last year’s report it was our intention to complete two projects in FY 09. The updates to our teaching/seminar room in 113 East Hall are done but none of the expenditures will show on this year’s accounting. We will report details on this upgrade on next year’s report.

Last fiscal year another goal was to use CAC funds to work with Economics to upgrade 64 Heady Hall into a full service teaching computer lab. While this wasn’t accomplished in FY 2009 it is still a top priority and is progressing as this report is being prepared. We expect this to happen soon in FY 2010.

Finally, any carry over funds are for replacing equipment in the 409 East Hall Lab in the future. We will likely be purchasing a new printer for this lab soon as the current Dell 5300 is approaching its fifth year of use and the warranty will be out soon.
Microbiology

Narrative 2008-2009 expenditures:

- Two desktop computers were purchased to complete the renovation of the student computing lab housed in room 205 Science 1. The 2 new PC computers replaced the last 2 in the lab that were 5 yrs. old. This lab is available to undergraduate and graduate students in microbiology as well as other majors taking microbiology courses.

- Three desktop computers were purchased for graduate and undergraduate secretarial staff as well as the Professor-in-charge of the undergraduate microbiology program. The new purchases replaced computers that were 6 years old and very slow. The Microbiology graduate program secretary received dual monitors to facilitate her work on graduate student seminars, admissions, record keeping, and accounting. This secretary is also secretary for the plant biology program. The new computers for the Undergraduate Program secretary and professor in charge will allow ordering of lab supplies, tracking and advising of students, access to electronic student files and grading, compilation of student evaluations of instructors in microbiology, (among other activities) that will facilitate the undergraduate teaching program.

- A new tablet laptop computer was purchased for use by a senior lecturer in the Microbiology program. Responsibilities of the senior lecture include teaching 125 students in the spring, 75 students in the summer, and 400+ students in the biology program in the fall. The tablet (write on screen) of the laptop allows better classroom presentations. The computer also has a webcam as the senior lecturer is developing an on-line course for microbiology using recorded lectures. She is working with the Brenton Center in CALS for course development software.

- A new laptop computer was purchased for the Microbiology program as a loaner to undergraduate, and graduate students who need to give presentations at meetings, seminars, or in class and also use as a temporary replacement for faculty teaching in Microbiology.

- We also renewed the licenses for the statistical package (SAS) used by undergraduate and graduate student in their upper level statistical classes and used for data analysis by graduate students preparing their thesis or manuscripts. This program is loaded on computers in room 205 Science 1 (the student computing lab).

- Not listed as an expense, but an asset to undergraduate and graduate students, printing costs in the student computer lab have been changed from $0.05 to $0.03 / page of printing effective in August 2009. This was a recommendation of the ad hoc committee and implemented with the new paper cut software acquired by ISU.

Narrative for anticipated expenditures for 2009-2010 computer funds:

The ad hoc computer committee met on Aug 10, 2009 because of an extra revenue deposit in May. Proposals which were selected:

- Adobe software to edit pictures for graduate student papers
- Tablet lap top computer for student and faculty presentations. The tablet function has been well received by students in the microbiology classes based on course reviews.
- Projector for undergraduate and graduate student presentations for seminar classes and work in progress meetings.
- Desk top PC to run new equipment and software in the advanced microbiology lab classes.
- In addition, a portion of the funds will be saved to fund a computer lab renovation in another 3 years (we estimate that we need to save ~$4,000/year for 4 years).

Other options that are to be considered as new funds are obtained include
  - A new flat bed scanner
  - Software for fatty acid analysis to use with Micro 440 lab and permit students individual access to analysis. Current software is complicated and only used by instructor
  - A 3rd laptop computer for loan to students (undergraduate and graduate) and teaching faculty. We have observed that many of the current older (>5 yrs) laptops we have are extremely slow and have some problems. The 2 newest laptops are in continual demand which leaves the office without an emergency loaner.