Office of the Vice Provost for Research
and
Dean of the Graduate School

Annual Report
Fiscal Year 2008

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Executive Summary

Sponsored program awards processed by the **Office of Research Support and Sponsored Programs** during FY08 totaled $52,997,521, representing an increase of 19 percent over FY07. Total sponsored program awards (including the Division of Agriculture) for FY08 totaled $66,173,520, representing a University overall increase of 15 percent compared to FY07.

The **Technology Licensing Office** executed three options, four licenses, and two assignments this year, and six of these agreements were with Arkansas-based companies. Licensing income was received from 21 companies, of which twelve companies reported commercial sales. Excitingly, seven Arkansas companies based on UA technologies had commercial sales, including four reporting their first commercial sale.

In the area of **Research Services**, the Glass Shop saw an increase in revenues of 45% and the Machine Shop showed an increase in revenues of 13%. These shops also provide free instruction to students in the use of specialized shop equipment and tools.

Graduate School enrollment was 3287 in fall 2007 compared to 3136 in fall 2006, a 4.8% increase.

Doctoral enrollment decreased to 1017 from an all-time high of 1026 last year. Since Fall 2000, doctoral enrollment has grown 50% compared to 21% growth in the total student body.

A total of 141 **doctoral degrees** were awarded during the 2007-08 academic year compared with 115 the previous year and 134 in 2005-06.

Graduate enrollment of male and female students is within 1% of parity.

The number of African-American graduate students increased from 197 (Fall 2006) to 231 (Fall 2007) representing 9.1% of the domestic graduate student population.

Retention of African-American graduate students in 2007 exceeded the corresponding rate for Caucasian students.

In Fall 2007 there were 158 **Doctoral Academy Fellows** and 43 **Distinguished Doctoral Fellows**. The number of doctoral academy fellows represents a 50% increase from the previous year.

Over 450 **travel grants** were awarded to graduate students at an average of $813 per trip.

As a result of the Higher Learning Commission's (HLC) accreditation visit, a concern that the "University Core" criteria needed to be reviewed and student assessment included in the review

process was highlighted for a follow up report. The **Director for Program Assessment** along with Associate Dean Chuck Adams are co-chairing a two year effort to address this concern.

The University of Arkansas community includes students from 101 countries. The top five in number (other than the United States) are India (206), China (95), Japan (86), Bolivia (62), and Korea (55).

The **George Washington Carver Project** hosted 23 minority student interns. Of these, 18 were from total of 10 minority-serving universities and colleges. While on campus, each intern worked directly with a faculty mentor on a structured research project.

The **Ph.D. program in Public Policy** had an enrollment of 77 students, including 14 African-American students, in Fall 2007. The program has an acceptance rate of 44%.

Seventy-three students have completed their MS degree in **Microelectronics-Photonics**. Seventeen of the graduates are women (23%) and sixteen are African American or Hispanic (22%).

The **Applied Sustainability Center** (ASC) was created in July 2007 through a grant from the Wal-Mart Foundation. The founding director, Dr. Jon Johnson, reports to both Dean and Vice Provost Collis Geren and Dean Dan Worrell. The ASC is leading the development of a consortium of universities, NGOs and consultants that will coordinate the delivery of sustainability related training to corporations in the consumer goods and retail industries.

The interdisciplinary graduate programs in **Space and Planetary Sciences** expect an enrollment of 22 students in Fall 2008. This number includes one distinguished doctoral fellow, six doctoral academy fellows, and one NASA fellow.

Fifty-six students were enrolled in **Cell and Molecular Biology** graduate programs this year with twelve graduating; four earned M.S. degrees and eight earned Ph.D. degrees.

The **Office for Studies on Aging** received $10,500 from the Women's Giving Circle for a proposal entitled *Meeting the Health Needs of Family Caregivers*. This project included a series of workshops for caregivers about physical and mental health topics.

A major event for the **University of Arkansas Press** was a benefit concert by Lucinda Williams. A joint project of the Press and University Advancement, the benefit raised over $60,000 to establish an endowment for a $5,000 annual poetry prize honoring Miller Williams.

The **Center for Mathematics and Science Education** is a major outreach component of the University of Arkansas, directly serving over 18,000 K-12 students and teachers through formal and informal education programs in FY08.

During the past year, **Testing Services** administered 477 tests taken by over 12,000 students and prospective students who were satisfying admission/degree requirements at UA and other institutions.

The **Survey Research Center** staff administered 56 surveys during the year. This compares to 36 surveys in FY07 and 20 surveys in FY06.

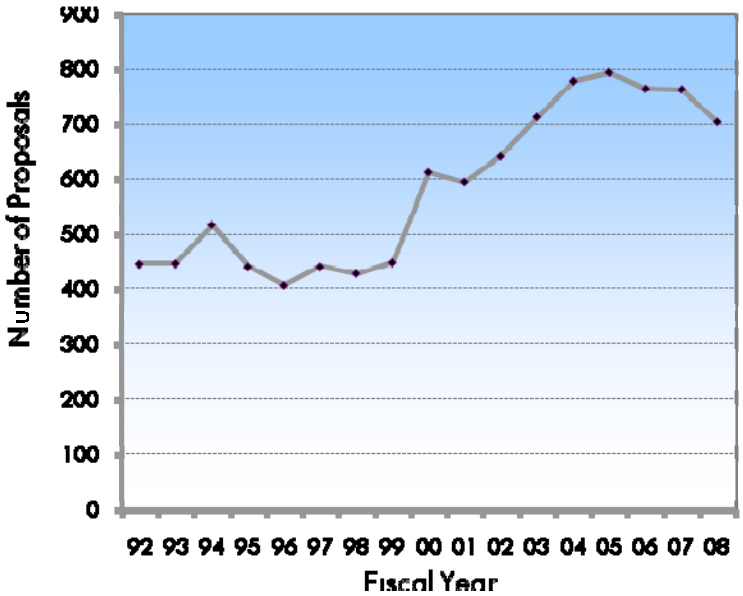
Among a number of **personnel changes**, Dr. Nathan McKinney and Mr. Jeff Amerine were hired as technology licensing officers with Dr. McKinney's position fully funded by the Division of Agriculture. Ms. Gloria Flores was appointed to a new position as Associate Director of Recruitment and Sponsored Student Programs. Mr. Mark Larmoyeux joined the RSSP staff as database administrator and Ms. Tana Myrstol and Ms. Shelley Wilmoth joined RSSP as preaward specialists. Dr. Derek Sears, founder of the Arkansas Center for Space and Planetary Sciences, announced his intention to step down as center director. Dr. Larry Roe will assume these duties on August 1, 2008. The Graduate School was diminished by the death of Ms. Sue DeVore who provided administrative support for the Ph.D. program in Public Policy.

Research Support and Sponsored Programs

Sponsored program awards processed by The Office of Research Support and Sponsored Programs (RSSP) during FY2008 totaled $52,997,521, representing an increase of 19 percent over FY2007. Total sponsored program awards for FY2008 totaled $66,173,520, representing a University overall increase of 15 percent compared to FY2007. The composition of FY2008 awards by funding source included $37,841,633 (57%) from federal sources, $ 10,011,041 (15%) from state sources, and $18,320,846 (28%) from other funding sources such as industry and private foundations.

RSSP processed 704 proposals and requests for continuation of multi-year awards in FY2008, constituting a total funding request of $ 172,001,675, a 3 percent increase in requested funding as compared to FY2007. This includes requests of $100,399,761 (58%) for federal funding, $16,344,806 (10%) for state funding and $55,257,108 (32%) for other types of funding. Figure 1 illustrates the history of submissions from FY1992 through the current fiscal period.

Figure 1—Proposal Submissions



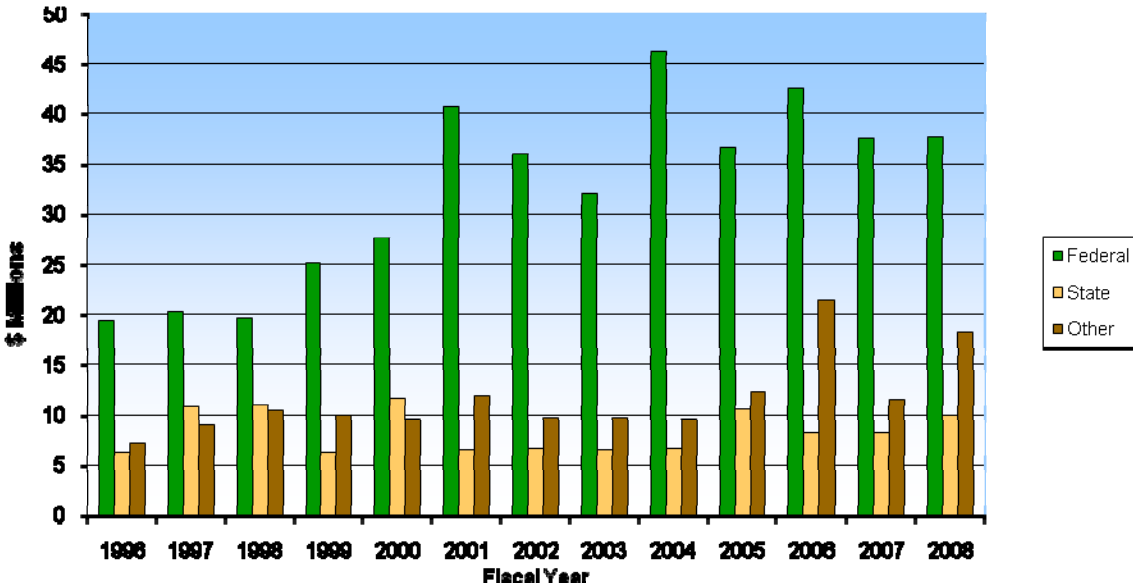
During FY2008 the number of proposal submissions to all sources was 704, a decrease of 8 percent over the previous fiscal year. This includes 340 proposals (48%) submitted to the federal government, 246 proposals (35%) to state government, and 118 proposals (17%) to other funding sources such as private foundations and industry.

As shown in Table 1, total sponsored program funding for FY2008 was $66,173,520. Of this amount, awards processed by RSSP accounted for $52,997,521, or 80%.

Table 1. Summary of Awards by Funding Source – FY 2008

Unit	Federal	State	Other	Total
ADMIN	$ -	$ -	$ -	$ -
AFLS	$ 6,822,439	$ 366,012	$ 7,623,406	$14,811,857
ARCH	$ 586,961	$ -	$ -	$ 586,961
ARSC	$12,895,862	$ 5,373,525	$ 1,622,271	$19,891,658
CTED	$ -	$ -	$ 100,000	$ 100,000
EDUC	$ 3,323,966	$ 1,986,908	$ 1,961,157	$ 7,272,031
ENGR	$ 9,933,020	$ 1,939,055	$ 6,063,140	$17,935,215
GRAD	$ 118,848	$ 211,377	$ 106,606	$ 436,831
LAW	$ -	$ 39,744	$ 49,785	$ 89,529
LIBR	$ -	$ -	$ -	$ -
VCAA	$ 70,000	$ -	$ -	$ 70,000
VCFA	$ 1,353,117	$ 54,950	$ 170,000	$ 1,578,067
VCSA	$ 2,478,461	$ -	$ 4,266	$ 2,482,727
WCOB	$ 258,959	$ 39,470	$ 620,215	$ 918,644
Total	**$37,841,633**	**$10,011,041**	**$18,320,846**	$66,173,520

Figure 2. Award Trends by Source



Unfunded federal compliance mandates continue to challenge our researcher and administrative resources. Export control issues are particularly challenging. RSSP is working with the new members of the Technology Licensing Office staff to assist investigators with identifying and appropriately restricting access to controlled technology. In spite of recent US Department of Defense communications reaffirming the need for DOD entities to comply with NSDD-189 by

acknowledging the fundamental nature of university research, industrial defense contractors are extremely reluctant to remove troublesome export control requirements from subcontracts to the University. Unless the investigator is willing to accept the additional burdens imposed by the inclusion of these unnecessary controls, the result is usually lengthy negotiations and delays in starting the research. The National Institutes of Health (NIH) has changed its policy regarding the publication of research results supported by NIH. All investigators are now required to ensure that such publication will not prevent an electronic version of their final, peer-reviewed, accepted manuscripts from being made publicly available on the National Library of Medicine's *PubMed Central* no later than twelve months after the official date of publication. These are just two examples of additional compliance requirements initiated, but unsupported financially, by the federal government in FY2008.

Federal agencies selected four sponsored programs for programmatic and financial audit this fiscal year. The National Science Foundation commissioned an audit of the NSF-funded EPSCoR program. There were no findings of non-compliance. However, NSF noted that while the University staff articulates and adheres to appropriate financial management procedures, it has insufficient, written, financial management policies and procedures. As a requirement of the audit, Research Accounting (RA) and RSSP are working together to document, in writing, our current policies and procedures. The Department of Justice audited three projects, resulting in five questioned transactions/activities. After additional information was provided by RA, all transactions were approved except the purchase of a gift acknowledging an individual's contributions to the project. The University agreed that the purchase was inappropriate and the charge was removed from the cost center. There were no sanctions or penalties.

The Institutional Review Board (IRB) continues to increase its use of electronic tools to administer the actions of the committee. Investigators submitted a record 601 new protocols this year. In addition, 319 existing protocols were renewed or amended. A new IRB policy has been drafted and will be shared with stakeholders this fall for revision and, ultimately, adoption by the University. Appropriate, documentable training of human subjects researchers (faculty, staff, and students) will be implemented in the next few months. This web based training will be provided by the Collaborative Institutional Training Initiative (CITI). The University is one of more than 800 universities world-wide participating in this initiative. The training is already available, at no cost to the investigator(s), for those who wish to participate voluntarily.

The Institutional Animal Care and Use Committee completed all semi-annual reviews on schedule with no instances of significant noncompliance noted. Implementation of the mandatory training program for all individuals actively engaged in research requiring the use of live vertebrate animals, or in the care of such animals, was well accepted by the University community. Although the present requirement is for the completion of two base modules, many investigators have completed all available. RSSP and the College of Food, Agricultural, and Life Sciences provide joint financial support for this on-line training.

RSSP welcomed four new staff members during FY2008, Tana Myrstol and Shelley Wilmoth, Preaward Specialists; Stephanie Smith, Accountant; and Mark Larmoyeux, InfoEd Database

Administrator. Our Administrative Assistant position is currently vacant but recruitment is underway to fill the position.

InfoEd International, Inc., vendor of our research administration software, was unable, once more, to provide a stable, electronic proposal submission and routing platform in spite of its predictions last year. However, our new database manager, Mark Larmoyeux recently attended demonstrations of proposed software enhancements to be released within the next two months. After viewing the demonstrations, interviewing InfoEd technical support staff, and working with University Information Technology Services (UITS), Mr. Larmoyeux is proceeding with plans to install, test, and, if the software meets expectations, implement electronic proposal routing by the end of FY2009. Should InfoEd be unable to deliver as promised, RSSP will investigate alternative software solutions.

Technology Licensing Office

Executive Summary

The Technology Licensing Office's mission is to commercialize world-class research to build a sustainable knowledge-based economy to benefit Arkansas and the world. During FY2008, we reorganized our office to facilitate the growth of UA's technology transfer. We also began reintroducing the TLO via internal and external marketing, including meetings with many faculty and students, posting our technologies on various websites, completely redesigning our own website, and meeting with people interested in growing Arkansas' knowledge-based economy. We are now evaluating and improving how we identify and move intellectual property from the University into the world.

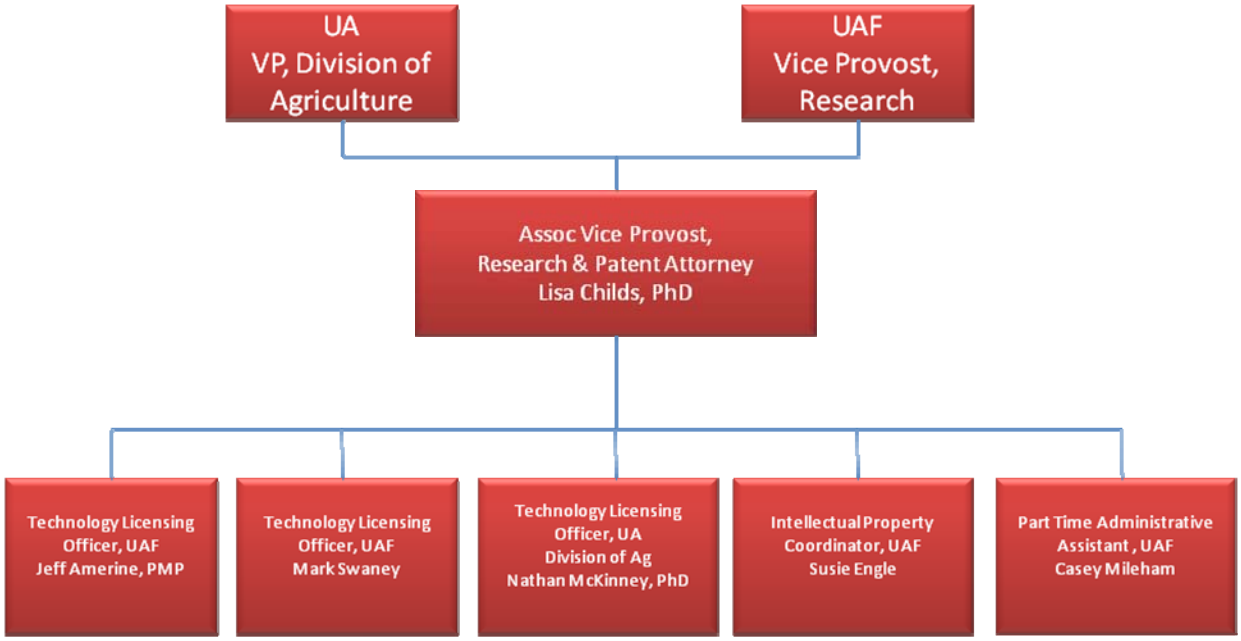
We spent much of FY2008 in a successful search for first one, and then two, technology licensing officers and we added a 0.3 FTE administrator. With fewer than ten years in the TLO collectively, our team of 5.3 FTEs is quite new. Despite the chaos of learning how our team works together, we have had a good year. We ended the year with about $60,000 more than we spent on outside attorney fees, and saw a modest increase in invention disclosures over FY2007.[1] We signed nine licenses and options, six with Arkansas companies. Seven Arkansas companies founded on UA technologies had commercial sales, including four reporting their first commercial sale. We met with all but one unit head for the Division of Agriculture, presented eleven intellectual property lectures to about three hundred and fifty University management, faculty and students, and met many of our Arkansas licensees.

[1] Because the TLO does its accounting on an accrual basis and much of our invoicing for reimbursement of patent costs occurred at the end of this fiscal year, some of this revenue may not be collected. We will take this into account as we plan for FY2009.

The Technology Licensing Office Reorganizes

The TLO manages most intellectual properties belonging to the Division of Agriculture[2] and the flagship campus (UAF). Despite this dual responsibility, the TLO has traditionally been funded by and reported to UAF's Vice Provost for Research, although Dr. Lisa C. Childs is funded by and reports to both UAF's Vice Provost for Research and the Vice President for the Division of Agriculture.[3]

Thus, to better reflect our relationship with Division and UAF, the TLO was reorganized in FY2008 to report to Dr. Childs as shown below. The Division of Agriculture agreed to fund a third technology licensing officer position, so we spent much of FY2008 interviewing for two technology licensing officers (one for the Division of Agriculture, and a second officer for UAF after our senior officer left in May 2007). In January, we hired Nathan McKinney, Ph.D., for the Division of Agriculture, and in March, Jeff Amerine, PMP (Project Management Professionl), for UAF. They joined Mark Swaney, technology licensing officer for UAF.



Our three technology licensing officers bring a variety of skills and talents to the office. We have a long-time engineer with strong ties to many of the campus faculty, a seven-time serial entrepreneur with deep knowledge of information technology and logistics and the resources available in Arkansas for entrepreneurs, and a former small business owner who is also a long-time Division of Agriculture employee. In addition, our administrative support (Susie Engle and Casey Mileham) bring their own skills and talents in web design, bookkeeping, attention to detail, compliance with federal regulations, patience, and general cheerfulness in keeping our office functioning.

[2] The Division of Agriculture manages most small fruit and plant variety intellectual properties internally.
[3] Childs is ending her second year as UAF's Associate Vice Provost for Research and Patent Attorney for the Division of Agriculture.

The TLO Evaluates and Revises Its Internal Processes

As we integrated our new team members, we reevaluated our team's mission: We commercialize world-class research to build a sustainable knowledge-based economy to benefit Arkansas and the world. With this in mind, we are streamlining our processes for moving UA's research out of the lab and into the world.

During FY2008's last quarter, we evaluated our business processes with an eye to further automating our office. We have created a secure web site where we can access the most current versions of our template agreements (along with business contacts, technology briefs, best practices, and other information). With the help of Mark Larmoyeux (a new member of Research Support and Sponsored Programs), we are mapping our business processes to document what we do and how technology can help us do it. We have also investigated several other information management systems for technology transfer in the event we decide to replace our current system.

We have updated our logo to reflect our Arkansas-centric approach, and completely revised our public web site, including its address, http://www.uark.edu/ua/tlo/. This searchable web site lists our available technologies, and, because many of our licensees are amenable to sublicensing, many of our licensed technologies. We have removed abandoned technologies, and reviewed every element of our website to ensure its relevance to our mission. Our listed technologies are linked to technical briefs and patents or published patent applications. As a result, our technologies are being constantly, though passively, marketed. Additionally, we have listed many technologies with technology brokers.

With our new team in place, we addressed several legacy issues. The Board of Trustees has approved all licenses in which there may be a conflict of interest. We have amended our licenses to reflect the addition or removal of technologies and amended six licenses to address typographical errors. We are now preparing other amendments to clarify the licensees' obligations to the federal government. We expect to complete an audit of all our US patents and patent applications during FY2009 to ensure that federal rights are properly identified.

Our in-house patent attorney now reviews most communications with the United States Patent and Trademark Office before our outside counsel submits them, resulting in more consistency among our patent counsel. We are also working out protocols to manage the risks that are inherent in a large patent portfolio distributed among several different law firms.

Continuing Education

Because we are a young office, we are working to ensure that we all have a basic understanding of technology transfer and to ensure that, among us, we can identify and deal with related issues. We have completed some important continuing education this year. Childs attended AIPLA and NASVF national meetings. McKinney and Childs attended the national Association of

University Technology Managers (AUTM) meeting this spring, and, by August 2008, all TLO members will have attended at least one recent AUTM meeting. McKinney and Amerine attended an export control course this spring. Engle attended a two-day workshop on Bayh-Dole compliance. Also, we attended webinars on material transfer agreements, Bayh-Dole, and technology licensing metrics. We have started an ongoing education program during our weekly office meetings, where topics have included export control, business plans, and foreign patent filings. We have developed a training manual for new hires.

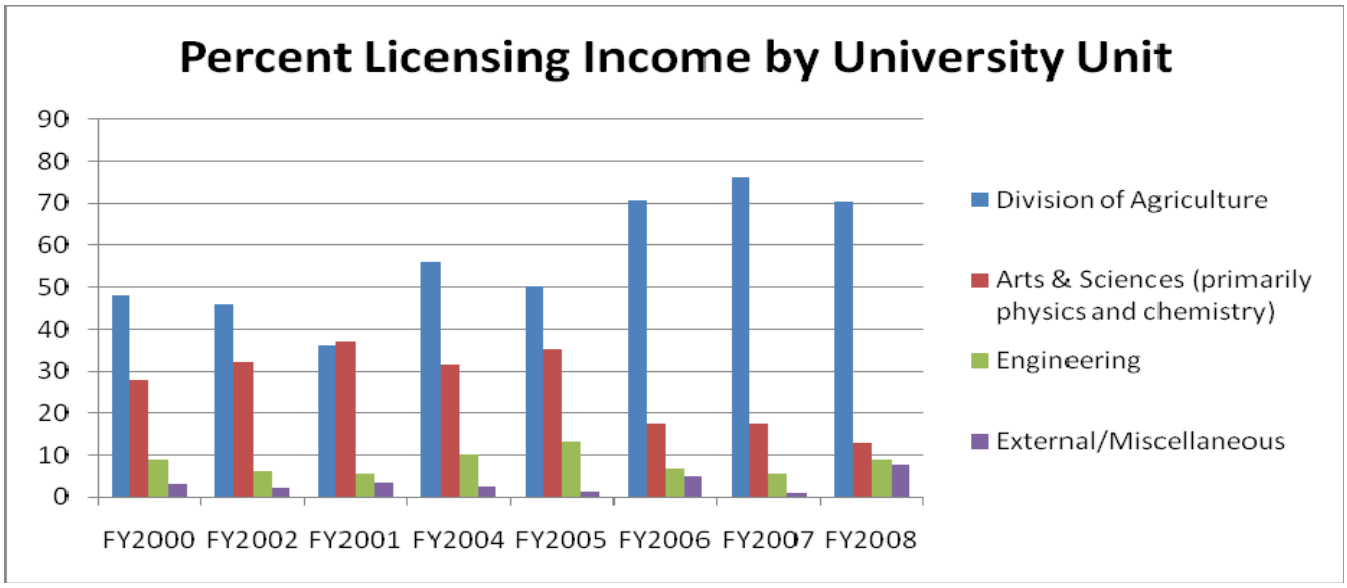
Outreach

We have met with many people interested in growing Arkansas' knowledge-based economy, including our Arkansas licensees, Arkansas technology companies that have not yet licensed UA technologies, our colleagues at other university technology transfer offices in Arkansas, and potential strategic funding sources, such as Fund for Arkansas' Future, Innovate Arkansas, Arkansas Science and Technology Authority, and Diamond State Ventures. Moreover, we meet twice monthly with management of our local, for-profit incubator to discuss issues relating to their current and prospective licenses. We also meet regularly with Arkansas Research and Technology Park's management. We have lectured on intellectual property to about three hundred and fifty UA management, faculty and students on eleven separate occasions. As described earlier, our web site has been revamped so that it is more user-friendly, and contains current information. McKinney met with all but one unit head in the Division of Agriculture. As an outgrowth of Jeff Amerine's experience judging business plan competitions and lectures on venture capital for the Walton College of Business (WCOB) this spring, we have been invited to develop a WCOB course, *Technology Commercialization Consulting Project*, for Spring 2009.

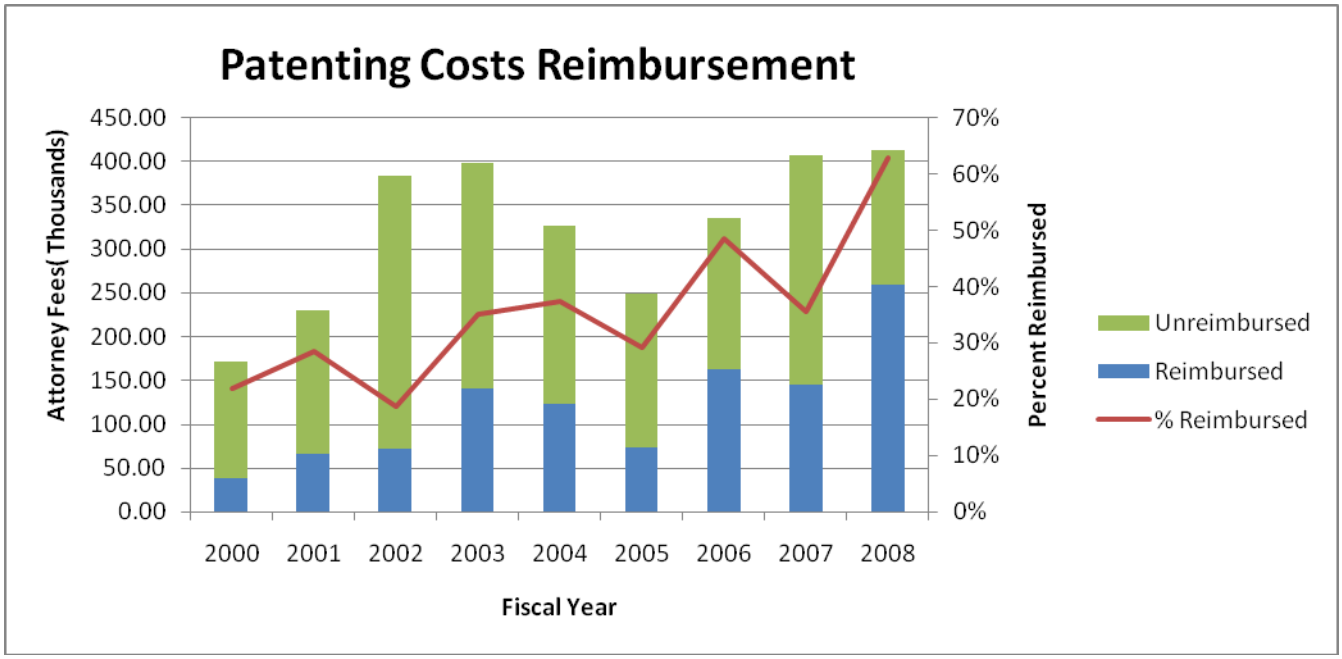
FY 2008 Quantitative Measures

The TLO executed three options, four licenses, and two assignments this year, and six of these agreements were with Arkansas-based companies. We received licensing income from 21 companies, of which twelve companies reported commercial sales. Excitingly, seven Arkansas companies based on UA technologies had commercial sales, including four reporting their first commercial sale. We had gross royalty income of $228K.[4] A total of $74K in additional income came from options, license signing fees and milestones. Inventors received $77K, and the UA system received $9.8K, pursuant to UA Board of Trustees Policy 210.1. The University units generating licensing income are shown below.[5]

[4] A single license (from the Division of Agriculture) generated more than half the gross royalty income.
[5] The external/miscellaneous category encompasses non-University intellectual property given to the University, as permitted under University Board of Trustees Policy 210.1, and intellectual properties from other University units, such as the College of Education and Health Professions or the School of Law.



Sixty-three percent of our patenting costs were reimbursed by licensees this year and, as shown below, the percent reimbursed is trending upward over the last nine years.



As shown below, we received twenty-four invention disclosures,[6] filed seven new provisional patent applications,[7] and issued four patents.[8] Because a provisional patent application is

[6] The term *invention disclosure* is a misnomer because the TLO also manages copyrighted technologies, especially

generally the first filing absent a compelling reason to go directly to a utility or Patent Cooperation Treaty (PCT) application, the number filed is an indicator of the TLO's inventory. We cannot perceive any particular trend in disclosures, filings, issued patents or several other data sets. One reason may be that our funding was well below the target level of 1% of the University's research expenditures (or about $1M). With such limited resources, it has been difficult to consistently expand the innovation pipeline.

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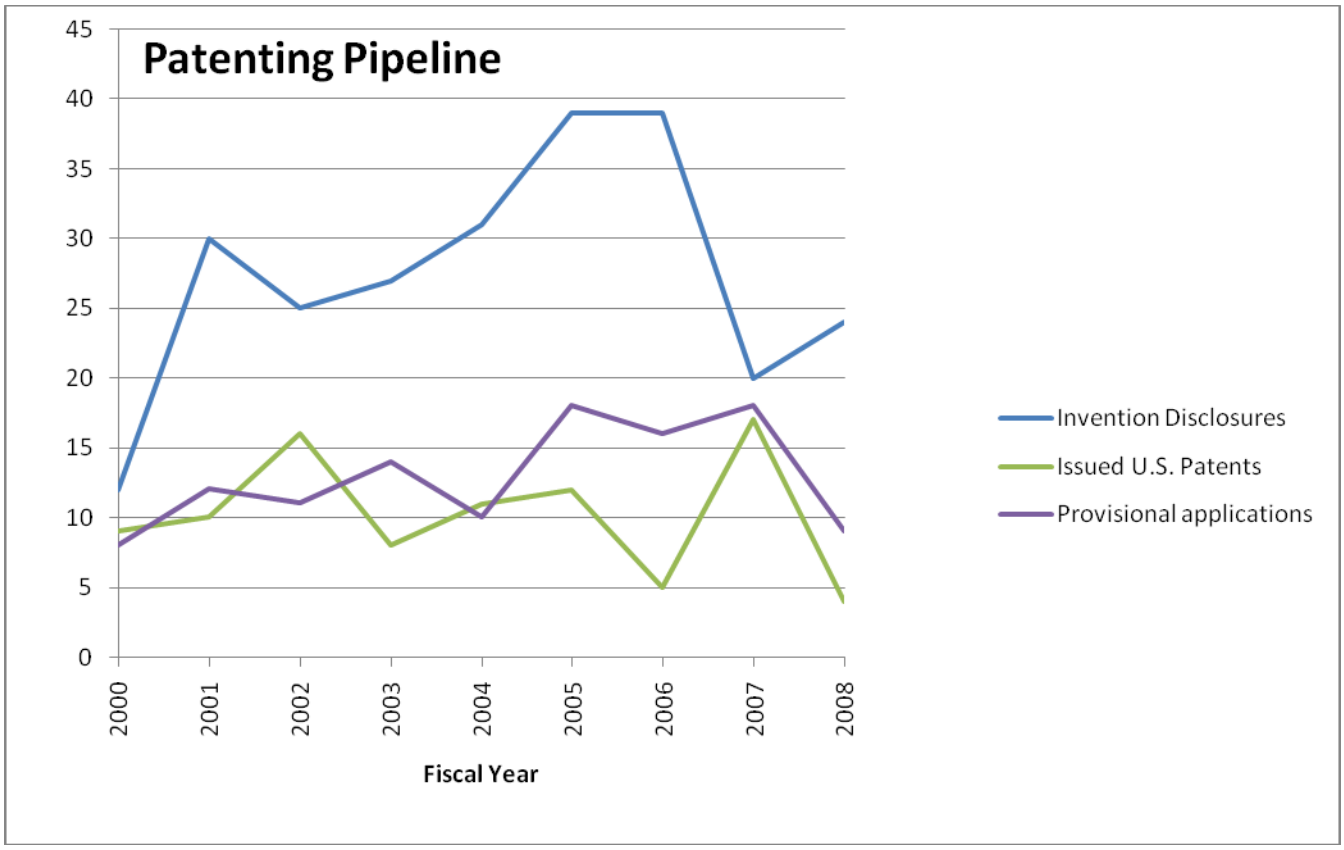
for software. Indeed, we updated our disclosure forms this year to differentiate between copyrighted works and patent applications. These updated forms were approved by the Chancellor as FY2008 closed.

[7] This year, we are not reporting the total number of US patent applications because current USPTO conditions require more refilings before an application issues as a patent, making this number less meaningful.

[8] The decreased volume of issued patents may be caused by several factors. First, proposed rule changes at the United States Patent and Trademark Office (USPTO) resulted in almost no USPTO activity for about four months. Although the rule changes were enjoined, we continue to have difficulty in moving patent prosecution forward. (Recent research, consistent with our experience, suggests that "the large number of non-final rejections per round of prosecution [at the USPTO] is the major cause of the backlog of applications." *Improving Patent Examination Efficiency and Quality: An Operations Research Analysis of the USPTO, Using Queuing Theory*, Ayal Sharon and Yifan Liu, 17 Federal Circuit Bar Journal, http://ssrn.com/abstract=1026320 (2007).) Second, the University decided about three years ago to file fewer patent applications without a licensee's agreement to sponsor the patent costs. With the USPTO's recent average tendency of 42 months from filing to grant (and longer in the biotech and high tech arenas), we could be seeing a decline in output caused by a decline in input although the patenting pipeline graph above does not clearly support this theory. http://www.patentlyo.com/patent/2008/06/patent-prosecut.html. Or, we could be dealing with statistical noise, and perhaps the steady state of UA patents has been about ten per year.



In sum, while we see a positive trend in percent attorney fee reimbursement, we cannot identify a trend in invention disclosures and patent filings.

Goals for FY08

We achieved most of our FY08 goals.
Goal: Continue to balance patent and copyright expenses with available licensing income.
Result: Achieved, with more than $60K left over.
Goal: Hire a new TLO Director.
Result: We hired two new technology licensing officers, and reorganized the TLO to report to Dr. Childs. Also, we now share an administrator with the Arkansas Research and Technology Park.
Goal: Achieve the patenting cost reimbursement ratio at or above the AUTM standard of 40 percent.
Result: We have invoiced for 63% reimbursement, an all-time record for our office. (We expect that we will have to work out payment plans for some of our licensees.)
Goal: Execute agreements with Arkansas companies for three intellectual properties.
Result: We executed agreements with six Arkansas companies for seven intellectual properties.
Goal: Remain current in meeting reporting requirements on inventions made with federal funds, in compliance with the Bayh-Dole Act.

Result: Achieved. Also, we have attended a conference and two Bayh-Dole webinars. As a result, we are further improving our reporting and licensing requirements.

Goal: Improve information management to generate reports tracking IP expenses and income by college.

Result: This continues to be a struggle. We are now able to track IP expenses and income by college for invention disclosures from FY2008 going forward, but we have to do this manually for earlier disclosures. We hope that by the end of FY2009 we will have reached a decision about whether to continue with the current information management system or to move to another system. If we decide to keep the current system, we hope it will be more functional going forward.

Goal: Complete internal TLO audit of existing intellectual property.

Result: Audit completed. We now have a searchable list of all current intellectual properties, which we regularly update. This audit also enables us to efficiently market our technologies via our website, which is regularly visited by technology brokers.

Goal: Update information posted on the TLO website.

Result: Our team, with Casey Mileham taking the lead, re-designed the entire website, and rolled it out in June. It now lists all properties, whether licensed or available, in several formats (by technology type, by patent number, by availability). We can now market all our properties, and we have already received inquiries about posted technologies.

Looking Ahead to FY2009

Over the next year, we intend to continue to improve relations with our faculty and Arkansas-based companies. We will develop and teach the first round of a course offered through the Walton College of Business, titled *Technology Commercialization Consulting Project*. We are developing a strategic plan, our 2020 Vision, which we expect to have fleshed out early in FY2009.

Research Services

Both the Glass and Machine Shops served a variety of departments and students. These shops provided services to twenty-two UA departments, six universities (in addition to UA) and six private businesses during FY08. Both shops are experiencing an increased request for instructing students, on a one-to-one basis, in the use of various, common machines, e.g., drill presses and polishers, available in the shops. No charge is made for instruction of students.

Machine Shop

Highlights of Dennis Rogers' efforts include the following projects:

- Dr. Zimmerman, UA Information Technology Services: Worked with Jeff Pummill to develop and build eight shrouds to cool the Star of Arkansas Supercomputer.

- Dr. Apon, Computer Science and Computer Engineering: Worked with Scott Fendley to develop and build a frame to hold multiple monitors for graduate student high performance computing research.
- Civil Engineering: Fabricated a bridge for students entering the A.S.C.E Steel Bridge and Concrete competition.
- Facilities Management: Repaired equipment in their Carpenter Shop and consulted on repairs for Zones A, D, and F.

Glassblowing Services

Highlights of John Pace's efforts include the following projects:

- Dr. Manasreh, Electrical Engineering: Helped design and fabricated a 43mm diameter quartz oven tube with accessories.
- Dr. Peng, Chemistry and Biochemistry: Fabricated double chambered, high volume, separation chamber for Dr. Dawei Chen.
- Dr. Koeppe, Chemistry and Biochemistry: Helped design and then built an inert gas, high vacuum manifold with cold traps and gauges.
- Dr. Johnson, Entomology: Fabricated six specialized Pyrex glass, live insect storage chambers for insect analysis.
- Dr. Vishal Jain, Food Science: Fabricated a nine cubic foot wooden box lined with mirrors over the entire inner surface for UV light saturation of cooking oil samples.

Revenues Generated in FY08

In addition to services provided gratis to faculty and students who need advice or general assistance, these two units provide services to both external and internal clients at an hourly rate (labor) plus associated shipping and materials charges. The Glass Shop saw an increase in revenues of 45% and the Machine Shop showed an increase in revenues of 13%. Overall there was an increase of 33% in total recharge/billing to clients from FY07.

	Jobs	Shipping and Materials	Labor	Total Income	Change from FY07
Glass Shop	94	$6,843	$9,943	$16,786	82%
Machine Shop	49	$1,950	$7,786	$ 9,737	15%
Total	138	$8,793	$17,729	$26,523	50%

Central Laboratory Animal Facility

The Central Laboratory Animal Facility (CLAF), an area of approximately 9000 sq. ft. located in the basement of the "A" wing of the Animal Sciences Building (AFLS), has been in operation since early 2000. During FY08, of the 13 rooms that can potentially house animals (primarily the commonly used small rodents and rabbits), 6 were in continuous use, with 2 additional rooms used for experimental procedures (exercise training on treadmills) and 2 rooms were occupied

intermittently. There were five investigators who were the primary users during FY08, three of whom use mice, one of whom uses Golden Syrian hamsters and one of whom uses rats. The investigators were charged a per diem rate for the care of their animals. FY08 per diem charges for animal care and housing were $13,700. Income from the CLAF users was down approximately 20% compared to FY07 due to a decrease in daily average animal population. The facility continued to cover direct costs (feed, bedding, cage-cleaning chemicals, supplies, routine maintenance costs and labor incurred for the care of the animals) as a result of the per diem charges to facility users. However, repairs to autoclave and cagewasher totaled $6,350 and thus there was a deficit of $625 when direct costs of facility operation were compared to income actually collected.

Graduate School

The Graduate School Vision Statement, Mission Statement, Core Values and Goals have not changed from the last Annual Report, and may be found on our website at www.uark.edu/grad.

Significant Achievements and Changes

There were several achievements and changes in the Graduate School during the 2007-08 year:

- We hosted 23 students from 11institutions for the summer 2008 George Washington Carver program;
- In October 2007, three of us (Diane Cook, Vicky Hartwell, and Patricia Koski) attended the SREB Institute, "Compact for Faculty Diversity Annual Institute on Teaching and Mentoring," in Washington DC; this followed a visit by Dr. Ansley Abraham, Director of the SREB program, to our campus in April 2007;
- We hosted the third annual retreat, at Lake Hamilton, for the Bush/Clinton Fulbright Tsunami Relief Initiative students from Texas A & M University and the University of Arkansas;
- We offered one course each semester, in the fall 2007 and spring 2008, for the Preparing for the Professoriate program, and the PFP committee continued to make progress toward proposing a graduate certificate program;
- The Teaching Assistant Effectiveness Committee of the Graduate Council continued to meet to explore options for better preparing graduate assistants who teach;
- We hired Tracy Joslin to replace Robyn Moore on the ISIS project; Robyn earned her doctoral degree in December 2007 and moved out of the state;
- Vicky Hartwell completed the Supervisory Development Program sponsored by the Office of Human Resources; Ms. Hartwell also took on some recruitment duties;
- We were saddened by the death of Sue Devore, in January 2008; Ms. Devore was the administrative support person for the Public Policy program;
- Latricia Shoals was hired to replace Sue Devore;
- Keukeu Abdullah, Karla Clark, Melinda Dunlap, Jennifer Ezell, and Cassandra Shaffer left our office;
- We hired Gloria Flores in a new position as Associate Director of Recruitment and

Sponsored Student Programs;
- We also hired Shani Farr, Lia Raquel Huddleston, and Kendra Smith in our recruitment office, and Stacy Clay, Marcy Nichols, Sedivy Reigh, and Melinda Schmohl in our admissions office;
- We co-hosted, with the Career Services Center, the "Abstract to Contract" student research paper competition;
- We initiated the Doctoral Completion project, in conjunction with the Council of Graduate Schools;
- We hosted the first annual graduate student family picnic early in the fall semester;
- Dr. Derek Sears notified us of his intention to step down as Director of the Space Center and the Space and Planetary Sciences degree program. He will be replaced by Dr. Larry Roe as Center Director and Dr. Rick Ulrich, who continues as Deputy Director of the Space Center and will assume graduate coordinator duties. This is effective August 1, 2008.

Progress and Accomplishments

Applications, Admissions, and Recruitment

Please see the separate annual reports for the Office of Graduate and International Recruitment and Admissions, the George Washington Carver Research Program, and the Director of Graduate Student Activities.

Enrollment and Graduation

The Graduate School has the following goals:
- Increase over-all graduate enrollment each year
- Increase doctoral enrollment each year
- Increase graduate enrollment each year among underrepresented minorities, and at least reach an enrollment and graduation rate that mirrors the population of the State who are eligible to enter graduate programs (i.e. those who hold at least a baccalaureate degree). Our target enrollment and graduation rates are: African American, 8.0%; Asian American, 1.4%, Hispanic American, 1.0%; and Native American/Alaskan Native, 0.5%
- Maintain diversity in graduate enrollment by gender and nationality
- Increase graduate degree production each year
- Increase the degree production of underrepresented minorities (see goals above)
- Maintain diversity in degree production by gender and nationality

Enrollment

Graduate School enrollment, by program, is given in Table 1, master's and doctoral enrollment of under-represented minorities is given in Table 2; master's and doctoral enrollment by gender is given in Table 3; and master's and doctoral enrollment by nationality is given in Table 4.

In general, we have met our goal of increasing graduate enrollment each year since 2000, in absolute numbers and (with the exception of Fall 2004), in percentage of the total University enrollment. However, in Fall 2007, we fell behind in doctoral enrollment for the first time. We have met our goal of enrolling at least 8% African American students every year since 2000 except in Fall 2000, 2004, and 2005. Our most recent enrollment, in Fall 2007, saw an African-American graduate enrollment over 9% for the first time in these years. We have met our goals of a minimum 1.4% Asian American, 1.0% Hispanic American, and 0.5% Native American/Alaskan Native in every year since Fall 2000. Gender differences in master's and doctoral enrollment were less than 1% in Fall 2007, our lowest difference in the past few years and considerably below the 5% difference in Fall 2002. In terms of nationality, our percentage of international students has slipped, in Fall 2007, to 18.43%, a percentage virtually identical to Fall 2000.

Table 1: Graduate Enrollment, in Frequencies and Percentage of Total University Enrollment

	Master's	Specialist	Doctoral	Grad Cert	Non-Degree	Total	% Change*	Total Univ**	% Univ
Fall 2007	2,081	29	1,017	5	155	3,287	4.82%	18,648	17.63%
Fall 2006	1,967	18	1,026	1	124	3,136	1.69%	17,926	17.49%
Fall 2005	2,007	10	922	2	143	3,084	3.87%	17,821	17.31%
Fall 2004	1,954	16	877	1	121	2,969	3.88%	17,269	17.19%
Fall 2003	1,803	6	852	0	197	2,858	6.25%	16,449	17.37%
Fall 2002	1,737	23	754	0	176	2,690	5.41%	16,035	16.78%
Fall 2001	1,669	10	706	0	167	2,552	2.82%	15,795	16.16%
Fall 2000	1,586	16	676	0	204	2,482		15,396	16.12%

*Percent change in graduate enrollment from previous year
**Total University enrollment, both graduate and undergraduate, degree-seeking and non-degree seeking

Table 2: Master's and Doctoral Enrollment, by Race/Ethnicity, in Frequencies and Percentages of Total Domestic Master's and Doctoral Enrollment, Fall 2000-Fall 2007

	African American	Asian American	Hispanic American	Native American	Total Domestic
Fall 2007	231	44	67	49	2527
	9.14%	1.74%	2.65%	1.94%	
Fall 2006	197	45	56	36	2392
	8.24%	1.88%	2.34%	1.51%	
Fall 2005	185	45	55	29	2343
	7.90%	1.92%	2.35%	1.24%	
Fall 2004	169	45	46	42	2245
	7.53%	2.00%	2.05%	1.87%	

Fall 2003	178	58	56	35	2104
	8.46%	2.76%	2.66%	1.66%	
Fall 2002	169	48	48	45	1970
	8.58%	2.44%	2.44%	2.28%	
Fall 2001	159	45	36	43	1878
	8.47%	2.40%	1.92%	2.29%	
Fall 2000	130	44	35	38	1845
	7.05%	2.38%	1.90%	2.06%	

Table 3: Master's and Doctoral Enrollment by Gender, in Frequencies and Percentages of Total Master's and Doctoral Enrollment, Fall 2000-Fall 2007

	Female	Male	Total
Fall 2007	1534	1564	3098
	49.52%	50.48%	
Fall 2006	1458	1535	2993
	48.71%	51.29%	
Fall 2005	1429	1500	2929
	48.79%	51.21%	
Fall 2004	1395	1436	2831
	49.28%	50.72%	
Fall 2003	1273	1382	2655
	47.95%	52.05%	
Fall 2002	1181	1310	2491
	47.41%	52.59%	
Fall 2001	1151	1224	2375
	48.46%	51.54%	
Fall 2000	1088	1174	2262
	48.10%	51.90%	

Table 4: Master's and Doctoral Enrollment by Nationality, in Frequencies and Percentages of Total Master's and Doctoral Enrollment, Fall 2000-Fall 2007

	Domestic	Int'l	Total
Fall 2007	2527	571	3098
	81.57%	18.43%	
Fall 2006	2392	601	2993
	79.92%	20.08%	
Fall 2005	2343	586	2929

	79.99%	20.01%	
Fall 2004	2245	586	2831
	79.30%	20.70%	
Fall 2003	2104	551	2655
	79.25%	20.75%	
Fall 2002	1970	521	2491
	79.08%	20.92%	
Fall 2001	1878	497	2375
	79.07%	20.93%	
Fall 2000	1845	417	2262
	81.56%	18.44%	

Graduation

Degrees awarded are given in Table 5; degrees awarded by race/ethnicity are given in Table 6; degrees awarded by gender are given in Table 7; and degrees awarded by nationality are given in Table 8. Note: The 2006/07 graduation year is the most recent for which we have official data.

Over-all degree production decreased in 2006/07, compared to the previous year, as did every category (master's, specialist, doctoral). However, master's and doctoral degrees were awarded to more African Americans, Native Americans, and Hispanic Americans than in the previous year. In fact, in the 2006/07 graduation year, we exceeded our goal of a minimum 8% graduation of African Americans for the first time since 2004/05. We did meet our graduation goals for Native Americans, Asian Americans, and Hispanic Americans in the 2006/07 graduation year. The percentage of master's and doctoral degrees awarded to women fell slightly in 2006/07, as did those awarded to international students.

Table 5: Graduate Degrees Awarded, in Frequencies and Percentages of Total Graduate Degrees Awarded

	Master's	Specialist	Doctoral	Total
2006-07	929	1	115	1,045
	88.90%	0.10%	11.00%	
2005-06	985	3	134	1,122
	87.79%	0.27%	11.94%	
2004-05	904	3	145	1,052
	85.93%	0.29%	13.78%	
2003-04	831	12	110	953
	87.20%	1.26%	11.54%	
2002-03	793	4	120	917
	86.48%	0.44%	13.09%	
2001-02	729	5	106	840

	86.79%	0.60%	12.62%	
2000-01	735	9	90	834
	88.13%	1.08%	10.79%	

Table 6: Graduate Degrees Awarded, by Race/Ethnicity, in Frequencies and Percentages of Total Graduate Degrees Awarded

		African American	Native American	Asian American	Hispanic American	White	Unknown	Total Domestic
2006-07	n	75	9	19	22	738	16	879
	% Domestic	8.53%	1.02%	2.16%	2.50%	83.96%	1.82%	
2005-06	n	73	8	20	17	789	32	939
	% Domestic	7.77%	0.85%	2.13%	1.81%	84.03%	3.41%	
2004-05	n	83	14	26	19	715	67	924
	% Domestic	8.98%	1.52%	2.81%	2.06%	77.38%	7.25%	
2003-04	n	73	12	22	18	645	5	775
	% Domestic	9.42%	1.55%	2.84%	2.32%	83.23%	0.65%	
2002-03	n	76	13	22	15	624	3	753
	% Domestic	10.09%	1.73%	2.92%	1.99%	82.87%	0.40%	
2001-02	n	73	10	20	10	590	3	706
	% Domestic	10.34%	1.42%	2.83%	1.42%	83.57%	0.42%	
2000-01	n	50	19	22	16	601	0	708
	% Domestic	7.06%	2.68%	3.11%	2.26%	84.89%	0.00%	

Table 7: Graduate Degrees Awarded, by Gender, in Frequencies and Percentages of Total Graduate Degrees Awarded, 2000/01 to 2006/07

Graduate Degrees		Female	Male	Total
2006-07	n	498	547	1,045
	% Total	47.66%	52.34%	
2005-06	n	541	581	1,122
	% Total	48.22%	51.78%	1
2004-05	n	525	527	1,052
	%	49.90%	50.10%	

	Total			
2003-04	n	457	496	953
	% Total	47.95%	52.05%	
2002-03	n	469	448	917
	% Total	51.15%	48.85%	
2001-02	n	458	382	840
	% Total	54.52%	45.48%	
2000-01	n	462	372	834
	% Total	55.40%	44.60%	

Table 8: Graduate Degrees Awarded, by Nationality, in Frequencies and Percentages of Total Graduate Degrees Awarded

Graduate Degrees		Domestic	Int'l	Total
2006-07	n	879	166	1,045
	% Total	84.11%	15.89%	
2005-06	n	939	183	1,122
	% Total	83.69%	16.31%	
2004-05	n	924	128	1,052
	% Total	87.83%	12.17%	
2003-04	n	775	178	953
	% Total	81.32%	18.68%	
2002-03	n	753	164	917
	% Total	82.12%	17.88%	
2001-02	n	706	134	840
	% Total	84.05%	15.95%	
2000-01	n	708	126	834
	% Total	84.89%	15.11%	

Retention

The Graduate School strives to assist with retaining graduate students to graduation. Table 9 provides retention rates. Year refers to the student's first enrollment. Retention includes those who were enrolled in spring 2008 and those who had graduated in either the first or any other degree program. Retention rates above 50% are better than national benchmarks.

Table 9: Retention by Race and Year

	African American	Asian American	Hispanic American	Native American	Caucasian
^2007	93.1	83.3	90.3	86.4	91.8
^2006	82.1	72.4	79.4	68.8	84.5
^2005	73.9	69.2	63.6	94.7	79.3
^2004	72.6	81.1	79.2	37.5	79.8
^2003	81.9	78.6	80.0	84.3	77.0
^2002	73.7	66.7	58.9	58.8	78.3
^2001	76.7	85.2	71.4	76.9	77.2
^2000	81.0	85.7	95.0	95.0	73.4

Graduate Assistantships, Fellowships and Travel Grants

In fall 2007, 1,227 students were on a graduate assistantship; there were 56 graduate students on the Lever Fellowship; and we hosted a total of ten SREB-funded scholars. We paid for 423 travel grants, for a total expenditure of $344,069. For information on other fellowships and travel grants, please see the report from Vicky Hartwell.

On-going, Yearly, and Traditional Activities

In 2007-2008, we continued organizing and/or financing these on-going special events:

- ✓ Fall and Spring sessions of the *Graduate Student Professional Learning Series*;
- ✓ Fall and Spring luncheon seminars for graduate students on topics such as "Stress and Time Management," "Dealing with Conflict," and "Finding Funding for Your Research."
- ✓ The August workshop for graduate assistants presented by the Teaching and Faculty Support Center;
- ✓ The annual Graduate Student Orientation held in August;
- ✓ Monthly meetings of the Graduate Dean's Student Advisory Board;
- ✓ Training for new graduate coordinators;
- ✓ Support for the Black Graduate Students Association;
- ✓ The annual visit of the incoming class of the Clinton School;
- ✓ Lunch meetings for SREB scholars in each of the fall and spring semesters.

In addition, we continued these routine activities:

- o Managing the periodic review of all degree programs;
- o Editing and producing the Graduate School newsletter;
- o Managing the functional aspects of ISIS; trouble shooting for ISIS issues;
- o Providing data to university staff and faculty as requested;
- o Serving on the Steering Committee of the ISIS project;

- Processing all out-of-career registrations for undergraduate and graduate students;
- Co-coordinating the All-University Commencement ceremony; and organizing all of the aspects of commencement that specifically pertain to graduate students;
- Serving on the Registration and Course Scheduling Coordinating Committee (RACSCCLs);
- Assisting with the Clinton School;
- Organizing, chairing and serving on the Graduate Council; creating the Council agenda and minutes; posting the agenda and minutes to the web; publicizing the activities of the Council;
- Overseeing the application for and approval of graduate faculty status;
- Preparing all of the material for the University Course and Programs Committee; preparing and posting the agenda and the minutes for the Committee;
- Editing the *Graduate School Catalog*;
- Preparing several reports (e.g. Peterson's Guide; GRE; NSF);
- Serving as a member of the Staff Senate;
- Serving as an *ex officio* member of the Faculty Senate, and reporting Graduate Council and University Course and Program Committee business to the Senate;
- Processing and monitoring the admissions, academic progress, committee assignments, change of majors, and degree completions of all graduate students;
- Processing and monitoring the tuition payments for all students on graduate assistantships or fellowships;
- Processing and monitoring all applications for graduate faculty status;
- Serving on the professional board and the users board of the Survey Research Center;
- Serving on the Campus Council;
- Served on the Disability Committee;
- Serving on the English as a Second Language Committee;
- Creating the course schedules for the seven interdisciplinary degree programs and the one interdisciplinary graduate certificate program; monitoring and making changes to the schedules;
- Organizing the work of graduate student grievance committees;
- Participating in the orientation for international students;
- Organizing monthly meetings of the interdisciplinary program directors;
- Organizing regular meetings of the Teaching Assistant Effectiveness Advisory Committee and the Preparing for the Professoriate Committee;
- Organizing a team for the Susan G. Komen race;
- Sponsoring a table at the annual Martin Luther King recommitment banquet;
- Facilitating the organization of graduate student support groups;
- Monitoring the Bush/Clinton Fulbright Tsunami Relief Initiative students;
- and serving on a wide variety of other committees.

Ms. Kendra Smith took the leadership role in this year's Carver Project. This summer we hosted 23 students from 11 institutions (Alcorn State University; Bennett College; Fort Valley State University; Huston-Tillotson University; Philander Smith College; Prairie View A & M;

Southern University; Texas Southern University; Winston-Salem State University; University of Arkansas; University of Arkansas, Pine Bluff) .

Associate Dean Koski attended the annual meetings of the Council of Graduate Schools, the national professional association, in Seattle, Washington. Associate Dean Koski and Ms. Lynn Mosesso, Director of the Office of Graduate and International Recruitment and Admissions, attended the annual meetings of the Conference of Southern Graduate Schools, in Austin, Texas.

There are seven interdisciplinary degree programs and one graduate certificate program which report directly to the Graduate School: the M.S. and Ph.D. in Cell and Molecular Biology; the M.S. and Ph.D. in Microelectronics-Photonics; the Ph.D. in Public Policy; the M.S. and Ph.D. in Space and Planetary Sciences, and the graduate certificate in Gerontology. Table 10 shows the enrollment in each of these degree programs from Fall 2001 to Fall 2007; and Table 11 shows the graduation from each degree program from 2000-01 to 2006-07. Each of our interdisciplinary programs continues to be very popular. In addition, Public Policy is the most diverse Ph.D. program on campus. Collectively, these cross-college interdisciplinary programs produced 9.6% of the total doctoral graduates in 2006-07. If we add the degrees received in Environmental Dynamics, which has grown into a cross-college program even though it remains housed in Fulbright College, the cross-college interdisciplinary degrees awarded in 2006-07 accounted for 13% of the total doctoral degrees (Ph.D./Ed.D.). Separate reports for each of the programs that report to the Graduate School are included later in this report.

Table 10: Enrollment in Interdisciplinary Degree Programs

	CEMBMS	CEMBPH	MEPHMS	MEPHPH	PUBPPH	SPACMS	SPACPH	TOTAL
Fall 2007	8	48	30	28	64	1	15	194
Fall 2006	7	45	30	28	61	0	16	187
Fall 2005	11	39	30	24	61	1	6	172
Fall 2004	20	34	26	26	63	N/A	N/A	169
Fall 2003	17	31	21	27	56	N/A	N/A	152
Fall 2002	13	15	14	23	44	N/A	N/A	109
Fall 2001	6	8	18	17	36	N/A	N/A	85

Table 12: Graduation in Interdisciplinary Degree Programs

	CEMBMS	CEMBPH	MEPHMS	MEPHPH	PUBPPH	SPACMS	SPACPH	TOTAL
2006-07	5	3	13	4	4	0	0	29
2005-06	7	6	7	5	10	1	1	37
2004-05	10	3	7	8	6	N/A	N/A	34
2003-04	4	2	8	2	1	N/A	N/A	17
2002-03	3	0	4	2	1	N/A	N/A	10
2001-02	1	0	7	0	0	N/A	N/A	8
2000-01	0	0	4	0	0	N/A	N/A	4
TOTAL	30	14	50	21	22	1	1	139

One-time, Beginning, or Ending Activities

During 2007-08, we:

- Served on the Library Expansion Task Force
- Served on the University Recruitment and Retention Committee
- Served on the University of Arkansas Experience Task Force
- Met with new faculty in the College of Education and Health Professions to talk about Graduate School policies

Actions by the Graduate Council

In 2007-08, the Graduate Council approved 25 program changes, seven policy changes, four program deletions, one new graduate certificate program and one new Ph.D. program. The Council denied three policy changes. The Council also routinely reviewed graduate and dual credit course changes sent forward from the University Course and Programs Committee, and considered graduate faculty applications. There were several discussions about possible future directions.

Graduate Student Activities

The Director of Graduate Student Activities (Ms. Diane Cook) is charged with enhancing graduate student retention and completion by providing professional and personal development programs for students.

Significant Achievements and Changes

<u>Graduate Student Professional Learning Series</u>
This program, initiated in 2005, has enjoyed much success. Three programs are held in the fall and spring semesters on topics of interest to graduate students, with a heavy focus on Responsible Conduct of Research. Presentations are made by research faculty or administrators. Each presentation is concluded with a dinner for all attendees (no charge) where graduate students can discuss the presentation and its implications in their own graduate program experience.

Doctoral Completion Project

With the goal of increasing the time-to-degree and graduation rates of doctoral students, the Graduate School works with twelve Ph.D. programs who have volunteered to assist the Graduate School in identifying best practices in doctoral student retention. In the 2007/2008 academic year roundtable discussions were held with the graduate coordinators of these programs to identify their best practices and to identify areas of concern.

Teaching Assistant Effectiveness Advisory Committee

The Graduate School created the Teaching Assistant Effectiveness Advisory Committee in 2007, to work toward increasing the preparation and effectiveness of all UA teaching assistants by supporting the departments in which the TAs are housed. This committee is comprised of faculty and graduate students representing departments with varying numbers of TAs. In the 2007/08 academic year the committee met to set goals for the short term.

Subcommittee work is focusing on 1) meeting with TA supervisors to determine best practices that currently exist within departments, and then disseminating that information to all departments; 2) planning TA workshops for each fall and spring semester, to help develop TA skills and confidence; 3) developing an email list of all TA's and TA supervisors that can be used to disseminate information to these groups; and 4) creating an online forum where TAs can share information among themselves, and where they can also ask questions of faculty mentors.

Preparing for the Professoriate

Begun in 2006, the PFP program attempts to prepare those doctoral students who will enter the academy as professors. The program currently consists of two courses taught each academic year: *Preparing for the Professoriate: Faculty Work Beyond the Classroom*, and *Preparing for the Professoriate: Work in the Classroom.* These courses are currently taught by Dr. William McComas, Parks Professor in Science Education. Also in the planning stages is a certificate program for Preparing for the Professoriate.

Annual ongoing activities

Graduate Student Lunch Seminars

In Fall 2007 and Spring 2008 a series of lunch presentations were held for graduate students on a variety of topics including Stress and Time Management, Dealing with Conflict, the Difference between a Resume and a Curriculum Vitae, and Finding Funding for your Research. Ten lunch seminars were held in Fall 2007, and five in Spring 2008. Topics for the lunch seminars are suggested by faculty, staff and graduate students.

Graduate Student Newsletter

The Graduate School began producing its graduate student newsletter, *Currents*, in Spring 2006. One issue was produced in fall 2007 and one in spring 2008. Providing more than just news and academic deadlines, the publication features in-depth profiles of current graduate students. Articles of interest to graduate students are also included in each issue. The newsletter is distributed to graduate students electronically, and printed copies are made available in the Graduate School offices.

New Graduate Student Orientation

Each August the Graduate School hosts an orientation for entering graduate students. In August 2007 we held our best orientation ever. The event formula provides graduate students with important information on their relationship and contract with the University of Arkansas and the Graduate School, but also includes valuable tips and techniques to help students succeed as graduate students. Breakout sessions on various topics are offered during the day. Session topics are: Multicultural Issues, Tuition/Assistantships/Fellowships, Getting Familiar with Fayetteville, and Graduate Student Panel. Approximately fifty faculty, staff and graduate students volunteer to work at New Graduate Student Orientation each August.

Graduate Student Family Picnic

The Graduate School hosts a picnic for all graduate students and their families early in the fall semester. The first picnic was held in September 2007, and was attended by approximately 100 people. Due to its popularity, it is now an annual event held each September. Members of the Graduate Dean's Student Advisory Board volunteer at the picnic.

Other Accomplishments and Activities

Sustainability Speaker Series

The Office of the Vice Provost for Research hosted a series of speakers throughout the academic year. Diane Cook worked with other faculty and staff at the University on these events, in an effort to increase sustainability awareness at the U of A. Presentations focused on many areas of sustainability—from the very simple things each person can do, to the world-changing efforts of major corporations in the area of sustainability. This effort will be maintained in the future by the UA Applied Sustainability Center.

Southern Regional Education Board (SREB)

In April 2007, Dr. Ainsley Abraham, Director of the SREB program, visited Fayetteville and met with the SREB fellowship holders at the University of Arkansas. In October, all UA SREB scholars attended the SREB workshop held in Washington, DC. Also attending were Associate Dean Patricia Koski, Graduate School Director of Fellowships Vicky Hartwell, and Director of Graduate Student Activities Diane Cook.

A lunch meeting of all SREB scholars is held each fall and spring semester, where students and their faculty mentors discuss concerns and successes in a visit with Dean Patricia Koski.

Office of Graduate and International Recruitment and Admission

Admissions Activities

There are no Graduate School of Business applications included in these numbers.

DOMESTIC ACTIVITY

	Apply	Admit	Deny	Enroll	Matriculation
Fall 2006	1606	924	57	586	63.4%
Fall 2007	1666	1000	64	656	65.6%
Change:	+ 60 (3.7%)	+76 (8%)	+7 (12.2%)	+70 (11.9%)	
Spring 2007	683	499	21	343	68.7%
Spring 2008	746	549	24	408	74.3%
Change:	+63 (9.2%)	+50 (10%)	+3 (14.2%)	+65 (18.9%)	
Summer 2007	668	474	20	305	64.3%
Summer 2008	715	537	17	377	70.2%
Change:	+47 (7%)	+63 (13%)	-3 (-15%)	+72 (23.6%)	

This shows a strong matriculation rate. There is a significant (11.9%) increase in enrolled students Fall 2007 vs Fall 2006.

GRADUATE INTERNATIONAL ACTIVITY

	Apply	Admit	Deny	Enroll	Matriculation
Fall 2006	965	336	335	131	39%
Fall 2007	1000	295	352	108	36.6%
Change:	+35 (3.6%)	-41 (-12.2%)	+17 (-5.07%)	-23 (-17.55%)	
Spring 2007	345	114	91	54	47.3%
Spring 2008	324	109	76	65	59.6%
Change:	-21 (-6.08%)	-5 (-4.38%)	-15 (-16.4%)	+9 (+9%)	
Summer 2007	56	32	4	17	53.1%
Summer 2008	80	28	10	11	39.2%
Change:	+14 (42.8%)	-4 (12.5%)	+6 (200%)	-6 (35.2%)	

Very low matriculation rates continue for graduate international admits. Competition from other U.S. institutions, other countries, and awarding of assistantships are factors. Fall 2007 saw an increase in applications and denials but a decrease in admissions and enrollment. Twenty three fewer students enrolled.

	UNDERGRADUATE INTERNATIONAL ACTIVITY				
	Apply	Admit	Deny	Enroll	Matriculation
Fall 2006	356	203	18	139	68.4%
Fall 2007	379	206	10	135	65.5%
Change:	+23	+3	-8	-4	
	(6.46%)	(1.4%)	(-44.4%)	(2.8%)	
Spring 2007	137	73	6	50	68.4%
Spring 2008	138	92	7	74	80.4%
Change:	+1	+19	+1	+24	
	(.73%)	(26%)	(16%)	(48%)	
Summer 2007	58	22	1	16	72.7%
Summer 2008	72	39	3	26	66.6%
Change:	+14	+17	+2	+10	
	(24%)	(22.7%)	(200%)	(37.5%)	

Overall strong matriculation rate. Applications were up by 23 (6.46%) and admissions up by 3 (1.4%) fall 2007, but enrollment of newly admitted students decreased by 4 students (135).

Total applications processed per admission cycle – includes spring, summer, fall:

	2006	2007	Change
Domestic GR	2957	3127	+170 (5.74%)
International GR	1366	1404	+38 (2.78%)
International UG	551	589	+38 (6.89%)
TOTAL:	4874	5120	+246 (5.04%)

- The Office processed 246 more applications for 2007 than 2006, a 5% increase.
- The largest increase was in domestic applications which increased 170 (5.75%) in 2007.

Overall graduate enrollment increased 4.8% from 3146 in Fall 2006 to 3297 in Fall 2007 (+151).

Fall 2007 saw a total of 958 international students enrolled, up from 951 Fall 2006 (+ 7, .7%)

There were 101 countries represented on campus, down one from the previous year. The top five countries represented are India (206), China (95), Japan (86), Bolivia (62), and Korea (55).

Fall 2007 saw a total of 85 sponsored students, up from 75 in Fall 2006 (+10). Fourteen sponsoring agencies placed students at the University. Students represent 27 different countries.

Staff Highlights

Elizabeth Mitchell was promoted to Administrative Assistant I in November, 2007.

Changes*:*
Gloria Flores was hired in July 2007 as the new Associate Director of Recruitment and Sponsored Student Programs.
Candace Stafford-Davis was hired August 2007 as the Graduate Assistant for Recruitment.
Lia Raquel Huddleston was hired in August 2007 as the new International Student Recruiter.
Kendra Smith was hired in November 2007 as the new Coordinator of Diversity Initiatives and Outreach.
Shani Farr was hired in December 2008 as the new Graduate Student Recruiter.
Melinda Schmohl was hired in December 2007 to replace Jennifer Ezell.
Sedivy Reigh was hired in March 2008 to replace Melinda Dunlap.
Stacey Clay was hired late June 2008 to replace Keukeu Abdullah.

Information and Training Initiatives

The biannual International Admissions Training for Graduate Coordinator's was held January 29-30, 2008. International admissions and recruitment, Sponsored Student Programs (SSP), Spring International Language Center, International Student and Scholars Office, and the Office of Study Abroad presented an overview of the how's and why's of admitting international students to 35 graduate coordinators.

Assistant Director of Graduate Admissions provided ISIS and graduate admissions procedures training to Operations Management site coordinators from four sites in September 2007.

Assistant Director of Graduate Admissions gave a presentation to Dr. Fred Pohlman's class regarding requirements for entering the Graduate School.

Work continues on an ISIS/Admissions training manual, with staff working with Karen Jennings, Coordinator of Training for the ISIS project.

In April 2007, recruitment and some admissions staff attended a brief training on data entry of applications and prospect cards into ISIS.

In March 2008, the Assistant Director of International Admissions, the International Credential Evaluator, and the Director of Admissions and Recruitment attended the American Association of Collegiate Registrars and Admissions Officers conference in Orlando, FL.

Catherine Cunningham and Gloria Flores conducted a training session for the International Orientation Mentor Training about the SSP office and its purpose on August 3, 2007.

Gloria Flores attended a Legal Aid presentation about the new Landlord/Tenants changes in Arkansas law. This was particularly important to know especially as it relates to our international students.

Gloria Flores, Lynn Mosesso, Director and Lia Huddleston, International Recruiter attended training sessions with the following undergraduate academic college advising centers and programs in order to be informed and prepared for international undergraduate recruitment: Engineering, Honors, Arts and Sciences, Business, Education and Health Professions, and Architecture.

Gloria Flores, Catherine Cunningham, Lynn Mosesso, and Leyah Bergman-Lanier held a luncheon for the Graduate School of Business Admission and Recruitment staff on February 4, 2008 in order to exchange information about understanding the sponsored student process and learning more about the graduate Business school admission process.

Gloria Flores and Catherine Cunningham met with Aleka Myer, Director of SSP at the University of North Texas and with Vi Cook, Director of SSP at Texas A&M University on February 18-20, 2008 to learn more about their programs in order to improve and develop the SSP at the UA.

Revenue

The Director evaluated 86 international applications (up from 63 in FY 2005) for the Graduate School of Business, generating $2,150.

Sponsored Student Programs service fee generated approximately $64,900 for fiscal year 2007.

Unit Efforts

<u>Graduate and International Admissions</u>

Admission data queries are generated monthly and given to Admissions to clean-up. These queries ensure the accuracy of ISIS admissions data and provide a good data entry training tool.

Effective October 2007, all I-20 data is entered into ISIS rather than SEVIS real time interface. SEVIS alerts checked daily, issues resolved, and I-20s are batch processed in cooperation with the Office of International Students and Scholars.

The Assistant Director of International Admissions continues to assist with new international student orientation check-in and First Year Experience orientation.

In November, 2007, the office updated emPower scanning folders and set up new libraries for viewing and administering scanning files.

The Assistant Directors of Admission served as Graduate School team captains for Race for the Cure 2008. Jeremy Turner has volunteered to be Graduate School team captain for 2009.

Assistant Directors of Admissions served on the Personnel Action Committee (previously Performance Evaluation Committee) for the Graduate School.

Assistant Directors of Admissions completed the Supervisory Development Program offered by Human Resourses in the fall of 2007.

Assistant Directors of Admissions submitted proposal for reorganization and restructuring of Admissions unit to include an additional two Admissions Analyst II positions. The proposal was approved.

Assistant Directors of Admissions met several times with Karen Jennings in ongoing efforts to create a policies and procedures manual. Several procedures were submitted to Ms. Jennings for formatting into ISIS 8.9 style.

In January 2008, Assistant Director of Graduate Domestic Admissions took over the processing and clean-up of duplicate IDs in ISIS from the ISIS support team.

Sponsored Student Programs (SSP) Unit Efforts

The office conducted SSP check-ins for all of the new SSP students in August 2007 and January 2008. These are one-on-one meetings that are held with these students to review all of the aspects of their scholarship, their admission, and other important aspects of their transition to the UA.

Catherine Cunningham and Gloria Flores along with Susan Byram, Assistant Director of International Admissions staffed the International Admission's Office and SSP Table at the International Student Orientation on August 7, 2007 and January 7, 2008.

Gloria Flores transported two Bush/Clinton/Fulbright Scholars from the Spring International Language Center at the UA to the University of Arkansas at Little Rock campus on August 16, 2007.

Gloria Flores, Catherine Cunningham, Keukeu Abdullah, Management Project Analyst I and Dan Ferritor, Vice Chancellor for Academics of the UA System chaperoned 14 Bush/Clinton Tsunami Relief Fund Project – Fulbright Scholars to Garrett Creek Ranch in Texas for the Leadership retreat hosted by Texas A&M on November 16-18, 2007.

The SSP Graduation Recognition Dinner was held on April 28, 2008 at University House. There were 24 students completing their doctorate or master's programs.

Exit Interviews were held in May 2008 with all of the SSP students graduating in May and August 2008.

Gloria Flores coordinated the UA sponsored Bush/Clinton Tsunami Relief Fund Project – Fulbright Scholar Leadership Retreat on May 15-18, 2008 in Hot Springs, AR. Thirty-two students from the University of Arkansas, Texas A&M University, and 5 other universities attended as did 14 staff.

Gloria Flores, Lia Huddleston, and Lynn Mosesso attended the NAFSA state meeting, April 2008 in Russellville, Arkansas. Ms. Mosesso gave a presentation. NAFSA is the International Association of International Educators (orginally named the National Association of Foreign Student Advisors).

Recruitment Unit Efforts

Shani Farr, Kendra Smith, Gloria Flores, and Lia Raquel Huddleston attended the Graduate and Professional School Enrollment Management Corporation Conference in San Antonio, Texas on February 20-22, 2008. The conference theme was "How to Recruit Graduate Students: Getting the Results You Want." A follow-up de-briefing meeting was held on April 7, 2008 with those above and Bryan Hill, Carrie Hobbs-Keith, Lynn Mosesso, Elizabeth Mitchell, Candace Davis and Vicky Hartwell.

Recruitment staff attended the following training sessions with academic and student affairs departments in order to better understand the UA's academic and support services for graduate recruitment: Cedrick Kenner, Multicultural Center; Dr. Bill Levine, Psychology; JoAnn Kvamme and Dr. Steve Boss, Environmental Dynamics; Bryan Hill, Engineering; Rebel Smith, Graduate School of Business; Carrie Hobbs-Keith, Industrial Engineering; Dr. Joe Shriver, Social Work; Barbara Batson, Career Development Center; Dr. Mike Miller, Rehabilitation, Human Resources and Communication Disorders; Dr. Anna Zajicek, Sociology; Dr. Brinck Kerr and Dr. Valerie Cook, Public Policy; Dr. Doug Rhoads, Cell and Molecular Biology; Anne Raines, Enhanced Learning Center; Jeanie Hulen, Master of Fine Arts program; Dr. Dean Gorman, Health Sciences, Kinesiology, and Rehabilitation.

The Recruitment Office

- Acquired two new laptops, four suitcases (for carrying recruitment materials) and three additional carts.
- Purchased a digital camera.
- Instituted a check-out procedure for laptops, suitcases, carts, Fuelman cards, Chartwells charge card, table banners and digital camera.
- Received two departmental charge cards from Chartwells which are then billed to us at the beginning of each month for hosting visitors.
- Recruiters have Traveler T-cards allowing them to use less personal money and charge hotel, meals, rental cars, etc. with their own card.
- Has provided a spreadsheet was showing reasons given when a newly admitted student declines the offer of admission. The data is taken from Intent to Enroll forms returned to the office.
- Set procedure for campus visits.
- Clarified roles of Admissions vs. Recruitment and implemented monthly meetings with Graduate Admissions and Recruitment.

- Moved storage and hourly workstations to OZAR 105.

Forms and Media Pieces and Web Presence:

Forms updated/revised

- Degree Award Notice form along with a standardized email to be sent to UA undergraduate deans offices.
- "Quick Answers for Prospective Students" brochure
- Request for Exception to Graduate School Admissions form
- OMGT application for admission
- All international GR and UG admissions letters
- 2008-2009 Estimated Academic Cost Sheet for international applicants

The following forms were created

- Admissions Training Checklist
- Recruitment pre-travel, post-travel, and signature request forms.

Media/marketing pieces created

Worked with University Relations to create a new domestic student recruitment piece for college fairs and conferences
International undergraduate and graduate bookmarks
Recruitment Bookmarks (not yet printed)
Flyer for visits - Carver Institutions
Flyer for visits - domestic universities/colleges
Flyer for visits – community colleges
New international prospective card information
Flyer – Jamaica
Flyer – Dominica (not printed)
MSU Career Expo AD to be put in The Standard newspaper
Updated/new design for Self-mailer for domestic prospective students
Updated/new design for SILC glossy flyer
Flyer – Bahamas (not printed)
Finalized Graduate School poster (template made by Brian Hill - ENGR)
Bolivian Tuition Advantage Flyer – (printed for advisors packets and not to be sent for college fairs)
Graduate Research Opportunities Forum (GROF) self-mailer
GROF save the date postcard
3 Models for postcards to be sent to UA staff (to recruit UA staff members)
New international folders (to be used in advisors and admissions packets) (not yet printed)
University of Oklahoma Job Search Guide adverstisement
Finalized design for Graduate (Domestic) t-shirt imprint
Finalized design for Carver Program t-shirt imprint
Designed International t-shirt imprint

Web Page Updates/Additions

- Graduate Application for Admission updated.
- International FAQs were updated.
- List of Student Cultural Associations updated.
- 2008-2009 Academic Costs for International Students was updated.
- Sponsored Student Programs website was revised and updated.

Domestic Recruitment Activities

Collectively, recruiters Lia Raquel Huddleston, Kendra Smith, Shani Farr, Director of Fellowships Vicky Hartwell, Associate Director of SSP and Recruitment Gloria Flores and student Angela Hines returned a total of 872 prospect cards from 37 recruiting trips, September 2007 – April 2008. Of those cards, Lia Raquel supplied 103, Kendra 164, Shani 139, Vicky 87, Gloria 272 and Angela supplied 59.

Recruiters rated each trip on a scale of one to five, five being high. The average rating was 3.43. The two with the lowest rating, a rating of 1, were the spring fairs at The University of Arkansas at Little Rock and the Tulsa Metro. For each trip, recruiters were asked if they recommend attending again. The recruiters responded in the positive for 33 of 37 trips. There were two trips with no response and two, mentioned above, were not recommended for continuing participation.

Recruiters visited a total of 29 universities, up from 23 last year, and attended the following conferences:

- MANNRS (Minorities in Agriculture, Natural Resources, and Related Sciences) Conference
- SACNAS (Society for Advancement of Chicanos and Native Americans)
- National Society of Black Engineers
- Society for Hispanic Professional Engineers
- National Black Graduate Student Association

The Recruitment Office provided cost share for faculty/staff to attend the conferences of the following organizations:

- Southern Anthropological Society (SAS)
- National Association of Black Geologists and Geophysicists
- Geological Society of America
- Southeastern Section of the American Physical Society (SESAPS)
- Society for Advancement of Chicanos and Native Americans in Science (SACNAS)
- Minorities in Agriculture, Natural Resources, and Related Sciences (MANNRS)

The office hosted 48 separate campus visits for prospective students, up from 32 last year.

In December 2007, as an initial training on how to conduct a campus visit, Kendra Smith and Shani Farr traveled to Arkansas Baptist College, Philander Smith College and the University of

Arkansas at Pine Bluff. During these visits they met with various faculty and administrators to introduce themselves and re-establish relationships between the UA Graduate School and these universities.

The IDeA Network of Biomedical Research Excellence (INBRE) state conference was held here at the University of Arkansas. As a part of this conference a vendor/grad school fair was held in the student union ballroom. Kendra Smith and Lia Raquel Huddleston attended this fair as a representative of the UA Graduate School.

During a UA Minorities in Agriculture Natural Resources and Related Science (MANRRS) meeting, Kendra Smith participated in a panel discussion as a representative of the Graduate School. The topic was "Applying to Graduate School." This meeting was held in the Multicultural Center and was attended by approximately 15 students.

While traveling to Atlanta, GA Shani Farr and Kendra Smith met with U of A Alumni to discuss the idea of bringing them into our recruiting efforts.

During the month of February, the College of Education and Health Professions hosted a Graduate Assistantship Fair for students that had been accepted for Fall 2008. Kendra Smith attended this fair and gave an official welcome from the Graduate School and also presented information on the services the Graduate School offers students.

In an effort to reach out to the business community and participate in an event that promotes diversity, Kendra Smith attended the Juneteenth Celebration at the Jones Center for Families in Springdale, Arkansas. She shared a booth with U of A undergraduate admissions and met several members of the business community who are interested in pursuing a graduate degree here at the University of Arkansas. The majority of these individuals were interested in programs within the Walton College of Business.

Kendra Smith, Coordinator of Diversity Initiatives and Outreach is the Director of the George Washington Carver Program (GWCP). It is a significant achievement that this program continued to see success this year even though there was a late start in advertising and inexperienced staff managing the program. There were a total of 29 applicants with 23 of those accepted to the program. Shani Farr, Graduate Recruiter and Clinnesha Dillon, Graduate Assistant provided excellent assistance. (Please see GWCP Annual Report later in this document for full details).

Fort Valley State University (FVSU) of Fort Valley, Georgia was added as a Carver institution in March 2008.

Kendra Smith assumed the role of advisor to the Black Graduate Students Association (BGSA).

Gloria Flores conducted a workshop on Applying to Graduate School co-sponsored by the Graduate School and Career Development Center held February, 2008.

Gloria Flores conducted a workshop on Applying to Graduate and Professional Schools for the UA Honors College seminar March, 2008.

Lynn Mosesso organized the inaugural meeting of the Graduate Recruitment Network. The purpose of the Network is to establish a good communication link between all of the offices and academic programs responsible for graduate and professional school recruitment at the UA, to share recruitment strategies and resources, and to plan on-campus recruitment events. Fifteen representatives of various UA colleges and offices met in June 2008. Bryan Hill, Engineering and Dr. Rebel Smith, Graduate School of Business, were elected co-chairs of the Network for the 2008-09 year.

Lia Raquel Huddleston was a guest speaker for Human Resources and the School of Social Work talking about Diversity and intercultural communication and cultural sensitivity.

Until the office of Graduate Recruitment had a full staff, we enlisted people outside of the office to help with recruitment initiatives:

- Dale Thompson and Angela Hines traveled to North Carolina where they attended the NC A&T Graduate Fair and Angela visited Bennett College for Women. They identified a significant number of prospects at both.

- Ken Vickers went to the Southeastern Section of the American Physical Society (SESAPS) conference hosted by Fisk University. Not only did he participate in the conference, but he used the opportunity to speak with Fisk students about UA summer and graduate programs.

- Our Graduate Assistant, Candace Davis, visited Philander Smith College for their fall Career Fair along with Sherea Dillon, President of BGSA.

- We provided financial support for JoAnn Kvamme and Byron Winston to attend the National Association of Black Geologists and Geophysicists conference. They will be hosting the 2009 conference here at the University of Arkansas.

- Joni Marvel traveled to the University of the Ozarks fall Career Fair. JoAnn Kvamme traveled to the University of Oklahoma Graduate and Professional School Fair.

We also reimbursed several students and faculty, including Jeffrey Bonacci, for mileage to the airport to pick up and return prospective students.

This year we supported students Deitrick Smart and Kara Matthews to attend the National Black Graduate Student Association's (NBGSA) annual conference, which was also attended by our Recruiter Shani Farr, and reimbursed Sherea Dillon for her mileage to and from the airport.

Students Kanika Calvin and Jeremiah Wilson received support to attend the Minorities in Agriculture, Natural Resources and Related Sciences (MANRRS) conference which was also attended by our Recruiter Shani Farr.

Communications

There are a total of 10 communications regularly sent to prospective students. These communications are generated by ISIS from information entered from of the prospect card or GRE scores. The cards are obtained through campus visits, email inquiries, on-line submissions, recruiting trips, as well as phone and drop-in inquiries. GRE scores are sent to us as designated by prospective students and automatically uploaded.

There were a total of 6,077 communications sent.

We received 1149 requests for information from our new on-line prospect card, with peak periods being September, October, and April.

Emails are sent to Master's and Doctoral prospects. We sent 680 Master's emails and 136 Doctoral.

We have two postcards, one listing 10 Multi-cultural reasons to attend the University of Arkansas and one encouraging requests for Application Fee Waivers. We sent 492 Multicultural postcards and 320 fee waiver postcards.

A total of 105 letters were sent to prospective Doctoral students eligible for a Doctoral Fellowship and 1,415 letters were sent to students who sent GRE scores or scores automatically uploaded.

Students who are below the undergraduate status of Junior are mailed a brochure with campus and Graduate School information. We sent 408 of these brochures.

A total of 65 prospects that attended a GWCP partner institution were mailed a GWCP flyer.

The Graduate School view book (Prospectus) containing information on the University as well as the application for admission and the application for assistantship was sent to 1,246 prospects.

We have partnered with the Fayetteville Visitor's Bureau for a recruitment mailing. We insert letters in Graduate School envelopes and deliver them to the Bureau. They then stuff the envelopes with Fayetteville Visitor Guides and mail them. Together we sent 1,210 Visitor Guides.

In addition to the communications generated through ISIS, recruiters made follow-up phone calls and emails to prospective students.

International Recruitment Activities

Our new international student recruiter began employment in mid-August, 2007.

Gloria Flores, Catherine Cunningham, and Leyha Bergman-Lanier, Director of the Spring International Language Center visited American based agencies and Embassies in New York, NY and Washington, D.C. on November 27-30, 2007 in order to promote the UA's academic programs and services provided by SILC and SSP for sponsored students.

Gloria Flores submitted visiting student applications for the International Research and Exchanges Board undergraduate program, the Edmund S. Muskie Graduate Fellowship, and Peace Scholarship sponsored by the United States Agency for International Development.

Gloria Flores coordinated the visit from the Cultural Attaché from the Embassy of the State of Kuwait, Dr. Ahmad Alloughani on May 9-10, 2008.

Gloria Flores and Catherine Cunningham attended the NAFSA National Conference in Washington, D.C. on May 26-30, 2008 for recruitment purposes.

In March 2008, Assistant Director of International Admissions and the International Credential Evaluator traveled to the Tulsa Community College (TCC) to present UA information at the TCC International Students Association meeting.

In April 2008, Assistant Director of International Admissions, International Credential Evaluator, and International Recruiter traveled to Northwest Arkansas Community College to present information to prospective international transfer students.

The office hosted 12 prospective students from Midwestern State University.

The office funded Nick Cogan, UA foreign student advisor, to recruit in Shanghai, Dailian, and Beijing, China. Mr. Cogan is fluent in Mandarin and met with students, parents, and alumni. We have received 12 applications for admission from this visit.

The Dean of the Graduate School signed a Memorandum of Understanding with the Ministry of Education, Rwanda to place master's and doctoral students at the UA. We have received 8 applications for fall 2008.

The office mailed out advisors packets and informational/marketing pieces to advising centers in Peru, Argentina, Brazil, Vietnam, China, Russia, Colombia, Bolivia, and many Caribbean islands.

Weekly reports were received from Hobson's Educational Guide website and monthly reports from StudyUSA.com/ESL.com websites with prospective student contact information. We receive between 500 and 3000 names per week. Prospective students are contacted by email on Tuesday morning each week.

The office initiated a database of contact information for prospective students met at college fairs. The database has prospective student names from Trinidad and Tobago, Bahamas, Jamaica, St. Lucia, Dominica, Belize, Anguilla, Bolivia, and Indonesia.

The office created a contact database of foreign student advisors of community colleges in Texas, Oklahoma, and Missouri.

DeDe Long, Director of Study Abroad, Michael Freeman, Director of the International Students and Scholars Office (ISSO), Leyha Bergman-Lanier, Director of the Spring International Language Center, Lynn Mosesso, Director of Graduate and International Recruitment and Admissions and Gloria Flores met to reorganize the Visiting Student process and procedures in January 2008. It was determined that Study Abroad will no longer handle these students. Efforts will be coordinated through the ISSO. The ISSO has hired a graduate assistant to work with this group. The International Admissions Office will work closely with ISSO, prioritizing the admission of visiting students. Sponsored Student Programs (SSP) will work with any visiting students who are sponsored.

International admissions and recruitment and Sponsored Student Programs hosted Katia Chetoshnikova, an Institute of International Education intern from Russia for a week in April 2008. We shared information with her about international recruitment office procedures, policies and history.

The Office of Graduate and International Recruitment and Admission

- Facilitated 30 campus visits for prospective undergraduate and graduate international students, providing information about the application process, admission requirements, UA programs and services, etc.

- Created content for web marketing/media:
    - Nirshamim.com
    - Hobson's Educational Guide Web site
    - Study in USA web site
    - Peterson's

- Created content for print marketing/media:
    - Hobson's Educational Guide (Books) (to be received October 2008)
    - Study in USA magazine (received June 2008)
    - 3000 Hobson's brochures (delivered July 2008)

- Participated Education USA college fairs in Trinidad/Tobago, Jamaica, the Bahamas, Dominica, St. Lucia, Anguilla, and Belize. Talked with over 1500 prospects and have received 28 applications.

- Contracted with Hobson International Guides to advertise in the European, Latin, Asian, and World editions for 2008 and the TOEFL/ETS/Hobson guide. This was cost-shared with the Spring International Language Center.

- Contracted with Study USA to advertise in their world wide edition and web. Cost-shared with Spring International.

- Responded to requests for application and admissions information through the Virtual Advisor program and the iao@uark.edu account.

The Office hosted Dr. Tran Thi Hong, Vice Director, and a delegation from Vietnam National University. We are hopeful a Memorandum of Understanding will be signed soon. In addition, Srini Krishnan (Chennai, India), "Artist in Residence" at Miami University, brought student members of the Global Rhythms to teach and perform at the UA Diwali festival.

Unit Goals for Graduate and Recruitment and Admission

- Continue to work with the ISIS Graduate Specialist to make sure data needs are met.
- Create and maintain an ISIS admissions procedure manual that is kept up-to-date and can be used for training purposes.
- Work toward the automation of letters to applicants and students.
- Implement workflow scanning processes for Admissions.
- Increase the number of sponsored students enrolled at the UA.
- Continue revising the Graduate Application for Admissions and other documents as needed for the implementation of scanning.
- Increase international and sponsored student recruitment activities.
- Increase outreach to Hispanic Serving Institutions and Historically Black Colleges and Universities.
- Build a strong recruitment team.
- Create new and revise old printed recruitment materials.
- Revise the current communication plan.
- Provide professional development opportunities to staff.

George Washington Carver Project

Overview

Implemented in 1997, the George Washington Carver Program (GWCP) was designed to establish mutually beneficial institutional relationships with Historically Black Colleges and Universities (HBCUs), Hispanic Serving Institutions (HSIs), and Tribal Colleges (TCs) as part of the continuing effort to increase the diversity of the graduate and professional student body. This goal is realized by encouraging students at participating HBCUs, and HSIs to engage in summer research and then pursue graduate and professional degrees at the University of Arkansas Graduate School.

This year's participating institutions are as follows:

- Alcorn State University 3 students
- Bennett College 1 student
- Fort Valley State University 1 student
- Huston-Tillotson University 2 students
- Philander Smith College 2 students
- Prairie View A & M University 1 student

- Southern University 1 student
- Texas Southern University 2 students
- Winston-Salem State University 1 student
- University of Arkansas 5 students
- University of Arkansas, Pine Bluff 4 students

23 Total

While on campus, each intern worked directly with a faculty mentor on a structured research project.

Application and Selection Process

Due to staff limitations, the initial call for applications was sent to faculty and administrators at each of the partner institutions during late fall and early spring. This usually takes place in early fall. Between December 2007 and March 2008, Kendra Smith, Coordinator of Diversity Initiatives and Outreach and Shani Farr, Graduate Recruiter, visited 12 of the participating institutions. All positions were advertised for Carver by attending Graduate School/Career Fairs and meeting with students and key administrators on each campus to provide eligible students with information about the George Washington Carver Program.

The Director of the George Washington Carver Program analyzed all the applications and transcripts for all departments except engineering before forwarding them to the appropriate administrator. The Assistant Dean, Dr. Thomas Carter III, in the College of Engineering analyzed the engineering applications before sending them to the appropriate faculty mentor. Students with less than a 3.0 GPA and 60 hours were automatically declined. Applications that progressed beyond the initial cut were sent to the department for further consideration. Of 29 applicants, 23 students were selected to participate in the 2008 George Washington Carver Program.

Implementation

The selected students arrived on May 18, 2008. As a part of the continued collaboration, the opening week activities were held with other university sponsored REU programs. These programs included Food Science, Microelectronics-Photonics, Physics, Chemistry, IDeA Network of Biomedical Research Excellence (INBRE) and Mechanical Engineering. Each program agreed to co-host the opening week activities May 18-20. The welcome barbeque for the Carver/REU students was held at the University House. Additional combined activities included orientation, a welcome luncheon, and a team-building day. (Please see schedule attached as Appendix A.)

In addition to the formal research training, the Carver interns completed Carver specific assignments (see Appendix B) and participated in several co-curricular activities including a trip to the George Washington Carver National Monument in Diamond, Missouri and a 2 ½ day trip to Little Rock, Arkansas that included dinner at Murry's Dinner Playhouse, a full day of team-building activities at the 4-H Center and visits to Central High Museum and the Clinton Library.

This year, a community service component was added. The Carver interns served as volunteers for the NWA Arkansas Juneteenth Celebration. They primarily worked with young children instructing them on various games and sports techniques.

The interns participated in a weekly lecture series called Dinner and Dialogue. The series featured presentations that would either enhance their research experience while they were here or give them knowledge of graduate school preparation. The presentations and topics were as follows:

- "Just a Little Brown Spider," presented by Dr. Collis Geren, Vice Provost for Research and Dean of the Graduate School.

- "Presentation Skills," presented by Dr. Lynn Meade, Professor, Department of Communications.

- "REU Alumni" presented by U of A graduate students.

- "Ethics and Research," presented by Dr. Dennis Brewer, Associate Vice Provost for Research.

- "Applying to Graduate School," presented by Ms. Shani Farr, Graduate Recruiter.

Interns presented their research findings at the closing program on Wednesday, July 9, 2008.

Recommendations for Future Improvement

- Begin confirming departmental participation in the Carver Program in early Fall to allow the Graduate Recruitment office to recruit students during graduate school fairs at the Carver institutions.
- Budget for a Graduate Assistant specifically for the Carver Program to help with planning and other Carver activities.
- Pursue grant opportunities to fund more internship opportunities in disciplines that are not currently offered.
- Add an activity where Carver students can interact with UA Black Faculty and Staff.
- Implement a phone interview process to make sure the student's interest genuinely match with the internship position for which they are applying.

Budget

Each participant received a $3000 research stipend, room and board, and reimbursement for travel to and from Fayetteville. Students participating in the Physics, Food Science, Mechanical Engineering, Chemistry, and the Microelectronics-Photonics REU programs were compensated according to the provisions of the funding agency.

The UA graduate departments interested in mentoring a George Washington Carver intern provided the major funding for the program. Each department transferred $5,500 per intern to a Carver account established in the Graduate School. The departments with established REU programs were responsible for the expenses associated with their students.

Appendix A
Schedule of Events and Activities

Sunday, May 18, 2008

1:00 p.m. – 4:00 p.m. Intern Arrival and Check-In
Maple Hill Lobby

6:00 p.m. – 9:00 p.m. Welcome Event
University House

Monday, May 19, 2008

7:00 a.m. – 8:30 a.m. Breakfast
Northwest Quad Dining Hall

9:00 a.m. – 10:00 a.m. Carver Group Photo
Front of Library

10:00 a.m.- 12:00 p.m. Concurrent Sessions

RED Session I: 10:00–10:50 a.m. Session II: 11:00-11:50 a.m.

YELLOW Session II: 10:00-10:50 a.m. Session I: 11:00-11:50 a.m.

Session I: Cash Checks and ID cards issued
Arkansas Union

Session II: Library Orientation
University of Arkansas Mullins Library

12:00 p.m.- 1:30 p.m. Opening Luncheon
Student Union Ballroom
Donald W. Reynolds Center, Seminar Room A
Dr. Don Bobbit, Dean
J. William Fulbright College of Arts and Sciences

1:30 p.m. – 2:30 p.m. Campus Tour

2:30 p.m. – 4:30 p.m. Tour Research Facilities and Meet Faculty Mentor

Tuesday, May 20, 2008

9:00 a.m – 3:00 p.m. Leadership/Team Building Activity

"Summer Camp"
Graduate Education Building Auditorium Rm. 166
Prof. Ken Vickers

7:00 p.m. – 10:00 p.m. George Washington Carver Orientation
Maple Hill

Wednesday, May 21, 2008
5:30 p.m. – 7:00 p.m. Dinner and Dialogue
Location: Donald W. Reynolds Center, Seminar Room A
Speaker: Dr. Collis Geren, Vice Provost for Research and Dean of the Graduate School
Topic: "Little Brown Spider"

Saturday, May 24 – Monday, May 26----------Free for Memorial Day Weekend!!!

Wednesday, May 28, 2008
5:30 p.m. – 7:00 p.m. Dinner and Dialogue
Location: Donald W. Reynolds Center, Seminar Room A
Speaker: Carver/REU Alumni
Topic: Panel Discussion

**********ASSIGNMENT #1 DUE!!**********

Saturday, May 31, 2008
8:00 a.m. – 5:00 p.m. George Washington Carver Memorial and Dinner Outing

Monday, June 2, 2008
5:30 p.m. - 6:30 p.m. Research Meeting
Old Main 325

Wednesday, June 4, 2008
5:30 p.m. – 7:00 p.m. Dinner and Dialogue
Location: Donald W. Reynolds Center, Seminar Room A
Speaker: Dr. Robert Brady, Department Chair Communications

Topic: "Presentation Skills"

Thursday, June 5, 2008
6:00 p.m. – 9:00 p.m. Night Out with Chemistry

Friday, June 6, 2008
**********ASSIGNMENT #2 DUE!!**********

Monday, June 9, 2008

5:30 p.m. - 6:30 p.m.	Research Meeting *Old Main 325*

Wednesday, June 11, 2008

5:30 p.m. – 7:00 p.m..	Dinner and Dialogue *Location: Donald W. Reynolds Center, Seminar Room A* *Speaker: Dr. Dennis Brewer, Associate Vice Provost for Research* *Topic: "Research and Ethics"*

Thursday, June 12, 2008

6:00 p.m. – 9:00 p.m.	Night Out with Physics

Thursday, June 12 – Saturday, June 14, 2008----------Trip to Little rock, Arkansas

Thursday, June 12, 2008

2:00 p.m.	Depart Fayetteville
6:00 p.m.	Arrive Little Rock
6:30 p.m.	Dinner

Friday, June 13, 2008

8:00am - 11:30 a.m.	Ferndale Activities
11:45 a.m. - 12:30 p.m.	Lunch
12:30 p.m - 4:00 p.m.	Ferndale Activities
4:00 p.m. - 6:00 p.m.	Free Time
6:00 p.m. - 6:45 p.m.	Dinner
7:00 p.m. – 10:00 p.m.	Free time

Saturday, June 14, 2008

7:30 a.m. – 8:15 a.m.	Breakfast
10:00 a.m. -11:00 a.m.	Central High School
11:30 a.m.-1:30 p.m.	Lunch/Mall
2:00 p.m.-4:00 p.m.	Clinton Library
4:30 p.m. – 6:00 p.m.	Dinner
6:00 p.m.	Return to Fayetteville

Monday, June 16, 2008

5:30 p.m. - 6:30 p.m.	Research Meeting *Old Main 325*

Wednesday, June 18, 2008

5:30 p.m. – 7:00 p.m..	Dinner and Dialogue *Location: Donald W. Reynolds Center, Seminar Room A* *Speaker: Shani Farr, Graduate Recruiter* *Topic: "Applying to Graduate School"*

Thursday, June 19, 2008

6:00 p.m. – 9:00 p.m. Night Out with microEP
Veterans Park

Saturday, June 21, 2008
10:00 a.m. Practice GRE/GMAT
Bell Engineering

2:30 p.m. Juneteenth Celebration/Community Service Project
Jones Center for Families

Monday, June 23, 2008
5:30 p.m. - 6:30 p.m. Research Meeting
Old Main 325

Thursday, June 26, 2008
6:00 p.m. – 9:00 p.m. Night Out with Mechanical Engineering

Monday, June 30, 2008
5:30 p.m. - 6:30 p.m. Research Meeting
Old Main 325

Wednesday, July 2, 2008

**********ASSIGNMENT #3 DUE!!**********

Thursday, July 3, 2008
6:00 p.m. – 9:00 p.m. Night Out with Carver
Arkansas Naturals Baseball Game
Arvest Park

Friday, July 4, 2008----------Free for 4th of July Holiday

Monday, July 7, 2008
3:00 p.m. – 6:00 p.m. Presentation Walk Through and Dinner
Old Main 523

Wednesday, July 9, 2008
1:30 p.m. – 2:30 p.m. Poster Presentation Set-Up
Willard J. Walker Hall
First Security Auditorium
Room 218

3:00 p.m. – 5:30 p.m. Poster Presentations and Reception
Willard J. Walker Hall

First Security Auditorium and Forum
Room 218

Thursday, July 10, 2008

12:00 noon	Paper Due
6:00 p.m. -10:00 p.m.	Farewell Dinner and Activity

Friday, July 11, 2008

9:00 a.m. – 11:00 a.m.	Check-Out and Departure

Appendix B
2008 GWCP Assignments

Assignment #1

Submit an overview of your departmental assignments/project, and work schedule to the Director of the George Washington Carver Program by 4:30 p.m. on Wednesday, May 28th, 2008. Please include mentor name, project summary, the address, building, and telephone number of the office/building in which you will be working, and a work schedule.

Submit a statement of two professional/academic goals that you intend to achieve while interning at the University of Arkansas to the Director of the George Washington Carver Program by 4:30 p.m. on Wednesday, May 28th, 2008.

Set up appointments to meet with the Director individually at least twice before July 4. Appointments can be made by contacting Elizabeth Mitchell, Project Coordinator for the Office of Graduate International Recruitment and Admissions at 479-575-5869.

Assignment #2

Submit a response paper pertaining to *I'll Find A Way or Make One* to the Director of the George Washington Carver Research Program by 4:30 p.m. on Friday, June 6th, 2008. The paper should be a minimum of three pages in length. Writing instructions are included for your review.

Assignment #3

Submit a paper and poster presentation pertaining to your summer research. The paper should be a minimum of five pages in length, including abstract. The paper should be done in APA format. Writing instructions are included for your review.

The poster should be submitted by 4:30 p.m. Wednesday, July 2, 2008.
The paper should be submitted by 4:30 p.m., Thursday, July 10, 2008.

The poster presentation should be done in accordance with the information you received in your packets, and will be presented to the University of Arkansas campus community on Wednesday, July 9, 2008.

APA-American Psychological Association. *Publication Manual of the American Psychological Association*. (2001). 5th Ed. Washington, DC: APA.

Graduate Fellowships

Fellowships

In fall 2007, 10 new graduate students accepted the offer of the Distinguished Doctoral Fellowship. The total enrollment of distinguished doctoral fellows during fiscal year 2008 was 43; 38 were Walton-funded and five were non-Walton funded. In addition, there were 42 new Doctoral Academy Fellows; 36 were Walton-funded and 6 were non-Walton funded. There were a total of 158 doctoral academy fellows; 11 of these were named doctoral academy fellows with a Walton match.

This year was the first year that doctoral fellowship recipients could choose to have their disbursements direct-deposited. Nearly 100% of the students signed up for this benefit, giving them the ability to track their disbursements in the student information system (ISIS). It also allowed the Director of Graduate Fellowships to monitor disbursements and troubleshoot any problems before the students were negatively impacted. The Director of Graduate Fellowships had the responsibility of entering all of the fellowships directly into ISIS, which allowed for improved customer service to the students.

Caliber of Students

Distinguished Doctoral Fellows continued to be from the top 1% of all students who attend graduate school. Likewise, Doctoral Academy Fellows were from the top 5% of all students who attend graduate school. The fellowships are a key component in attracting top graduate students to the University of Arkansas. This year's doctoral fellows came not only from institutions in surrounding states, such as the University of Kansas and Texas A&M University, but also from New York University, Villanova University, Pennsylvania State University, the University of Wisconsin, California State University, etc.

One distinguished doctoral fellow, Joseph Hoag, completed his degree program in May and has accepted a position with Microsoft. Another distinguished doctoral fellow, Marshall McCue, who also completed his degree in May, had his research deemed newsworthy by the journal *Nature*. Dr. McCue was funded by a grant from the National Science Foundation for his first three years of doctoral study, and then by the Distinguished Doctoral Fellowship.

Doctoral Visit Fund

The dedicated doctoral visit fund allowed the Graduate School to assist departments in bringing 43 prospective doctoral students to campus. The visits aid in the recruiting effort for the Distinguished Doctoral Fellowship and Doctoral Academy Fellowship. The fund provides an opportunity for students and faculty to visit, for students to view the campus and its facilities and

to tour Fayetteville and the larger Northwest Arkansas area. The visits are especially beneficial for students who have never been to the campus and surrounding area.

Graduate Student Travel Grants

The graduate student travel grant program continues to be an integral part of recruiting and retaining talented graduate students. Students used these travel grants to attend conferences in 38 states and the District of Columbia, and international conferences in Canada, Europe, Asia, Africa, Central America and South America. The maximum reimbursable amount for master's and Educational Specialist (Ed.S.) travel grants was $600, and the maximum reimbursable amount for doctoral participant and doctoral presenter grants remained at $1,000. For fiscal year 2009, the travel grant award amounts will remain at the same level.

A total of 423 travel grants were funded during the fiscal year. A comparison of the five years of the travel grant program is shown in the table below:

Fiscal Year	Amount Expensed	Total Grants Awarded	Total Grants Expensed	Average Trip Expense
2008	$344,069	454	423	$813
2007	$330,362	435	418	$790
2006	$293,610	391	365	$804
2005	$360,000	441	441	$816
2004 (Aug-June)	$237,032	321	321	$738

Three categories of travel are offered to graduate students: master/Ed.S., doctoral participant, and doctoral presenter. Students may apply for and be awarded one travel grant per year (July 1-June 30). Master/Ed.S. students who are awarded a travel grant are required to present a formal paper or poster. Alternate types of presentations, e.g., oral presentations of original work that may be appropriate to the student's degree program, are reviewed on a case-by-case basis. Doctoral students may apply for a participant travel grant during the first year of their academic program. This travel grant does not require the student to present research, but it does offer the student the opportunity to network and learn more about the chosen field of study. Doctoral students may also request a presenter travel grant, with the intent to present research at a professional meeting/conference. The student must be a named author and the sole presenter at the conference. The research must carry the name of the University of Arkansas.

The distribution of the types of travel grants that were expensed during the past five fiscal years is shown below.

Trip Type	FY2008	FY2007	FY2006	FY2005	FY2004
Master/Ed.S	106	90	91	176	135
Doctoral Participant	50	69	70	89	46
Doctoral Presenter	267	259	204	176	140
Totals	423	418	365	441	321

Graduate students in six colleges and more than 50 degree programs, including the interdisciplinary programs administered by the Graduate School, took advantage of the travel grant awards during the fiscal year:

COLLEGE	MASTER/ED.S. AWARDS	DOCTORAL PARTICIPANT AWARDS	DOCTORAL PRESENTER AWARDS	TOTALS
AFLS	38	3	53	94
ARSC	42	17	118	177
EDUC	4	12	15	31
ENGR	12	4	47	63
INTER	1	11	17	29
WCOB	9	3	17	29
TOTAL	106	50	267	423

All graduate students who are awarded travel grants are expected to be full-time students during the semester the travel occurs. The number of fellowship recipients, graduate assistants, and regular full-time graduate students whose travel was expensed in 2008 is listed below.

Student Type	Master/Ed.S. Travel Grant	Doctoral Participant Travel Grant	Doctoral Presenter Travel Grant	Total
Distinguished Doctoral Fellow	0	2	22	24
Doctoral Academy Fellow	0	23	68	91
Other Fellowship	2	0	6	8
Graduate Assistant	93	17	157	267
Full-time Graduate Student	11	8	14	33
Total	106	50	267	423

Southern Regional Education Board (SREB) -- State Doctoral Scholars Program

In fiscal year 2008, two of the SREB Doctoral Scholars enrolled at the University of Arkansas completed their doctoral programs (one in Poultry Science and one in History). Three new SREB scholars began their programs in fall 2007, bringing the total number of currently enrolled SREB-funded doctoral scholars to ten. There are five male and five female SREB doctoral scholars, and the programs of study they are enrolled in are Public Policy (6), Anthropology (1), Environmental Dynamics (1), Biological Engineering (1) and Comparative Literature and Classical Studies (1).

Students who are awarded this funding must be from a racial/ethnic minority (including Native Americans, Hispanic/Latino Americans, Asian-American and African-American), and they must

plan to become a full-time faculty member in a postsecondary institution upon completion of the doctorate. The program seeks to increase the diversity of faculty in postsecondary institutions by aiding students to pursue and complete the doctoral degree.

Benjamin Franklin Lever Tuition Fellowships

The Benjamin Franklin Lever Tuition Fellowship program is intended to increase diversity within graduate degree programs on the University of Arkansas-Fayetteville campus. Census data from the State of Arkansas is used as a benchmark to assist in determining diversity needs within specific degree programs. The fellowship supports those graduate students who are fully admitted into an on-campus degree program, but for whom tuition funding via a graduate assistantship or similar position is not available. This lack of departmental support may be due to limited departmental resources or because the structure of the degree program does not allow this option (e.g., the Master of Arts in Teaching program).

Funding allocated for the Benjamin Franklin Lever Tuition Fellowship program enabled the Graduate School to award tuition support to 56 graduate students across 28 degree programs during fiscal year 2008. The students supported by the fellowship included 21 new recipients and 35 students continuing on the fellowship from previous years. The distribution across degree programs was:

Degree Program	Doctoral	Master's
Adult Education	1	
Agricultural and Extension Education		1
Agricultural Economics		6
Childhood Education		1
Communication Disorders		1
Counseling/Counselor Education	2	1
Comparative Literature and Classical Studies	1	
Computer Science and Computer Engineering		1
Educational Administration		1
Elementary Education		1
English		1
Geography		2
History		1
Health Science		1
Kinesiology		8
Microelectronics-Photonics		1
Public Administration		1
Physical Education		1
Political Science		1
Public Policy	4	
Recreation	1	1
Secondary Education		2
Social Work		5
Sociology		1

Special Education		1
Vocational Education	1	
Workforce Development (formerly Adult Education)	5	1
Totals	15	41

Of the 56 awardees, 31 (55.36%) were female and 25 (44.64%) were male. The distribution of awardees based on ethnicity and gender is shown in the table below:

ETHNICITY	FEMALE	MALE	TOTAL
Asian	0	3	3 - (5.36%)
African American	22	9	31 - (55.36%)
Hispanic/Latino	4	3	7 - (12.49%)
American Indian/ Alaska Native	1	2	3 - (5.36%)
Caucasian	4	8	12 - (21.43%)
Total	31	25	56 - (100%)

During the year, four Lever fellows were awarded graduate assistant positions and one received funding from the Southern Regional Education Board (SREB), both of which include tuition payment.

Eighteen Lever fellows graduated during the academic year; three with doctoral degrees and the remainder with master's degrees in the following programs:

PROGRAM	DOCTORAL	MASTER'S
Adult Education	1	
Agricultural Economics		1
Childhood Education		1
Health Science		1
Kinesiology		4
Physical Education		1
Political Science		1
Social Work		3
Workforce Development	2	

For students who do not have other financial resources, the Benjamin Franklin Lever Tuition Fellowship remains a valuable resource for beginning or continuing in their graduate studies.

Other Fellowships

The Graduate School offers $3,000 supplemental fellowships to assist in recruiting and retaining students to the Master of Fine Arts programs in Art, Creative Writing, Drama, and Translation. Thirteen new students qualified for and accepted these fellowships in fiscal year 2008, bringing the total number of M.F.A. graduate fellows to 49.

The graduate student who is funded by the Harry and Jo Leggett Chancellor's Fellowship completed his third year of eligibility. This fellowship is awarded to a doctoral student for a maximum of four years.

During fiscal year 2008, Ms. Vicky L. Hartwell continued in her role as Director of Graduate Fellowships. In the 2007-2008 year, she

- Administered the Distinguished Doctoral Fellowship, Doctoral Academy Fellowship, and Graduate Fellowship for Master of Fine Arts programs: reviewed nominations, made recommendations for awards, sent award packets, posted fellowship amounts to ISIS, adjusted awards when necessary, worked with financial aid counselors to resolve any questions regarding fellowships, tracked expenses to earnings for accounts.
- Administered the Graduate Student Travel Grant program: reviewed and approved applications, entered into Access database, sent award notifications, approved expense transfers processed by Mr. Michael Rau, tracked expenses to earnings for account.
- Administered the Benjamin Franklin Lever Tuition Fellowship program: reviewed nominations once per semester, made recommendations for awards, sent award packages, coordinated tuition payment with Ms. Paula Lasner, tracked expenses to allow maximum number of fellowships to be awarded.
- Administered the Southern Regional Education Board (SREB) – State Doctoral Scholars Program: reviewed enrollment compliance, coordinated tuition and fees payment with Ms. Paula Lasner, posted fellowship awards to ISIS when funding switched from SREB to Graduate School match for students in interdisciplinary programs, attended SREB fellows luncheon.
- In conjunction with Ms. Diane Cook and Mr. Michael Rau, coordinated the "creation" of office space in Ozark 12 for selected graduate students, including furnishings, telephone and key access, at the request of Associate Dean Patricia R. Koski.
- Presented two sessions at Graduate Orientation on fellowships, graduate assistantships and travel grants.
- Volunteered to serve on "PERF" Committee, an ad hoc committee organized by Dean Patricia R. Koski. The committee was charged with developing additional materials for the performance evaluation form for classified employees. Presented research from performance evaluation materials in use at peer institutions to the committee. Created new forms now in use.
- Worked with Ms. Lynn Mosesso and University Relations on the creation of a new marketing piece; selected text, proofread, met with Printing Services regarding paper and ink, approved print proofs.
- Began traveling to select institutions to assist the Office of Graduate Recruitment with recruiting efforts. Schools visited included Arkansas State University (fall and spring), Oklahoma State University (graduate fair and Big XII Diversity Fair), and Missouri State University (graduate fair). Followed up with prospective students and began making faculty contacts.
- Participated in two sessions of the Graduate School Workshop, held in November.
- Attended the Compact for Faculty Diversity Annual Institute on Teaching and Mentoring in Washington, D.C., with Dean Patricia R. Koski and Ms. Diane Cook.

- Completed the Supervisory Development Program; also attended workshops on Safety in the Workplace, AEAP: Supervisory Tools, Worker's Compensation, and Employee Retention.
- Substituted for Ms. Diane Cook in her absence at the awards presentation for graduate students who participated in From Abstract to Contract: Graduate Research Symposium and Career Networking.
- Attended the National Association of Graduate Admissions Professionals (NAGAP) conference in Denver.
- Continued work on master's degree; twelve hours completed.

Program Assessment

The Office of Program Assessment conducted one departmental review during 2007-08. Programs within the Art Department which is housed in the Fulbright College of Arts and Sciences held a site visit in March 2008 and the completed review reports were disseminated in April. The department will complete the Strategy for Improvement/Maintenance document during the fall 2008 semester. Six other reviews were delayed for various reasons and will occur during the 2008-09 or 2009-10 academic years. The Strategy for Improvement/Maintenance documents listed in the following table were approved by the departments, deans' offices and reviewed by the Provost. These program reviews occurred in 2005-06 and 2006-07.

Strategy for Improvement/Maintenance Documents

Department/Program	*College*	*Action*
Biological Engineering	Agriculture/Engineering	Pending
Biological Sciences	Arts and Sciences	Completed
Chemistry and Biochemistry	Arts and Sciences	Completed
Mathematical Sciences	Arts and Sciences	Completed
Mechanical Engineering	Engineering	Completed
Philosophy	Arts and Sciences	Completed
Physics	Arts and Sciences	Completed
Psychology	Arts and Sciences	Completed
Public Administration	Arts and Sciences	Completed

As a result of the Higher Learning Commission's (HLC) accreditation visit during the spring of 2007, a concern that the "University Core" criteria needed to be reviewed and student assessment included in the review process was highlighted for a follow up report. Therefore, the Director for Program Assessment along with Associate Dean Chuck Adams from the College of Arts and Sciences are co-chairing a two year effort to first review the criteria for each subject matter area of the core. Then, assist each department that offers core courses to develop student learning objectives, assessments and setup feedback processes that will return assessment results and suggestions for change to the faculty responsible for teaching the courses. The University wide final report is to be forwarded to the HLC in June of 2010.

The initial review of Academic Policy 1630.10, Student Academic Achievement and Degree Program Outcomes, has been approved following an analysis of the format and timing of the required policy reports. The college reports which are to be forwarded to the Provost's Office will be changed from annual to every other year, and a new format has been established. The report entitled 'Documenting Student Achievement' also has additional data requirements. The report will document individual degree learning outcomes, assessment methods, feedback structure and changes made to the degree program.

The U of A Experience Task Force which was Co-Chaired by the Director of Program Assessment submitted its final report in May 2008 following two years of fact finding and analysis. Twelve recommendations were submitted to the Provost's Office and Vice Chancellor for Student Affairs. As a result of the meeting, the Provost's Office will select areas for further study including teaching assistant training and several other recommendations that could increase retention and graduation rates. These subject areas are also being highlighted at the state level and further work will be conducted during the next year.

Additional activities performed by the Director of Program Review were to serve as Secretary for the University Course and Programs Committee (UCPC) which met once per month, and to prepare documentation for the Faculty Senate agenda from the UCPC and the Graduate Council. The Director of Program Assessment attended a state wide conference on program assessment that was held in April 2008 and will continue to attend additional meetings. Activities for the 2008-09 academic year will include nine department/program reviews along with the previously mentioned activities.

Public Policy Ph.D. Program

Executive Summary

The 2007-08 academic year was characterized by many customary programs and practices such as seminars, qualifying exams, dissertation defenses, and research and professional development seminars. The past academic year also included a number of changes to the program. Professors Brinck Kerr, Program Director, and Valerie Hunt, Associate Program Director, took over program operations beginning June 2007. The program continues to receive a large number of applications for admission. Students in the program continue to publish manuscripts in peer-reviewed academic journals and present many papers at international, national, and regional conferences. Students exiting the program continue to be placed in excellent positions.

The new program administration, with the assistance of the Graduate School, initiated some changes to the policy program. The PUBP methods sequence was revised to require all students entering the program after fall 2008 to take at least three hours of quantitative methods. This change will make our students better prepared in the area of methods and more competitive in the academic job market. In order to increase the quality of students in the program, the admissions process has become more selective. During 2007-08 the program added three new PUBP faculty members, Professors Vaughn DeCoster (Social Work), Bob McMath (History), and Tom Smith (Curriculum and Instruction). Professor Patrick Stewart, a new hire in the

Political Science Department, will join the PUBP faculty in August 2008. If approved, a new specialization in gerontology/aging policy will become effective beginning fall 2009. With the assistance of the Graduate School, the PUBP website was updated and reformatted during the past academic year. The program administrators are also in the midst of an extensive curriculum review process that will identify (1) congruence with student needs and (2) overlaps in content among courses in the core curriculum. The program administrators have collected a complete set of survey data from former and current students for the purpose of contributing to its 10-year review, initiated a policy of conducting exit interviews with PUBP graduates, and compiled a list of program alumni.

Student Enrollment and Admissions

The program enrolled 77 students in 2007-08. Enrollment continues to be diverse (see Table 1 below). The program receives many applications, the majority of which are turned down due to student qualifications, administrative capacity, and/or lack of fit. The acceptance rate for 2007-08 was 44 percent. For spring 2008 the admissions committee granted admission to 12 out of 24 applicants; for fall 2008 they granted admission to 6 out of 17 applicants.

Table 1. Breakdown of Active Students by Sex and Race/Ethnicity, 2007-08

	Female	Male	Total
African American	9	5	14
Asian American	0	0	0
Latina/Latino	0	2	2
Native American	3	0	3
International	7	6	13
White (non-Latina/Latino)	26	19	45
Total	45	32	77

Program Changes/Activities

The Future of the Program - Recent efforts by the Graduate School to increase administrative support for the policy program will help it take steps toward the goals of achieving greater prominence and recognition. In addition to adding new PUBP faculty members, strengthening methods requirements, and being more selective in the admissions process, the new program administration is developing strategies for placing program graduates in faculty positions at regional colleges and universities. The topic of placement is a recurrent theme in the program's research and professional development seminars. Professor Patrick Larkey, Adjunct Research Professor of Public Policy at UAF and former Associate Dean of the H. John Heinz III School of Public Policy and Management, Carnegie Mellon University, will teach special topics courses in fall 2008 and spring 2009 on Public Policy Research Design/Measurement for advanced PUBP students. Students who take advantage of this offering should be in an enhanced position to conduct high quality dissertation research.

Proposed Specialization in Gerontology/Aging Policy - A letter of notification proposing a new specialization in gerontology/aging policy has been drafted. If the new specialization is approved, it will be effective beginning fall 2009. The new specialization coordinator will be Professor Barbara Shadden (Rehabilitation, Human Resources and Communication Disorders/Office of Aging Studies). It is appropriate to offer a concentration in this area because the study of gerontology is heavily influenced by public policy. As the median age of Americans increases, there is increasing interest in the effect of policies on various issues related to aging. Gerontology itself is an interdisciplinary area of study, and policy issues related to gerontology are best addressed within a doctoral framework that emphasizes interdisciplinary input and collaboration. The appropriateness of the Public Policy Ph.D. Program for housing a specialization in gerontology is supported by the fact that there have been at least four applicants to the doctoral program who would have chosen this concentration had it been available.

Clinton School – The policy program had a very important role in the development of the Clinton School of Public Service. A few recent graduates of the Clinton School have inquired about admission to the policy program. These inquiries have resulted in a few informal, preliminary discussions about developing a track (i.e. admissions relationship/understanding) between the Clinton School and the policy program. The program administrators will continue to explore this possibility.

Graduate Assistantships – The Graduate School has changed our graduate assistantships to twelve month positions. This has been helpful for recruiting and student support. It would be beneficial to develop approximately six more assistantship positions as the program would benefit from a higher ratio of full-time students on assistantship to part-time working students. During the 2007-08 academic year the Middle East Studies Program permanently dedicated three assistantships collectively to PUBP and to the PLSC MA and MPA programs. PLSC and PUBP have not yet addressed the issue of how to divide and/or award these assistantships.

Specialization Activity/Changes – The program administrators review existing specializations on a continuing basis to determine if they are still adequately staffed and in demand. The ability to create new specializations and allow others to go dormant is a strength of the policy program's design. This flexibility allows administrators to respond to changing needs. Because two of the most active members of the Community Development specialization, Professors Margaret Reid and William Schwab, have recently taken new administrative positions within the university, the program administrators have temporarily suspended student applications to this specialization. It appears that the Education Reform Department will obtain an Education Policy Ph.D. program in the near future. In anticipation of this change, the program administrators have replaced the education policy specialization coordinator, Professor Gary Ritter (Department of Education Reform), with two new specialization coordinators. Professor Tom Smith (Curriculum and Instruction) is the new advisor for education specialization students in the K-12 area. Professor Mike Miller (Rehabilitation, Human Resources and Communication Disorders) is the new advisor for education specialization students in the Higher Education/Administration area. Health policy is still an area of great demand, but we continue to lack the faculty resources to meet the demand. The proposed Gerontology/Aging Policy specialization will help to meet some of this demand.

The American Review of Politics - The public policy program continues to be a major supporter of the journal. Specialization faculty members and advanced Ph.D. students are frequently asked to review manuscript submissions in their policy areas.

Microelectronics-Photonics Graduate Program

Progress and accomplishments related to strategic plans and university priorities and goals

The microEP Graduate Program completed its "tenth year review" last year (spring 2007). The following items were recommended by the external reviewers, with current status on each recommendation added:

Budget increases to support 5-10 TA positions, travel, and events. The budget for these items has not changed, and remains fixed at two fully funded 50% TA positions and a maintenance budget of $250 per enrolled student in the prior academic year's fall semester.

Continued budget support of Director and Program Specialist's salary, and create new budget to support an Assistant Director. Strong support of Director and Program Specialist salary continued, and two months of summer funding was added for to the microEP budget for an Assistant Director position.

Improved faculty participation in active governance, and distribute management of some program elements to the core faculty members. Progress has been made here by addition of three Assistant Directors with specific responsibilities for microEP program elements, but increased direct faculty involvement in active governance has not been demonstrated.

Improved communication between Director and partner department's faculty. The administration of this task is a responsibility of new microEP Assistant Director Paneer Selvam in Civil Engineering. Program status reports were presented in spring 2008 to the EE, ME, and Physics Departments, with microEP status reports planned for all partner departments in the fall 2008 semester.

Three faculty were interested in supporting microEP as Assistant Directors with specific responsibilities and authority to manage portions of the program infrastructure. The three new Assistant Directors officially started their positions in late February 2008 with the following assignments:

Russell DePriest (microEP Adjunct Professor, Sandia Principal Member Technical Staff)

- Manages grad student non-academic training and the undergraduate minor. The emphasis is providing an oversight into the research planning of all students, and providing training for the students in two major elements of the students' professional development – project development/milestone attainment combined with research vigor.
- Manages microEP minor, including student mentoring.
- Manages small group teams for student peer review of research progress.
- Reviews semester student research progress reports with each student.

Matt Gordon (Associate Professor, ME)

- Manages the microEP graduate student application process as well as other internal program aspects affecting our PhD level students.
- Advises PhD students after their first two years in the program.
- Manages PhD candidacy process.
- Manages grad student application process and communication.

Panneer Selvam (Professor, Civil Engineering)

- Manages administrative support tasks that involve high levels of detailed scheduling and communication with a wide range of people.
- Manages microEP grad student annual review process.
- Manages monthly all microEP student research presentations.
- Manages Graduate School student financial documentation process.
- Organizes new student orientation activities.
- Manages Industrial Advisory Committee meetings and communication.
- Organizes annual review of microEP program with partner departments.

An examination of all entering students into the microEP graduate program through the fall 2008 Cohort 11 class shows a total of 163 students will have entered the program since its inception in 1998. Sixty-one of these students are expected to be actively enrolled for fall 2008 with thirteen only lacking final report, thesis, or dissertation; one is passive (leave of absence for military duty), five have left the educational system without a graduate degree, sixteen have transferred to another graduate degree program before finishing a microEP degree, and eighty have completed one or more microEP graduate degrees and have left the University of Arkansas.

Of the 142 students that have not prematurely exited the program, thirty-three are female (23 percent of the student population).

Of the 142 students that have not prematurely exited the program, thirty-one are African-American or Hispanic (22 percent of the student population).

Of the thirty-one African-American and Hispanic students, five are currently beyond the MS degree and actively working on a PhD degree and three have already completed their PhD microEP degrees (one is in medical school and the other two having started tenure-track faculty jobs). Two of the active PhD path African-Americn students are female.

Seventy-three students have completed their MS microEP degrees through August 2008 graduation, with eighteen now actively enrolled in the PhD microEP program. Seventeen of the graduates were women (23%) and sixteen were African-American or Hispanic (22%).

Twenty-five PhD students have graduated through August 2008, including three male Africa-American graduates, one female Caucasian graduate, and one female Asian graduate. The remaining graduates are Caucasian males.

The microEP program implemented the first summer of a three-year NSF REU site beginning in Summer 2001 and won a second NSF REU site for five years beginning in Summer 2004. The summer 2008 program had fifteen students, including three African-American male students, one African-American female student, four white female students, one Asian male student, and six white male students.

The microEP program continued support of the following laboratory classes in the HiDEC processing facility through MEPH TELE fees expenditures of $10,000 for materials and equipment:

ELEG 5293L Integrated Circuit Fabrication Laboratory
ELEG 5243 Microfabrication
ELEG 4223 Solar Cell Design and Fabrication

Other expenditures from the MEPH TELE fee account included:

MEPH 5873 Fabrication at the Nanoscale ($4,000)
Purchase of Comsol License ($1,000)

This use of MEPH TELE fees to support classes being taught in HiDEC continued the microEP Grad Program partnership with HiDEC, resulting in the policy continuing that allowed summer 2008 microEP REU participants to work in HiDEC without further additional charges to their mentoring professors or the REU site budget.

The microEP Industrial Advisory Committee met for the sixth time in April 2008 in conjunction with the Physics Centennial Celebration. Items that received significant discussion included increased internal and external marketing of the microEP program, new Assistant Director positions created, renaming of the program to reflect its increased nanoscale emphasis, and the need for continued emphasis on professional effectiveness training in addition to traditional academic emphases.

New Initiatives to support teaching and research

A new undergraduate minor in Microelectronics-Photonics was implemented in fall 2007. This is the first undergraduate minor on the UA campus in which a group of faculty at the Graduate School level was given the authority to manage an undergraduate minor course of study that was not linked to an existing undergraduate degree program.

Ms. Kassie Wilson was hired in a part time clerical position funded by the new NSF S-STEM grant to support that grant's tactics and goals.

The microEP program will propose in the fall 2008 cycle that any student from a UA BS Engineering Department allowing shared hours between that department's BS/MS degrees will also be allowed to share hours between a BS Departmental degree and a MS microEP degree.

PhD microEP student Rob Sleezer suggested an exchange of missions for the student peer review groups and the monthly all microEP student presentations. That idea has been slightly modified and adopted by the microEP management team, and will be presented to the microEP faculty in the fall approval process.

Benchmarking evidence

The process has started with formal exit interviews of its graduates in the fall 2007 semester to gather information on program effectiveness on campus and in its training methods as viewed by its graduates.

Achievements in teaching, research, and public service that would not have occurred without the existence of the interdisciplinary program

The following grants and awards all are based in the interdisciplinary microEP graduate program as the educational program that supports the research, training, management, or educational mission of the grants. The role of microEP in each grant is indicated below:

1999			
NSF IGERT:	Schaper, Salamo	$2,200,000	Central concept
2000			
NSF MRSEC:	Salamo	$2,245,000	Education component
Dept of Ed FIPSE:	Salamo, Vickers, Turner	$ 280,000	Central concept
NSF PFI:	Loewer, Salamo, Vickers	$ 360,000	Management component
2001			
NSF REU (3 year):	Brown, Salamo	$ 353,000	Central concept
NSF IGERT RET:	Schaper, Salamo	$ 10,000	Central concept
NSF MRSEC RET:	Salamo	$ 20,000	Education component
FIPSE Supplement:	Salamo, Vickers, Turner	$ 25,000	Central concept
2002			
NSF GK-12:	Salamo, Vickers, Hobson	$2,700,000	Central concept
NSF REU RET:	Brown, Salamo, Vickers	$ 20,000	Central concept
2003			
NSF REU (5 year):	Brown, Salamo, Vickers	$ 625,000	Central concept
NSF Eng U/G Reform:	Vickers, Foster, Carter	$ 100,000	Central concept
2004			
NSF PFI:	Saxena, Salamo, Foster	$ 600,000	Entrepreneur education
2007			
NSF S-STEM:	Vickers, Oliver, Schaper	$ 600,000	Central concept

A NSF S-STEM grant was awarded to the microEP program to support graduate and undergraduate scholarships for the program's students. A new proposal will be submitted to the National Science Foundation in August 2008 for a third REU site grant. Because of new limitations set by the NSF, the grant period would only be for three years as opposed to the current REU grant for five years.

Problems to be addressed

No academic year teaching budget has been approved to support microEP-generated courses. Departmental decisions on scheduling of core microEP courses are being made with no consultation with microEP management to discuss implications of those decisions.

Faculty self-associated with microEP Graduate Program

Biol and Ag Eng	Jin-Woo Kim	
	Yanbin Li	
BioMed Eng	Mahendra Kavdia	Graduate Studies Committee Member
	Kaiming Ye	
Chemical Eng	Robert Beitle	
	Jamie Hestekin	
	Rick Ulrich	Graduate Studies Committee Member
Chemistry	Bob Gawley	
	Ingrid Fritsch	
	Xiaogang Peng	
	Julie Stenken	
	Ryan Tian	
Civil Eng	Paneer Selvam	Assistant Director, microEP
Comp Sci/Eng	Jia Di	
	John Lusth	
Electrical Eng	Simon Ang	
	Juan Balda	
	Bill Brown	
	Susan Burkett	
	Magda El-Shenawee	
	Omar Manasreh	
	Alan Mantooth	
	Hameed Naseem	
	Errol Porter	
	Len Schaper	Graduate Studies Committee Member
	Vasundara Varadan	
	Vijay Varadan	
Industrial Eng	Scott Mason	
Mechanical Eng	Matt Gordon	Assistant Director, microEP
	Adam Huang	
	Ajay Malshe	
	Bill Schmidt	
	Doug Spearot	
	Steve Tung	
	Sulin Zhang	
	Min Zou	
MicroEP	Russell DePriest (Adjunct)	Assistant Director, microEP
	Ron Foster (Adjunct)	

Physics	Laurent Bellaiche	
	Henry Fu	
	Eitan Gross	
	Jiali Li	
	Lin Oliver	Graduate Studies Committee Member
	Greg Salamo	
	John Shultz	
	Surendra Singh	
	Jak Tchakhalian	
	Ken Vickers	Director, microEP
	Min Xiao	

Faculty on microEP Graduate Program Assessment Team

Education Assessment	Sean Mulvenon
	Ronna Turner
Sociology	Douglas Adams

Adjunct Faculty of the microEP Graduate Program

Dr. Russell DePriest	Principal Member Technical Staff, Sandia National Labs
Professor Ron Foster	Adjunct Assistant Professor
Dr. Jerry Jenkins	Sr. Engineer, CFDRC
Dr. Jerzy Krasinski	Oklahoma State University
Dr. Alexander Lostetter	Arkansas Power Electronics International, Inc.
Dr. Kalmakar Rajurkar	University of Nebraska-Lincoln
Dr. Malathi Srivatsan	Arkansas State University
Dr. Eric Stach	Purdue University
Dr. David Storm	USNRL
Dr. Jining Xie	The Pennsylvania State University

Applied Sustainability Center

On July 7, 2007, the Wal-Mart Foundation funded a proposal by the Sam M. Walton College of Business at the University of Arkansas (U of A) to create the Applied Sustainability Center (ASC). The ASC's mission is to help companies in the retail and consumer goods industries to become more sustainable through outreach, research and education. The ASC proposal included four broad goals for the first year: 1) to lead multi-stakeholder projects to reduce carbon emissions in consumer goods, 2) to promote sustainable local food production, 3) to create a training and education program for current and future decision makers of consumer goods and retail firms, and 4) host a sustainability speaker series open to managers, students and other citizens of northwest Arkansas. We also proposed to complete a strategic plan for the ASC, and undertake a variety of other related projects. This report reviews the first year activities of the ASC and progress toward goals.

Innovation Projects

Two innovation projects were at the heart of the proposal, one to reduce the embodied carbon in consumer goods and another to improve the sustainability of agriculture supply chains in the US. As originally proposed, the projects were to bring together multiple stakeholders from the business, NGO, academic, and government sectors in a series of working sessions to explore ways to create a sustainable economy. The actual form of the projects differs somewhat from our original vision, but in ways that will ultimately expand the scope of the projects while improving their effectiveness and efficiency.

Carbon Innovation Projects

The first innovation project had as its objective the removal of embodied carbon from consumer goods. The ASC's first sponsored activities took place from July through September, during which the ASC convened a meeting to evaluate a pilot carbon measurement project undertaken by Wal-Mart's Greenhouse Gas SVN and the Carbon Disclosure Project (CDP), an NGO focused on corporate carbon measurement and reporting. (A timeline is included in Table 1 below.) The pilot involved numerous suppliers from seven test categories (dairy, soft drinks, beer, DVD, toothpaste, soap, and vacuum cleaners), who completed a prototype carbon measurement scorecard.

In addition to participating in seven pilot category meetings in Bentonville, the ASC hosted three meetings to solicit stakeholder input and synthesize and distribute information. The first meeting was held in Washington, DC and included representatives from several NGOs (e.g., EDF, World Wildlife Federation, World Resources Institute, Conservation International, CDP and NRDC). The NGO representatives provided input on the measurement instrument and overall process. The second meeting was held at the University of Arkansas and included representatives from participating companies from the seven categories, NGOs, universities (e.g., Brown University, UC-Berkeley, University of Arkansas), and the EPA, who convened to report on their experiences using the pilot scorecard and critically evaluate the process. That meeting was followed by the announcement at the CDP's annual meetings in New York on September 24 of the launch of a product level carbon data collection initiative. The third meeting hosted by the ASC was held November 1 and included representatives from CDP, EDF, the academic community, and Wal-Mart. The objective of the meeting was to evaluate the data collection effort and to adapt the process going forward.

As a result of the pilot initiatives, ASC, CDP and Wal-Mart developed an integrated two part carbon program, one focused on reliable carbon data collection, the second on working directly with selected supply chains to find ways to reduce embodied carbon. These efforts are described below.

Table 1. Key Carbon Innovation Activities and Events

Date(s)	Activity
2007	
July 9-26	Pilot Category Meetings (7), Bentonville
August 15	NGO Meeting, Washington DC
September 7	Carbon Stakeholder Pilot Meeting, Fayetteville

September 24	Carbon Disclosure Project Announcement, New York
November 1	Key Carbon Stakeholders Meeting, Fayetteville
November 7	Carbon Innovation Labs Proposal Submitted
December 2-7	Appreciative Inquiry Training, Florida
December-current	Initiate Category Scan Process (In Partnership With EDF)
2008	
January 9	Launch Dairy Carbon Innovation Project, Chicago
February 8	Begin Open Source LCI Planning With Greg Norris
February 15	Initiate U of A Research Into Dairy Life Cycle Analysis
March 14	Open Source Life Cycle Inventory Meeting, Fayetteville
April 4	Dairy Carbon Council Meeting, Chicago
June 17-19	Dairy Carbon Reduction Lab, Fayetteville

Carbon Life Cycle Data Collection. Companies participating in the SKU level pilot reported that measurement and reporting was burdensome and expensive, and the data that were collected were largely unreliable. To improve cost efficiency and reliability, the carbon innovation team decided to scale back the scope of data collection to initially focus on only the most carbon intensive product categories. The ASC identified several carbon emissions models suitable for identifying target categories for measurement and intervention, including models from UC-Berkeley, Carnegie-Mellon, and Harvard. The Environmental Defense Fund has been reviewing and evaluating the competing models since March. Once a carbon scan model is selected, data collection for the top ten percent of carbon intensive product categories will resume.

The nature of subsequent carbon data collection and reporting represents an important strategic initiative of the ASC. Consumer goods companies have found that rigorous life cycle analyses (LCA) are required to understand the full environmental and social impacts of their products. LCA is in its infancy, and reliable supply chain data is generally collected using proprietary methods and stored in databases that are unavailable for peer review or open assessment. In response to these deficiencies, in February the ASC initiated an *open source life cycle inventory* program that will collect not only carbon data, but also water, material waste, and social data as well. The open source inventory approach is being driven by Dr. Greg Norris, who teaches Life Cycle Analysis classes at Harvard and has just begun an adjunct appointment at the University of Arkansas. Under the LCI approach, life cycle data will be collected and reported in modular form using open source protocols, which protect proprietary company information but make the numbers available for evaluation and comprehensive LCA model building. This methodology is both more rigorous and more cost effective than the proprietary approaches that currently dominate life cycle analyses in the corporate world. The ASC convened a meeting led by Dr. Norris and including representatives of CDP and EDF, Wal-Mart, and leading consumer goods companies to kick off the effort. The open source LCI will be highlighted in the Sustainability Index meeting sponsored by Wal-Mart in mid-July, and is designed to play a central role in integrated measurement efforts in consumer goods industries in the coming years.

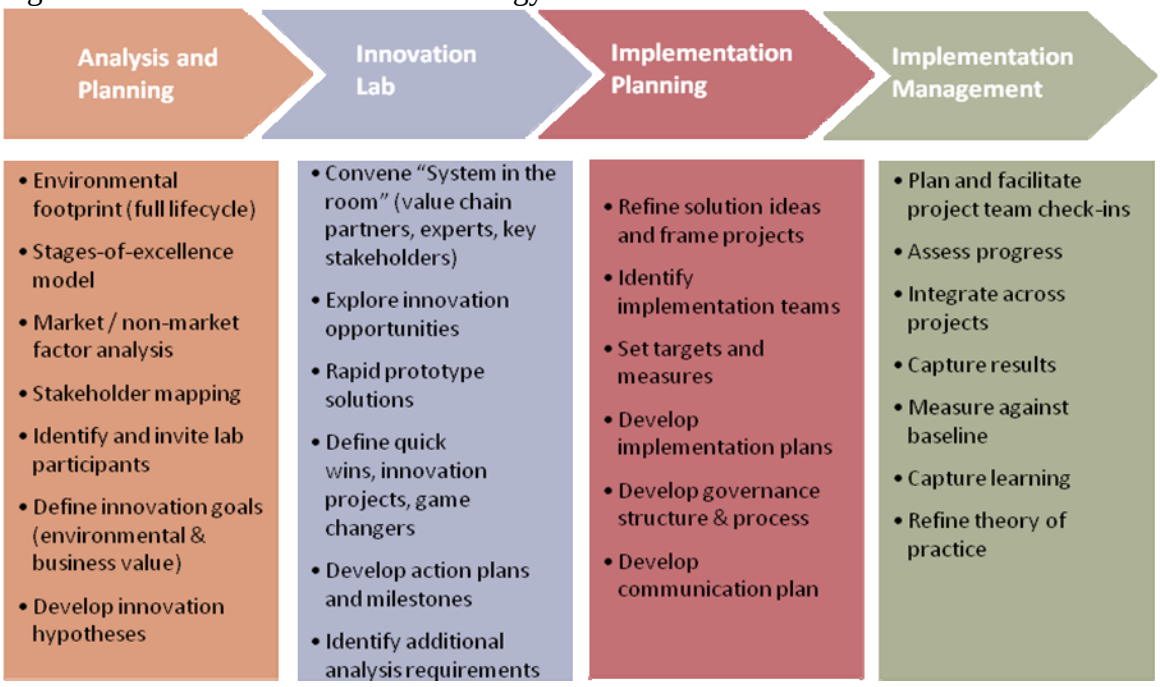
Carbon Innovation Labs. As part of the carbon innovation project included in the proposal, the ASC committed to working directly with companies to reduce carbon emissions in the production, distribution, sales, use and disposal of consumer goods using a carbon innovation methodology which would also be developed by the ASC (Figure 1). Carbon emissions are

asymmetrically distributed across product categories, with a few products representing disproportionate impact. The carbon scan model discussed above will be used to identify those industries that represent the greatest opportunities for carbon emissions reductions, at which point companies from the targeted categories will be enrolled in the carbon innovation process.

Because the carbon scan review has taken longer than expected, and because the ASC made the commitment to work directly with industry in its first year, we have already initiated one carbon innovation project. Numerous preliminary studies have pointed to the dairy industry as especially carbon intensive. The dairy industry also represents clear opportunities to reduce absolute levels of greenhouse gas emissions through the development of best practices, which can be applied to other categories, especially those related to agriculture. The ASC partnered with Dairy Management Incorporated (DMI), the national marketing organization for the U.S. dairy industry, to co-lead the first carbon innovation lab. Over 270 dairy industry experts representing the entire dairy value chain, NGO's, academia, and government participated in the three day event that yielded 26 separate carbon reduction initiatives.

An overview of the carbon innovation methodology developed by the ASC is shown in Figure 1. The process involves conducting rigorous life cycle analyses of the entire supply chain, developing hypotheses about the carbon reduction opportunities, designing and conducting multistakeholder meetings that bring key supply chain players together with academic experts and NGO representatives, and developing plans for actions that will result in reduced carbon emissions. The LCA, hypothesis generation, and meeting design phases of the dairy carbon innovation project are well underway (see Table 1 for dates of key meetings), and a multistakeholder meeting involving over 250 participants will be held June 17-19.

Figure 1. Carbon Innovation Methodology.



To meet our objectives around the open source LCI and carbon innovation projects for the second year and beyond, the ASC will continue developing capacity to deliver five or six innovation projects per year for the next five or more years. In partnership with CDP, we have hired a project manager to manage the data collection and innovation labs. The joint position will give the ASC access to CDP's considerable expertise in carbon measurement and reporting and will elevate ASC's global visibility. The project manager will work under the guidance of Greg Norris to lead the open source LCI process. We have also developed close working relationships with other carbon experts in NGOs and academic units inside and outside the University of Arkansas.

On-line Markets for Local Produce Growers. The second innovation project is aimed at relocalizing food supply chains and facilitating the move to more sustainable agriculture practices in the United States. Revitalizing rural farm economies is also an objective. The original proposal was focused on two subprojects, the first to develop tools for mapping existing and optimized food supply chains and the second finding ways to work directly with farmers to get their products onto local grocers' shelves.

The ASC hired a Food/Fiber Project Manager in December, 2007 to oversee this process. Shortly thereafter, the project manager began working with the Center for Applied Spatial Technologies (CAST) at the U of A—a leading Geographic Information Systems (GIS) program in the U.S.—in developing the mapping tool, which will enable decision makers in both production and merchant sectors to explore alternative supply chains. CAST has developed a functional pilot program that maps current spinach and lettuce production against Wal-Mart distribution centers. The program is capable of analyzing potential improvements in terms of food miles, CO_2 emissions/fuel consumption, and product freshness/spoilage from shifts to production in more proximal areas capable of growing these products. The program will be expanded to include other retailers' distribution centers and other products.

The ASC is also working with the University of Illinois to roll out an internet based virtual produce market, which was designed to link small and medium sized farmers with institutional food buyers. UI has developed a program, Market Maker, which has been piloted in a ten state area. The objective for the ASC-UI partnership is to expand the program to include grocery chains throughout the US. The ASC is working with UI, the USDA, other land grant colleges, state extension agencies, and Wal-Mart to extend this program to include retailers. In partnership with Wal-Mart, we are currently working to develop a grocery chain pilot, which is open to any grocer wishing to participate. The ASC has conducted training for Wal-Mart produce buyers to use the system, and is working with USDA to develop grant/loan programs to enroll and train growers to use the system. Our goal is to expand the program to include all fifty states. Ideally, the GIS capabilities will be merged into the on-line market program so that produce buyers can better identify opportunities to source fresh produce prior to each growing season.

The ASC has also worked to enroll women, minority, and Native American producers in this program. During a meeting on March 11, 2008, the ASC introduced Wal-Mart produce buyers and Wal-Mart's Tribal Voices program to the Intertribal Agriculture Council. The ASC is also

involved in identifying target regions to pilot projects and define success for women and minority producers.

Training and Education

The ASC proposed to develop a diverse sustainability training and education program in its first year. We have experimented with several formats and venues. (Table 1 lists events and dates.) The first education activity involved a partnership with the Walton College MBA program to bring in a former Wal-Mart buyer with experience in sustainable textiles (Coral Rose) to deliver a semester long professional development sustainability class. The course was delivered in the spring semester, and included MBA students taking the class for credit as well as professionals in the supplier community who wished to learn more about sustainable business management. The ASC also sponsored the development and delivery of a sustainability class for undergraduate and Masters students that was taught by Terry Tremwel, director of research for the Walton College's Supply Chain Management Research Center. The class was offered in the fall semester and spring semesters of the 2007-2008 academic year. In addition to multisession courses, the ASC partnered with Blu Skye and Saatchi and Saatchi S consulting firms to develop and deliver supplier day-long training sessions, which were delivered in January, February and May 2008.

The ASC led the creation of a task force that is designing an undergraduate minor in sustainability, which will be open to students across the University of Arkansas. The same task force is designing a joint professional MBA/MA in sustainability, a project based program that combines a traditional MBA curriculum with technical training in science and engineering. The target date for delivery of both programs is Fall 2010.

The ASC is leading the development of a consortium of universities, NGOs and consultants that will coordinate the delivery of sustainability related training to corporations in the consumer goods and retail industries. In pursuit of this, the ASC convened a meeting May 7 that included representatives from the University of Arkansas, Arizona State University, Aspen Institute, NGOs, various consultants, and the corporate community. In November 2008, The ASC will also host a colloquium for NGOs interested in working with corporations on sustainability projects. The ASC is collaborating with Adam Werbach of Saatchi and Saatchi S and Wal-Mart's Living Greener Working group in developing the colloquium. In preparing for the NGO colloquium, the ASC hosted a steering committee meeting March 26, 2008.

Finally, the ASC is exploring opportunities in China. The ASC was invited to participate in Wal-Mart's China sustainability kick-off meetings in Shenzhen in March, and is the designated contact for U.S. business schools for the October 22 event in Beijing. We have developed curricula for training managers of manufacturers in China, and are working to establish a partnership with Tsinghua University for delivery. The Walton College of Business has also launched a new Executive MBA program with Tonji University in Shanghai, and the ASC is exploring ways to incorporate sustainability into that curriculum. We have also developed a close working relationship with the Aspen Institute, which has well established relationships with business schools in China on sustainability initiatives.

Table 1. Education and Training Events and Timeline

Date(s)	Course/Event
Aug-Dec 2007, Jan-May 2008	Sustainable Enterprise (Instructor: Terry Tremwel)
Jan 17, Feb 26, May 8	Sustainability 101 Supplier Sessions
March 26, 2008	NGO-Industry Partnership Workshop Steering Committee
Sep 2008	NGO-Industry Colloquium
May 7, 2008	University Consortium Sustainability Training Meeting
Jan-Mar, 2008	Leadership in Environmental Sustainability (Instructor: Coral Rose)

Speaker Series

In its first year, the ASC planned to bring in a series of sustainability related speakers. We brought in eight speakers during FY08. The ASC's executive and managing directors have also made several sustainability related presentations to local and national audiences, including Wal-Mart and Sam's Club meetings, a Retail Industry Leaders Association (RILA) sustainability meeting, and national webinars (with Terry Tremwel). The ASC has participated in and cosponsored sustainability events with the Walton College's Center for Retail Excellence and Supply Chain Management Research Center, which are presentations by ASC faculty to large audiences consisting of retail and consumer goods executives.

Table 2. Speaker Series Events and Timeline

Date	Speaker(s)	Affiliation	Topic
September 7, 2007	Dr. Al Bartlett	Univ. of Colorado	Population and Energy
October 4, 2007	Dr. Kevin Robbins	Louisiana Tech Univ.	Climate Change
October 22, 2007	Dr. Ed Freeman	Univ. of Virginia	Stakeholder Management
February 7, 2008	Dr. Robert Costanza	Univ. of Vermont	Ecological Economics
March 26, 2008	Dr. Dan Esty	Yale University	Green to Gold
April 3, 2008	Tadesse Meskela Paul Rice Joe Alcantara Matt Kistler	Oromia Coffee Farmers' Union CEO, Transfair CEO, Café Bom Dia SVP, Sustainability Wal-Mart	Screening: *Black Gold* Fair trade coffee and business opportunity
April 17, 2008	Tom Szaky	TerraCycle	Eco-entrepreneurship (in conjunction with business plan competition)
June 23, 2008	Amory Lovins	Rocky Mountain Institute	Energy in the future

In December, the ASC partnered with the U of A's Associate Vice Chancellor for Facilities to hire a campus Sustainability Coordinator, who has helped orchestrate the speaker series. Having a full time coordinator will allow the ASC to increase the number of sustainability speakers in our second year. The Sustainability Coordinator has led the creation of a campus Sustainability Council to integrate campus-wide sustainability activities. The Council is made up of seven working groups: Academics and Research, Waste, Water, Land Use and Development, Energy, Food and Agriculture, and Social and Community. The U of A was an early signatory to AASHE's Presidents Climate Commitment to achieve carbon neutrality by 2030, and the Sustainability Coordinator is responsible for managing the projects related to this objective.

Strategic Planning and Development

During the first year, the ASC has begun to develop a long term strategic plan. In pursuit of this, the ASC sponsored a study by the Aspen Institute to survey university sustainability centers, conduct in depth interviews of a subset of strategically relevant centers, and summarize those findings in an ASC branded whitepaper that has been made available to center directors at all universities. Among other things, the study showed there has been dramatic growth in the number of university sustainability centers in the past few years, but that few of those centers have developed fully self-sustaining revenue models. The landscape of sustainability centers is still taking shape, with many opportunities to establish areas of expertise. The interviews revealed widespread interest among center directors in collaboration, and the Aspen Institute is facilitating the creation of strategic partnerships between the ASC and select university centers.

The results from the Aspen Institute report are being incorporated into the final strategic plan, which will be used to develop a corporate membership program. Corporate sponsors serve two main functions: 1) to assist with strategic planning for the center and establishing the center's research agenda and 2) to provide funding for research and outreach programs.
The initial focus is on firms that operate in or serve food and fiber industries for two reasons: these sectors have a disproportionate impact on the environment, and the University of Arkansas has a strategic competency in agriculture. We currently have enrolled three pioneer sponsors at $100,000/year, with an initial target of ten pioneers. After procuring those sponsorships, we will begin recruiting supporting sponsorships at $25,000/year. Research and outreach revolving around agriculture sector life cycle analyses will be initiated in late summer.

Other Activities

Business Plan Competition. The ASC and Energy Group at Wal-Mart co-sponsored a sustainable business plan competition which took place April 17-18, 2008. The initial competition involved nine select schools, which held preliminary competitions on their own campuses. Winners of campus competitions were invited to northwest Arkansas to compete in a semifinal round. Two finalist teams presented to Wal-Mart executive judges, including Lee Scott. The ASC underwrote the facilities and logistics expenses, and Wal-Mart provided award money. The co-sponsors shared project management responsibilities. The winning team was awarded $20,000, the runner-up $10,000, and the other teams that made it to northwest Arkansas received $1,000. We expect to continue the business plan competition in the second year and beyond. One of the unique features of the program was the assignment of a Wal-Mart coach to each campus who actually went to the campus for the preliminary round of judging and then served as a coach to the winning team prior to the semi-finals in Bentonville.

Miscellaneous. In addition to core projects, the ASC was involved in numerous other activities related to sustainability in consumer good and retail industries. We cosponsored and/or supported sustainability conferences and events with the Walton College's Center for Retail Excellence, Supply Chain Management Research Center, and Information Technology Research Institute, and supported the Agriculture and Engineering colleges in an energy event cohosted with Congressman John Boozman. The ASC assisted in the creation of student and professional chapters of Net Impact in northwest Arkansas, and sponsored a monthly sustainability breakfast to bring together people from different sectors in northwest Arkansas to talk about sustainability

projects. We sponsored a teaching workshop for Walton College faculty on ways to infuse sustainability into the curriculum, presented to numerous other academic, professional, and business groups, and wrote articles for the Aspen Institute and other organizations. The ASC also supported the Fayetteville Economic Development Council's efforts to create a sustainable entrepreneurial cluster, meeting with organizers and potential companies several times over the year.

Budget

The original budget, which is part of the proposal in the Appendix at the end of this section, was organized around estimates for costs associated with the activities in the proposal. Specifically, the estimated cost of the carbon and local agriculture innovation projects was $694K, training was $290K, strategic plan was $278K, and administration was $223K for a total of $1.48 million. While we have stayed focused on the original goals in the proposal and are on budget, the underlying activities evolved to meet the inevitable contingencies encountered in a first year start-up. We provide explanations where there are significant differences from estimated and actual costs of activities, and where new costs arise. All numbers are expenses to date and encumbrances through June 30, 2008.

Strategic Planning[1]			
	Salaries/Professional Services	$ 223,752.00	
	Aspen Institute Study[2]	$ 50,000.00	
	Travel	$ 10,767.83	
	Meetings	$ 680.69	
			$ 285,200.52
Administration and Additional Projects[3]			
	Salaries/Fringes[4]	$ 152,058.69	
	Internships	$ 49,000.00	
	Computer Equipment	$ 8,562.78	
	Phone, Printing, Supplies, Catering, etc.	$ 11,604.58	
	Web site	$ 1,852.50	
	Annual Report	$ 58,340.00	
	Other Meetings (CEO Summit)	$ 2,333.01	
	Other Conference Travel	$ 4,471.04	
	Campus Sustainability Coordinator	$ 20,000.00	
	Sustainable Business Plan Competition	$ 14,401.19	
			$ 322,623.79
Innovation Projects			
	Carbon Innovation Project[5]		
	Pilot Measurement Project[6]	$ 100,000.00	
	Development of Methodology[6]	$ 100,000.00	
	Research[6]	$ 200,000.00	

	Innovation Lab Summit Planning and Implementation[6]	$ 300,000.00	
	Training (Appreciative Inquiry)	$ 5,646.29	
	Open Source LCI Meeting	$ 2,983.87	
	Meeting Expenses	$ 8,314.90	
	Travel	$ 4,713.22	
			$ 721,658.28
	Sustainable Agriculture[7]		
	Project Manager	$ 54,226.10	
	Virtual Market	$ 1,654.25	
	Travel	$ 748.58	
			$ 56,628.93
Training and Education[8]			
	Salaries	$ 43,833.00	
	One day workshops	$ 770.00	
	Training Consortium Meeting	$ 500.00	
	China Series Development	$ 3,538.28	
	NGO Training	$ 2,227.81	
	Travel	$ 2,639.14	
	Speaker Series[9]	$ 3,862.00	
			$ 57,370.23
Total through June 30, 2008			$ 1,443,481.75

[1] The proposed budget for Strategic Planning was $277,500 (actual = +$7,700). Primary expenses went toward salaries for the executive director and professional services. Due to the accelerated timeline, the time required to hire administrators into university positions, and uncertainties around long-term funding, we avoided hiring a large professional staff in our first year, relying instead on outside consultants. Blu Skye Sustainability Consulting, which has extensive experience and relationships among corporations, NGOs, and universities, was brought in to help in the creation of the strategic plan and development of strategic relationships.

[2] As described in the narrative, Aspen Institute was contracted to survey, interview, and analyze university sustainability centers as part of our strategic planning process. In addition to the study, our work with Aspen was very useful in terms of promotion in the university and corporate communities, and continues to be useful as we establish strategic relationship with other universities and NGOs.

[3] The proposal budget for administration and overhead was $223,050 (actual = +$99,574). This category includes expenses for activities and resources not included in the proposal, specifically the business plan competition ($14.4K), contributions toward the campus sustainability coordinator ($20K), and the production of an annual report and web site ($60.2K). Expenses for the lease, equipment and supplies ($24.6K) were considerably below proposal estimates ($102K,

difference = -$77.4K), largely a result of the university's donation of office space and computing equipment and staff efforts to contain these costs.

[4] The budget for administrative salaries and fringes was $96,050 (actual = $152,059). The difference includes all fringes for the executive and managing directors, salary and fringes for an administrative assistant, and contract labor hired for the web site and annual reports.

[5] Several factors converged to increase the expenses associated with the carbon innovation project, which was already the most complex and expensive activity in the proposal budget ($693,550 for both innovation projects). An unanticipated opportunity to work with the Carbon Disclosure Project and Wal-Mart on carbon measurement and reporting arose a few weeks after the proposal had been submitted and approved (late May), but before the funding arrived. The CDP project fit the ASC's overall objectives very well (i.e., develop methodology for measuring carbon footprints at product level, create reporting standards, identify high opportunity/high priority supply chains, etc.), and the decision was made—with the funder's consent—to fold the CDP/Wal-Mart effort into our activities. This had the simultaneous consequences of increasing the complexity and time pressures for this aspect of the innovation project. The process is more fully described in the narrative, but the accelerated need for staff support, additional meeting expenses, and a general increase in project complexity resulted in greater expenses toward this project than expected.

[6] The Carbon Innovation Project was designed to be the first and most complicated activity undertaken by the ASC. The ambitious objectives, one year timeline, and accelerated pace resulting from the opportunities described above required that we initiate many complex activities as soon as the funding was received. Hiring project managers and other support staff into university positions typically takes several months, and to get the project up to speed in the time required, we subcontracted many of the associated activities to Blu Skye Sustainability Consulting, who have worked under the supervision of ASC staff and U of A faculty. The budget categories are proportioned according to the time devoted to each of the listed activities. Over the course of the year, activities have been shifting to ASC faculty and staff, and in the second year and beyond, the great majority of activities will be carried out by U of A faculty, staff, and adjuncts. Moreover, the Innovation Lab methodology developed in first year with the dairy project and launch of the open source LCI will be used by all future innovation projects.

[7] Whereas the Carbon Innovation Project was more expensive than anticipated, the Sustainable Agriculture Project was less costly than expected. Although we do not expect this to continue in the second year, the Center for Applied Spatial Technologies donated faculty time and considerable computing resources to the mapping project. By researching and enrolling the University of Illinois in January, our Project Manager was able to avoid the costs of developing and implementing this technology in house, and has instead worked to adapt the technology to make it available to grocers while also rolling it out to more states. As a result, we are ahead of schedule and considerably under budget.

[8] The training budget is also lower than forecast ($190K not counting the speaker series). Costs were contained by looking for partnerships inside the university—particularly the Walton College's Center for Management and Executive Development, but also the MBA program and

the Supply Chain Management Research Center—along with outside partners. We expect to continue along this vein with the creation of our consortium of education providers, playing a coordinating role as well as providing content.

[9] The Speaker Series was much less expensive than expected ($100K), even as we brought in more speakers than we had proposed. Sustainability has been a hot topic across many areas in the past year, and we were approached by several organizations wishing to partner with the ASC to bring in speakers. Partner organizations included the City of Fayetteville, Wal-Mart, the Environmental Dynamics program, and the Walton College Dean's Office, who helped identify sustainability experts who could speak to the joint needs of the collaborating entities and sharing expenses. We also encountered lower speaking fees and honoraria than anticipated.

Appendix: Text of the proposal that was funded July 7, 2007

THE UNIVERSITY OF ARKANSAS APPLIED SUSTAINABILITY CENTER
An Interdisciplinary Initiative of the Sam M. Walton College of Business

Conservation and the ingenious use and reuse of resources are part of Arkansas's legacy. Wal-Mart is building on that legacy by leading the corporate business world in revolutionizing sustainable business practices. The University of Arkansas Applied Sustainability Center can help translate this perspective into best management practices for businesses that can increase their long-term financial profitability and at the same time benefit society through more judicious use of land, water, air, fossil fuels, and other natural resources.

The Applied Sustainability Center will work with disparate partners to facilitate the rapid development of sustainable business practices and promote their application across the retail and consumer goods industry sectors. Working together through the Center, businesses, NGOs, universities, and other interested parties can help to achieve environmental stability for future generations.

WHY IS AN APPLIED SUSTAINABILITY CENTER ESSENTIAL TO THE SUCCESS OF SUSTAINABILITY IN BUSINESS?
Sustainability will be one of the biggest business opportunities of the 21st century. Focus on this needs to be imperative. It will only be realized when managers understand the nature of the opportunity and have tools and process to move on it. Early sustainability initiatives have already resulted in social and economic gains but the bigger opportunities will be found in Innovation Projects and System Changes which will require further collaboration and exploration.

WHY THE UNIVERSITY OF ARKANSAS?
Wal-Mart's commitment and ultimate success requires partnerships across entire value chains. The University of Arkansas has a rich history with Wal-Mart and is located in close proximity to Wal-Mart and its network of major supplier partners. Additionally this work builds on existing expertise in the University, such as supply chain management, RFID, engineering, agriculture, and other disciplines.

WHY SHOULD WAL-MART SEED THE U OF A APPLIED SUSTAINABILITY CENTER?

The ultimate success of the Applied Sustainability Center will be measurable change. By seeding the Center with an initial three year gift, Wal-Mart can ensure the successful launch of such work. Wal-Mart's commitment will develop into further support from the right stakeholders and founders.

THE CENTER

The Center will serve as an umbrella organization under which disparate activities that address sustainability will be promoted and coordinated throughout the University of Arkansas.

As a clearinghouse and resource center for the most effective ideas in sustainability, this envisions the Center organized along the lines of the RFID Center, with member businesses funding the Center's educational and research operations in conjunction with the University. The partners in this effort will solve problems, promote solutions, and educate stakeholders about the benefits of adopting sustainable business practices.

Year one the Center will focus on four areas: 1) Innovation Projects and related research, 2) education of key decision makers, 3) further development of the University of Arkansas's Sustainability Speakers Series, and 4) creation of a long term strategy for the Center. The University of Arkansas respectfully requests that the Wal-Mart Foundation provide seed funding for the first year to achieve these objectives. After the first year, at which time a fully developed strategic plan will be in place, the Center will apply to the Wal-Mart Foundation for years two and three funding, in addition to reaching out to other stakeholders who will achieve value from the Center to create a longer term funding model for operations, innovation projects, and education.

INNOVATION PROJECTS

The Center's first year initiatives will include two Innovation Projects, which will consist of multi-stakeholder working sessions aimed at the creation of practical implementation oriented strategies that will result in measurable environmental and economic gains in two areas. The first Innovation Project will focus on *reducing the embodied fossil fuel content of products* follow the same general model as the Agriculture Innovation Project. We will focus on three categories (e.g., tires, televisions, and beef) that will serve as initial exemplars, the findings from which will be extended to other products after the working sessions are completed.

Applied research and white papers will be submitted and presented, and action oriented databases, websites, and other resources will be developed. At the end of this Innovation Project, we will have identified quantifiable objectives and methods for reducing embodied carbon in the tires, televisions, and beef supply chains. Wal-Mart, select suppliers, NGOs, academics from the U of A and other universities, and other relevant experts are among the stakeholders who will be involved. First session objectives include identifying working group members, objectives, and timelines. Subsequent sessions will bring together different combinations of the group and subgroups to answer questions and develop specific solutions; the final session will include all participants and will result in deliverables for immediate action. Deliverables will include a plan that describes how the objectives can be achieved by key

stakeholders. Scorecards for buyers and suppliers, along with websites and other resources, will be created and made available to critical decision makers in the supply chain. Ultimately, methods and findings from these supply chains will be synthesized and extended to other supply chains.

The second Innovation Project will focus on *practical steps that can be taken to increase the sustainability of agriculture in the US*. The objective is to identify business practices that lead to increases in product freshness and quality while simultaneously reducing the environmental impact of agricultural practices. Environmental objectives include enhanced protection of natural resources (water, soil, air), as well as reductions in overall food miles. In the development of this innovation project, the Center will develop quantitative goals for the environmental and economic impact in the food and agriculture supply chain. Processes (e.g., working sessions) and products (e.g., whitepapers) similar to the Carbon Innovation Project will be used. Deliverables will include an analysis and map of the current agricultural supply chains, along with objectives and maps for US agriculture in three and ten years and a transition plan of how to reach those goals.

We envision the first year Innovation Projects to result not only in project specific performance improvements, but we also expect to learn from and adapt them for similar efforts in subsequent years. Common methodologies and support structures created in the first year will lead to the efficient and effective development of future Innovation Projects.

EDUCATION

In addition to Innovation Projects, we will develop a Merchant and Supplier Development Program, aimed at educating decision makers in the supply chain in ways to profitably implement Wal-Mart's sustainability goals. This program will develop cutting edge educational programs for direct delivery to buyers and suppliers, as well as the development of "train the trainer" programs to be delivered to HR professionals in Wal-Mart and the supplier community. In the first year, we will develop 6-8 merchant pilot programs, with the intention of rolling out education to substantially all buyers and associated supplier representatives in the following months. We expect the core product to be a 1-2 day program that both engages and educates decision makers. As a result of this program, buyers and suppliers will be provided with practical information on ways they can implement sustainability goals that serve the environmental and economic goals of their organizations. In support of this program, the Center will host and maintain a website and staff dedicated to answering merchants' and suppliers' applied sustainability questions, either by providing direct answers to questions, or by brokering contacts with other organizations.

SUSTAINABILITY SPEAKERS SERIES

The University of Arkansas Applied Sustainability Series will sponsor, in conjunction with Wal-Mart and other co-sponsors, a Speakers Series that will feature public and private speeches by a wide array of thought leaders on sustainability issues. The objective is to expose all members of Northwest Arkansas, including business and community leaders, to alternative views on business and sustainability. Speakers may include high profile business leaders, academics, environmentalists, journalists, politicians, and others, but will also include less visible but influential thought leaders. Where possible, the speeches will be recorded and made available on

the Center's web site. Summaries and transcripts of speeches may also be made available. The Center will also produce and distribute other communications for relevant stakeholders.

Strategic Planning

The final first year initiative will be creating a longterm strategic plan that will establish the Applied Sustainability Center as a world leader in infusing sustainability in mainstream business practices. This will include the creation of Mission, Vision, Strategic planning, Structure, Affiliations, Funding, Focus Areas, and an Operational Plan for years two, three and beyond. We will involve multiple stakeholders in the process, including Wal-Mart, suppliers, other universities, leading NGO's and GO's, NWA communities, potential funders, and internal U of A stakeholders. The resulting plan will enable the center to move forward with existing and new programs and activities.

Support in the first year will be provided solely by the Wal-Mart Foundation. This will free Center staff to immediately focus on the creation of the direct value and engage in strategic planning. Administrative expenses in years two and beyond will expand to include other corporate sponsors, and will eventually exceed the Wal-Mart Foundation's sponsorship level for administration and overhead. Diversifying the funding base will both grow resources for Center to expand its impact and ensure the commitment of a broader array of influential corporations and decision makers.

Summary of Deliverables and Criteria for Success

The first evaluation date for the Center's ongoing programs will be January 31, 2008. While the Center will have only been functional for slightly longer than six months, we anticipate having made substantial progress toward our first year goals. Criteria used to evaluate the initial success of the Center will include the following outcomes:

- Removal of Nonrenewable Carbon Innovation Project
    - Design and hold one of three multi-stakeholder working sessions involving leading experts in carbon reduction, with plans to hold two more sessions and other sub-sessions by mid-year.
    - Identify three pilot carbon product pilot categories (e.g., beef, televisions, tires).
    - Create quantifiable methods for identifying total carbon in these areas, as well as targeted reductions.
    - Solicit proposals for applied research projects related to carbon reduction
    - Create working draft of plan to implement carbon removal objectives in supply chains.
- Sustainable Food and Agriculture Innovation Project
    - Design and hold one of three multi-stakeholder working sessions involving leading experts in sustainable agriculture, with plans to hold two more sessions and other sub-sessions by the third quarter.
    - Identify key sustainable factors for 21st Century U.S. agriculture.
    - Map U.S. current agriculture systems, develop ideal maps for agriculture in three and ten years.
    - Solicit proposals for applied research projects related to reengineering food and agriculture networks in the U.S.
    - Create working draft of initial transition plan for agriculture in first three years.

- Speaker Series
    - Delivery of at least three leading sustainability speakers for northwest Arkansas audiences in the general, academic, and business communities.
    - Increased community awareness and involvement in sustainability through other awareness activities
- Education
    - Develop professional courses in sustainability for professionals in the Consumer Package Goods and Retail industries.
    - Deliver up to six pilot training sessions for these professionals around specific sustainability issues.
- Strategic Planning and Center Development
    - Develop long-term mission and objectives for the Center, specifically as it fulfills the needs of its key stakeholders, and as it fits into the larger sustainability environment
    - Create working draft of a sound three year plan for the Center, including a funding plan, governance structure, and facilities plan.

Year 1 Budget

Innovation Projects				
Management, Facilitation		$	153,550	
Workshop Event Expenses		$	150,000	
Research Staff	2	$	130,000	
Internships	6	$	90,000	
Applied Research Grants	6	$	120,000	
Engineering Research Center		$	50,000	
				$ 693,550
Merchant/Supplier Training				
Training Staff		$	100,000	
Facilities, Equipment, Supplies		$	25,000	
IT/Web Support		$	50,000	
Internship		$	15,000	
Speaker Series		$	100,000	
				$ 290,000
Administration and Overhead				
Executive Director (25%)		$	42,500	
Managing Director (50%)		$	53,550	
Lease, Equipment, Supplies		$	102,000	
Travel (Staff)		$	25,000	
				$ 223,050
Strategic Planning				
Executive Director (75%)		$	127,500	
Meeting & Event Expenses		$	50,000	
Outside Support		$	100,000	
				$ 277,500
Total				$ 1,484,100

Arkansas Center for Space and Planetary Sciences

1. Significant achievements and changes
1.1. Progress relating to strategic plans and university priorities
1.1.1. The Five Year Plan

The Arkansas Center for Space and Planetary Sciences is now at the end of the third year of its current five-year plan. As last year, we have attempted to score ourselves in Table 1, although obviously some of these issues are quite complex and many qualifications could be applied. Nevertheless, we feel we are on target in achieving our goals.

With two unsuccessful proposals and a very similar mission from the University of Arizona coming close to being selected, we have decided not to continue this effort (goal 1).

Nevertheless, this activity has been well worthwhile, giving our students considerable exposure to space mission management and design and demonstrating the University of Arkansas' ability to participate in such an effort. However, JPL is interested in hearing from us about future ideas for missions and it seems highly likely that the space center will participate in mission proposals in the future (goals 1 and 2).

We are on schedule for new sample analysis facilities (goal 3), have made significant improvements to the Keck laboratory facilities (goal 4), and have a large room for a spaceflight instrument development on-line (goal 5). Our graduate program will be at 22 students with the fall 2008 intake, and it is not clear that it will reach 50 by year five (goal 6).

Our summer REU program is a great success, but had problems in creating an academic year program so we taught an honors colloquium to raise awareness of the space center and our interests among undergraduates (goal 7).

Our EPO programs are thriving (goal 8). We are constantly researching opportunities for long term funding (goal 9) and our programs of internal competed grants and for proposal writing and review are a great success (goal 10), having now obtained three major grants from NASA, a $403k grant for space instrument development, a $426,000 grant for the analysis of Stardust particles, and a $1,400,000 grant for supermassive black hole research.

*Table 1. Scorecard at Year Three: Tracking against the space center's five year plan**

Goal	Score	Goal	Score
1 Successfully propose the Hera mission to NASA	1	9 Sustain a long term funding base	2
2 Be a champion for sample return	2	10 Increase grant support for faculty	2
3 Create national sample analysis facility	2-3	11 Strengthen interaction with campus centers	1
4 Develop Keck laboratory for space simulation	3	12 Increase interactions with industrial partners	2
5 Create a flight hardware facility	2-3	13 Increase diversity	2
6 Build graduate program to 50 students	2-3	14 Establish permanent physical plant	2
7 Increase undergraduate participation	2	15 Maintain and expand infrastructure	2
8 Strengthen and grow EPO programs	3		

* 1, No progress. 2, Acceptable progress. 3. Goal achieved.

We feel we have satisfied the university's conditions for continued occupancy of the old museum (goal 14) and all of the space center's research laboratories and related activities continue to run smoothly. However, with the exhaustion of earmark funds anticipated in mid-year 2009 we desperately need a permanent operational budget (goal 15); the infrastructure support systems we have in place are critical to our efforts. In recognition of our accomplishments, the university

has agreed to conduct an external search for a Director after the resignation of the present Director, Derek Sears. (The University is exploring this option, but a search has not yet been authorized.)

We have not succeeded in developing partnerships with other centers on campus (goal 11), but we continue to have success in increasing industrial interactions (goal 12). Last year we had two African American students in our REU program and we now have an African American in our graduate program (goal 13).

1.1.2. External Advisory Board meeting

Table 2. Membership of the new External Advisory Board for the space center.

Name	Institution
Stephen Saunders (chair)	NASA Headquarters
Nathan Bridges	NASA Jet Propulsion Laboratory
William Cochran	University of Texas at Austin
Rich Dissly	Ball Aerospace
Alan Howard	University of Virginia
David Grinspoon	Denver Museum of Nature and Science

The External Advisory Board (Table 2) met at the space center on September 30th 2007 and heard student presentations, toured the facility, and met with faculty and students informally and for a round-table discussion. Dan Kennefick provided a lunch-time talk on Albert Einstein and peer review.

The board provided a written report that made several recommendations to faculty in the space center and to the university:

- Do not rely on earmarks.
- Allow the space center permanent occupancy of the building.
- Find a way to make the center less dependent on Derek Sears.
- Find ways to get the students flight experience by flying balloon or suborbital experiments, or nanosatellite construction.
- Put greater emphasis on research projects that utilize the vast amounts of under-used mission data.

1.1.3. Infrastructure support for the space center

The VC for Advancement, Dr. Gearhart visited the headquarters of the W. M. Keck Foundation on our behalf, following an initiative led by Associate VC Sandra Edwards and Development Officer Emily Smith, with a proposal for $15,000,000 that would enable the space center to

evolve from direct support to endowment support over a five-year period. Unfortunately, Keck were not able to help, but did offer – contrary to normal procedures – to consider a new research proposal from us which was submitted in spring 2008.

We are now within a year of completing the transition for our research support from earmark to research grant support. While this is largely very good news, it leaves us with the problem that unlike the earmarks, research funds do not provide essential infrastructure support.

When Congress failed to pass an FY07 budget, there were no earmarks and we spread out FY06 funds over two years. On the advice of our lobbyists, we submitted a proposal for which NASA obtained nine external reviews. That this was an attempt to replace an earmark was known to the reviewers and this may well have influenced the comments. The highlights of the reviews were:
The education programs, undergraduate and graduate, are excellent.
The outreach programs are excellent.
The research projects were adequately described, but Sears and Chevrier were the only faculty with a reputation in the space and planetary sciences.

The Barringer Crater Company continues its 17-year support of our public lecture series, describing the program as "highly successful".

Meteorite Magazine continues to provide its own support from subscriptions and advertising.

Table 3. Proposals funded to support the space center's infrastructure in 2007-2008

Source/Agency/ Foundation	Title	Amount/ Status
Barringer Crater Company	Barringer Public Lectures (1991 – present)	$58,000 Funded
International sales	Meteorite Magazine	$38,000 Funded
NASA/FY08	Research initiatives at the University of Arkansas, focused on the investigation of returned samples, together with the associated physical and intellectual infrastructure	$267,900 Funded

1.2 Research

1.2.1. New faculty hire update

1. Fang-Zhen Teng took up his position as assistant professor in geosciences in January 2008 to be a member of the space center and perform cosmochemistry research using the new ICPMS facility. At the time of his arrival the ICPMS instrument was producing excellent data but there were no clean rooms in which to prepare samples. Clean rooms are under construction in Ferritor Hall and the space center. Dr. Teng's start-up from Geosciences had been allocated to the former clean room and the space center's contribution was in the lost FY07 earmark. The university provided $50k to replace the space center's contribution; these funds are allocated for Dr. Teng's use for his space center projects.

2. Julia Kennefick was hired in response to a joint request from the department and the space center with start-up funds provided by the space center ($100k) and Fulbright College ($26k). In her first year of appointment Julia was Co-I on a $1.4M NASA award for research on supermassive blackholes. She has also been responsible for several new space center initiatives, such as a student computer lab and the 2008 NSF REU proposal.

3. Vincent Chevrier was recently promoted to research assistant professor in the space center in recognition of his work on surface processes on Mars and his supervision of center students.

1.2.2 Visiting Researchers

Clive Neal, University of Notre Dame, Indiana, visited the center for discussion and presented a Geosciences Seminar on April 4th 2008 "The Ontong Java Plateau large igneous province: Recent results from Solomon Island fieldwork and ocean drilling".

George W. Cooper from NASA Ames Research Center recently delivered the spring 2008 Barringer Lecture at the Space Center. entitled *"Meteorites, Comets, and the Origins of Life on Earth*." The talk was well-attended by members of the university community, the Space Center, and the public.

Francois Poulet, IAS, Orsay, France visited in May 2008. He gave a talk on phyllosilicates on Mars.

Marc Seigar, an observational astronomer and a faculty member in the Department of Physics and Astronomy at the University of Arkansas, Little Rock, has been appointed an adjunct professor at the Space Center. Dr. Seigar's research is focused on the structure, morphology and dynamics of galaxies and their dark matter halos. He is a member of the UALR Astronomy Core Curriculum Committee, the International Astronomical Union, and the American Astronomical Society.

Stephen M. Pompea, a scientist and the manager of science education at the National Optical Astronomy Observatory Office of Public Affairs and Educational Outreach, has joined the Space Center as an adjunct professor.

Dr. Pompea is the director of the U.S. International Year of Astronomy and chair of the Telescope Kits and Optics Challenges Working Group. He is also a Co-PI for: Investigating Astronomy (NSF IMD); Astronomy from the Ground Up (NSF ISE); and, Collaboration to Advance Teaching Technology and Science (NSF GK-12). Dr. Pompea was a Distinguished Lecturer for 2007-2008 for the National Association of Geoscience Teachers.

1.2.2. Industrial partners

We continue our successful collaboration with Space Photonics Inc. developing an optical probe for regolith analysis.

1.2.3. Competed Research Awards

There was no internal space center competed research program during 2007-2008 because of lack of funds. However, we think that this program had run its course and had achieved all that it was going to achieve. Our success in attracting federal funds (Fig. 2) indicates that this program was a success. It is perhaps worth noting that in several instances the external board that reviews these internal proposals recommended support for only one year, arguing that the work was competitive for national funding.

Table 4. Funded or pending proposals submitted to NASA by space center faculty July 1, 2007 – June 30th 2008.

PI	Co-I	Title	Agency/Program	Amount/ Status
Derek Sears (Chem/Biochem)	NA	Radiation/thermal history of Stardust particles	NASA/DDAP	$421,090 Funded
Rick Ulrich (Chem. Engineering)	V. Chevrier, M. Left-wich, L. Roe, D. Sears	Optical probe for regolith analysis (OPRA)	NASA/PIDDP	$402,955 Funded
Daniel Kennefick (Physics)	J. Kennefick, C. Lacy, M. Seigar	Census of super-massive black holes	AR/NASA/ EPSCOR/RIDD	$40,000 Funded
Daniel Kennefick (Physics)	J. Kennefick, C. Lacy, M. Seigar	Census of super-massive black holes	NASA/EPSCOR	$1,400,000 Funded
D. Sears Chemistry/Biochemistry	V. Chevrier, L. Roe	Icy Moons of the Outer Solar System	W. M. Keck Foundation	$500,000 Pending
D. Sears Chemistry/Biochemistry	F. Teng	Iron isotope patterns in ordinary chondrites	NASA/COSMO-CHEMISTRY	$968,398 Pending
D. Sears Chemistry/Biochemistry	C. Lacy, V. Chevrier	Primitive materials on the surface of asteroids	NASA/PGG	$404,065 Pending
V. Chevrier Space Center	D. Sears, L. Roe	Dynamics of water vapor in planetary regoliths	NASA/PGG	$456,730 Pending
F. Teng Geosciences	D. Sears	Isotopic studies of lunar samples	NASA/COSMO-CHEMISTRY	$968,398 Pending

1.2.4. Proposal writing and review procedures

For a third year the space center has offered a proposal writing and review procedure for faculty in the space center. The space center has put in place a procedure for assisting faculty members in seeking external funding. This is modeled on a similar system in use at the Jet Propulsion Laboratory. A proposal manager (the space center manager) guides the proposers through the proposal writing process, drawing up a timeline, checking for compliance with guidelines and for internal consistency, and having responsibility for proposal budgets. A team of three University of Arkansas faculty members (of which two are space center faculty) reviews proposals and

communicates their reviews in a formal meeting between the Internal Review Panel and the proposal team.

1.2.5. Equipment and facilities

Brief details of our progress with equipment and facilities are as follows:
1. ICPMS. Installed and operating well. Need to finish wet labs in the space center.
2. Thermoluminescence clean rooms. Clean rooms are ready and will be equipped with modified equipment; need to buy furniture.
3. Optical microscopy and Extraterrestrial Secure Curation Facility. Open and operational. Will move to higher state of cleanliness after completion of the TL facility.
4. Spaceflight Instrument Laboratory. Completed and operational.
5. Planetarium. The new digital projector arrived and was installed and working in the completed planetarium by November 2007. A celebratory 30-minute planetarium presentation that was developed by volunteer graduate students in the space and planetary sciences program was prepared and presented to space center students and faculty, the chair of physics, and the provost. The planetarium is a joint project with physics and is now in routine use in several astronomy courses. It is also heavily used by small visitor groups as an outreach effort. The projector was purchased with funds from the Sam M. Walton College of Business, the College of Engineering, and the Department of Physics.

1.3 Education

1.3.1 Undergraduate programs

The Research Experience for Undergraduates (REU) program. This is an interdisciplinary summer program that is funded by this award. This ten-week program brought ~10 students from a variety of science and engineering backgrounds to the UA campus to research topics in space and planetary sciences. The students are assigned mentors in their respective research areas, and the students get a chance to experience life as a graduate student. REU student research interests vary from geomorphology to instruments for spacecraft. The students also prepare midterm posters, participate in end of term orals, and attend a follow-up national conference. In recent years, about 75% of the participants in this program have presented their work at the annual Lunar and Planetary Science Conference. .

The students go on several field trips throughout the summer that reflect the major disciplines in the space center. At the Oklahoma Aquarium, students get a behind the scenes look at what life in extreme environments might be like. On their trip to western Oklahoma, the students observed land formations that are comparable to those on Mars. At the Johnson Space Center (JSC) in Houston, students got a chance to visit the lunar and meteorite processing laboratories and take a public tour of the JSC and other facilities.

The Research Experience for Arkansas Honors Undergraduate program.

With encouragement from the Deans of Fulbright College and the Honors College we offered an academic year program of undergraduate research modeled on our summer program. We do not

consider it a success, since while we had 20 positions we received only four applications (five by the end of the year) and only two wanted to continue into a second year. The space center faculty are suspending the program for a year while they consider alternative approaches.

Nevertheless, each of the students was required to attend the annual meeting of the Arkansas Academy of Science and two were among the four short-listed for the best undergraduate presentations at the meeting.

Two also attended the American Astronomical Society meeting in Hawaii and one received an honorable mention for her poster presentation. The students were therefore of high quality and received excellent mentoring, but our infrastructure modeled on the summer program needs a complete overhaul.

1.3.2 Graduate programs

By fall 2008, 29 students will have been admitted to the program since its creation in January 2005. Four students have withdrawn or failed and three have graduated so that by the fall we will have 22 graduate students enrolled, well on our way to the target of a steady state of fifty students in five years. The program is not only attracting good students from around the country, but it is also attracting a highly interdisciplinary class of students.

The high quality of the students participating in this program is worth stressing. For example, one is a highly prestigious Distinguished Doctoral Fellow (DDF), six are Doctoral Academy Fellows (DAF) and one was a NASA fellow. The DDF and DAF are UA fellowships provided by income from the endowments of the Graduate School for especially talented graduate students.

During this year, the three two-week workshops (communications, ethics, entrepreneurship) were removed from the catalog and replaced by a one-hour course in professional development. This is taught in the spring semester. Graduate-level courses in astronautics and astrobiology have been approved.

This year saw the third of the space center graduate orientation programs. A central component of this is the annual graduate field trip that this time visited sites in central and northern Arkansas.

The first two trips were one to western Oklahoma to see geological features similar to those found on Mars and one to sites in Arizona including the Barringer Meteorite Crater. This fall, the trip will be a tour of the Alamogordo, New Mexico, region to visit launch facilities, observatories, and sulfate and other sediment deposits. These field trips are designed by students and led by John Dixon of geosciences and Derek Sears of chemistry and biochemistry.

1.4 Management

1.4.1 Faculty governance

Derek Sears has resigned as Director of the space center and of the interdisciplinary graduate program in space and planetary sciences, effective July 31, 2008. After considerable deliberation, the space center faculty (with a lot of input from the students) recommended and the university agreed that the university would search for an external hire for the director of the space center. Larry Roe would be interim director; shortly after his own appointment was announced, Dr. Roe announced that Rick Ulrich would assume the role of graduate coordinator as part of his duties as Deputy Director.

When the Walton Gift was made to the university, the university allocated a chair and a professorship to the space center, subject to our raising the required matches. Sears now occupies the professorship. The university is exploring the possibility of using the chair to attract high quality applicants for the Director's position.

1.4.2 Personnel

The following are changes to the space center managers/administrators for 2007-2008:

- Hazel Sears, space center Manager with the university title of Project Program Manager, has resigned effective July 31, 2008. Advertisements for her replacement have been published. With the loss of the earmark her salary from the center dropped by 33% from January 2008.
- Jessica Park is the space center Programs Administrator under the university title of Project Programs Specialist. With the loss of the earmark, her salary from the center dropped 25% from January 2008 and 50% of this support was reallocated to the profits from Meteorite magazine.
- Walter Graupner is the space center Laboratory Manager under the title scientific research technologist. With the loss of the earmark his salary from the center dropped by 50% from January 2008, but we recouped the loss from research grant funds.

1.4.3 Institutional commitments

During the reporting period, the University of Arkansas has committed the following resources to the space center.

- An endowed professorship in space and planetary sciences was created and awarded to space center Director Derek Sears. Funds from the W. M. Keck Foundation were used to match funds from the Walton Family Foundation to create the W. M. Keck Professorship in Space and Planetary Science.
- Two faculty members, Drs. Teng and Kennefick described above, have been hired whose presence will strengthen the space center and their respective departments.
- The University has approved a request from the space center that we go externally to hire a replacement for the director and is exploring the possibility of supporting the position with a Walton chair.

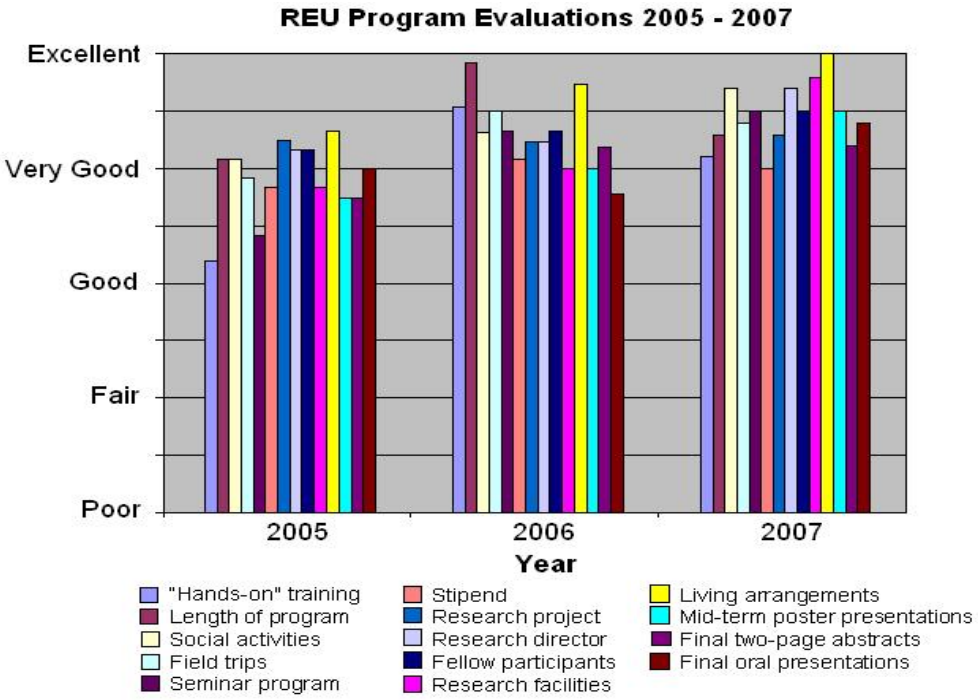
1.4.4 Evaluation of our programs

We ask participants to evaluate our Research Experiences for Undergraduates (REU) and Summer Triangle: Observing, Research, and Inquiry (STORI) programs. We are generally comfortable with the evaluations. Starting next year we will implement a program for evaluating the graduate programs.

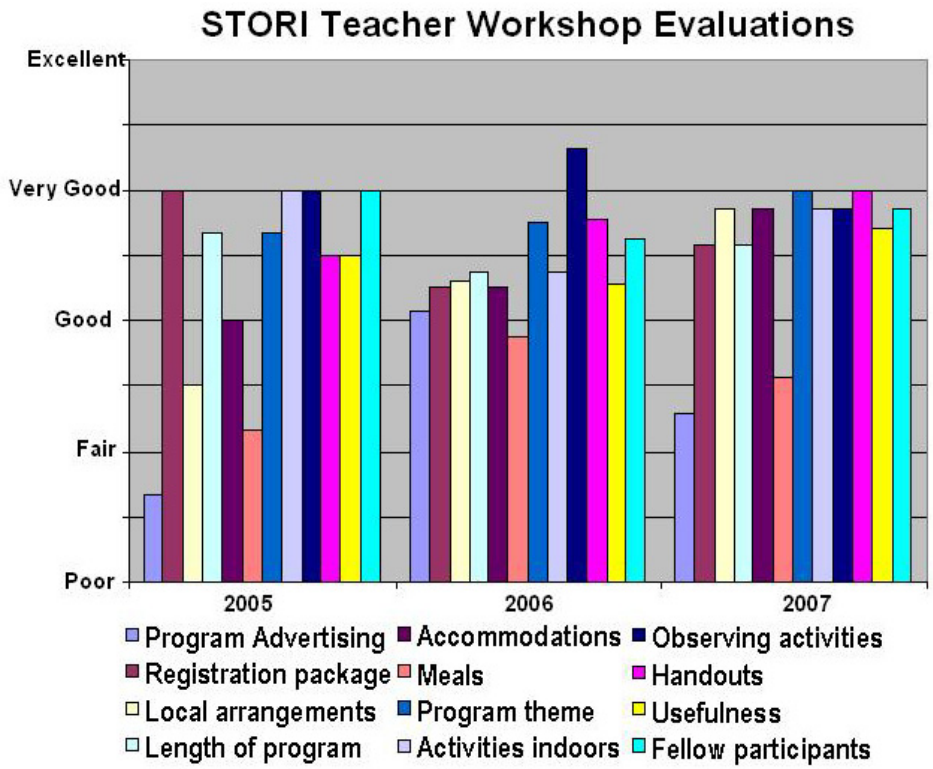
2. Achievements in teaching and research

Dan Kennefick, a member of the Space Center and a faculty member in the department of Physics, has recently received mention in an article published on the *Scientific American* web site. The article is titled, "Did Researchers Cook Data from the First Test of General Relativity."

Dr. Kennefick's original article, entitled "Not Only Because of Theory: Dyson, Eddington and the Competing Myths of the 1919 Eclipse Expedition" appeared in the proceedings of the 7th Conference on the History of General Relativity. The original article can be found at: http://arxiv.org/abs/0709.0685.



The student participants rate the program "very good" with perhaps a slight improvement last year. We see no major areas of concern.



The teacher participants rate the program "good to very good", with most of the dissatisfaction coming from meals provided and physical conditions (lack of internet connection and air conditioning). These will be addressed in the near future.

2.1 Awards including external funding

The following space center faculty members have received substantial external funding during this performance period.

Claud Lacy of the Physics department is in the second year of a NSF grant of $90,000 to study WEBSCOPES for use in undergraduate research.

Rick Ulrich of Chemical Engineering has received a grant (~$403,000) from NASA to work with Space Photonics a local industrial partner of the space center to develop an space-borne instrument for IR spectroscopy of planetary regoliths.

Derek Sears of Chemistry and Biochemistry began the first year of a three-year award to support his thermoluminescence of Stardust particle research.

Daniel Kennefick, Julia Kennefick, Marc Siegar and Claud Lacy received a $1.4M award from NASA to perform a census of superheavy black holes in the universe.

2.2 Conference presentations and Publications

Center faculty members and students (graduate and undergraduate) made presentations (~20) at several national conferences (~8) covering all the major science and engineering disciplines.

Publications (incomplete list, July 2007 to June 2008)

Altheide, T. S.; Chevrier, V. F.; Denson, J. (2008) Evaporation Kinetics of Liquid Magnesium Sulfate Brines Under Sim ulated Martian Surface Pressure. 39th Lunar and Planetary Science Conference, (Lunar and Planetary Science XXXIX), held March 10-14, 2008 in League City, Texas. LPI Contribution No. 1391., p.2493

Altheide, T. S.; Kral, T. (2008) Low-Pressure Desiccation Effects on Methane Production by Methanogens. 39th Lunar and Planetary Science Conference, (Lunar and Planetary Science XXXIX), held March 10-14, 2008 in League City, Texas. LPI Contribution No. 1391., p.1108

Barton, Jonathan L.; Lazar, David J.; Kennefick, Daniel J.; Khanna, Gaurav; Burko, Lior M. (2008) Computational Efficiency of Frequency-- and Time--Domain Calculations of Extreme Mass--Ratio Binaries: Equatorial Orbits. eprint arXiv:0804.1075

Bibring, J.-P.; Langevin, Y.; Poulet, F.; Gondet, B.; Mangold, N.; Mustard, J.; Arvidson, R.; Chevrier, V.; Sotin, C.; Omega Team (2007) Mars Climatic and Geological History, Derived from the OMEGA/MEx Data. Seventh International Conference on Mars, held July 9-13, 2007 in Pasadena, California, LPI Contribution No. 1353, p.3234

Bryson, K. L.; Chevrier, V. F.; Kennington, D.; Sears, D. W. G. (2008) Adsorption Kinetics in Martian Regolith Analogs. 39th Lunar and Planetary Science Conference, (Lunar and Planetary Science XXXIX), held March 10-14, 2008 in League City, Texas. LPI Contribution No. 1391., p.2123

Bryson, Kathryn; Chevrier, V.; Sears, D. W. (2007) An Experimental Study of the Behavior of Ice Under a Basalt Regolith and Implications for the Martian Diurnal Water Cycle, the Formation of Liquid, and the Presence of Ice at Low Latitudes on Mars. American Astronomical Society, DPS meeting #39, #17.07

Chastain, Brendon K.; Chevrier, Vincent (2007) Methane clathrate hydrates as a potential source for martian atmospheric methane. Planetary and Space Science, Volume 55, Issue 10, p. 1246-1256.

Chevrier, V. F.; Altheide, T. S. (2008) Liquid Water and Ferric Sulphate on Mars. Workshop on Martian Gullies, held February 4-5, 2008 in Houston, Texas. LPI Contribution No. 1301, p.23-24

Chevrier, V. F.; Altheide, T. S. (2008) Low-Temperature Aqueous Fluids on Mars. 39th Lunar and Planetary Science Conference, (Lunar and Planetary Science XXXIX), held March 10-14, 2008 in League City, Texas. LPI Contribution No. 1391., p.1176.

Chevrier, V. F.; Gavin, P.; Goetz, W.; Grauby, O.; Madsen, M. B.; Mathe, P. E.; Rochette, P. (2008) Thermally Treated Nontronite as a Model for a Component in the Magnetic Red Dust on the Surface of Mars. 39th Lunar and Planetary Science Conference, (Lunar and Planetary Science XXXIX), held March 10-14, 2008 in League City, Texas. LPI Contribution No. 1391., p.2250

Chevrier, Vincent; Chittenden, J. D.; Bryson, K.; Roe, L. A.; Sears, D. W. (2007) Pilgrim, R. Experimental Study of the Effect of Wind on the Stability of Water Ice on Mars. American Astronomical Society, DPS meeting #39, #17.06

Chevrier, Vincent; Poulet, Francois; Bibring, Jean-Pierre (2007) Early geochemical environment of Mars as determined from thermodynamics of phyllosilicates, Nature, Volume 448, Issue 7149, pp. 60-63.

Coleman, K. A.; Dixon, J. C.; Howe, K. L.; Rowe, L. A.; Chevrier, V. F. (2008) Simulation of Martian Gullies Using a Water/Ice Slush. 39th Lunar and Planetary Science Conference, (Lunar and Planetary Science XXXIX), held March 10-14, 2008 in League City, Texas. LPI Contribution No. 1391., p.2240

Craig, J. P.; Sears, D. W. G. (2008) The Nature and Origin of Semarkona Fine-Grained Matrix: An Induced Thermoluminescence Study. 39th Lunar and Planetary Science Conference, (Lunar and Planetary Science XXXIX), held March 10-14, 2008 in League City, Texas. LPI Contribution No. 1391., p.1081

Dixon, J.; Coleman, K. A.; Howe, K. L.; Roe, L. A.; Chevrier, V. (2008) Simulation Experiments on Mars' Gullies. Workshop on Martian Gullies, held February 4-5, 2008 in Houston, Texas. LPI Contribution No. 1301, p.32-33

El Shafie, A.; Kegege, O.; Barrows, S.; Roe, L.; Ulrich, R. (2008) Penetration Testing of the OPRA Regolith Penetrator. 39th Lunar and Planetary Science Conference, (Lunar and Planetary Science XXXIX), held March 10-14, 2008 in League City, Texas. LPI Contribution No. 1391., p.2125

Fishbaugh, Kathryn E.; Poulet, François; Chevrier, Vincent; Langevin, Yves; Bibring, Jean-Pierre (2007) On the origin of gypsum in the Mars north polar region. Journal of Geophysical Research, Volume 112, Issue E7, CiteID E07002

Gavin, P.; Chevrier, V. F.; Ninagawa, K. (2008) Effect of Impact and Heating on the Spectral Properties of Clays on Mars. 39th Lunar and Planetary Science Conference, (Lunar and Planetary Science XXXIX), held March 10-14, 2008 in League City, Texas. LPI Contribution No. 1391., p.2033

Gavin, Patricia; Chevrier, V. (2007) Impact And Thermal Treatment Of Clays: Implications For The Surface Properties Of Mars. American Astronomical Society, DPS meeting #39, #14.06

Gietzen, K. M.; Lacy, C. H. S.; Ostrowski, D. R.; Sears, D. W. G. (2008) Analysis of Reflectance Spectra of Ordinary Chondrites: Implications for Asteroids. 39th Lunar and Planetary Science Conference, (Lunar and Planetary Science XXXIX), held March 10-14, 2008 in League City, Texas. LPI Contribution No. 1391., p.1125

Gietzen, Katherine M.; Lacy, C. H.; Sears, D. W. (2008) Abundant Clinopyroxene On The S Asteroids And Implications For Meteorites And Asteroid History And The Asteroid-meteorite Relationship. 39th Lunar and Planetary Science Conference, (Lunar and Planetary Science XXXIX), held March 10-14, 2008 in League City, Texas. LPI Contribution No. 1391., p.1161

Kennefick, Daniel (2007) Not Only Because of Theory: Dyson, Eddington and the Competing Myths of the 1919 Eclipse Expedition. eprint arXiv:0709.0685

Kennefick, Daniel; Kennefick, J.; Lacy, C. H. S.; Seigar, M. (2008) The Arkansas Galaxy Evolution Survey (AGES): Supermassive Black Holes in the Universe. American Astronomical Society, AAS Meeting #212, #15.06

Kennefick, J.; Bursick, S. (2007) Infrared Imaging of SDSS Quasars: Implications for Quasar Evolution. Cosmic Frontiers ASP Conference Series, Vol. 379, proceedings of the conference held 31 July-4 August 2006 at Durham University, Durham, UK. Edited by Nigel Metcalfe and Tom Shanks., p.304

Lacy, Claud H.; Kennefick, D.; Kennefick, J.; Seigar, M. (2008) Binary Supermassive Black Holes. American Astronomical Society, AAS Meeting #212, #15.05

Ostrowski, D. R.; Sears, D. W. G.; Gietzen, K. M.; Lacy, C. H. S. (2008) Spectral Features in C and C-like Asteroids and the Possible Presence of Phyllosilicates. 39th Lunar and Planetary Science Conference, (Lunar and Planetary Science XXXIX), held March 10-14, 2008 in League City, Texas. LPI Contribution No. 1391., p.1061

Pilgrim, R.; Ulrich, R.; Leftwich, M. (2008) Optical Design of OPRA: Optical Probe for Regolith Analysis. 39th Lunar and Planetary Science Conference, (Lunar and Planetary Science XXXIX), held March 10-14, 2008 in League City, Texas. LPI Contribution No. 1391., p.1391

Poulet, F.; Bibring, J.-P.; Gondet, B.; Langevin, Y.; Mustard, J.; Mangold, N.; Chevrier, V.; Gendrin, A. (2007) Discovery, Mapping and Mineralogy of Phyllosilicates on Mars by MEx-OMEGA: A Reappraisal. Seventh International Conference on Mars, held July 9-13, 2007 in Pasadena, California, LPI Contribution No. 1353, p.3170

Poulet, F.; Chevrier, V.; Bibring, J.; Langevin, Y.; Gondet, B. (2007) Modal Mineralogy Of The Martian Phyllosilicate-rich Terrains And Implication For Their Formation. American Geophysical Union, Fall Meeting 2007, abstract #P11E-07

Poulet, Francois; Bibring, J.; Chevrier, V.; Langevin, Y.; Gondet, B. Modal Mineralogy of the Martian Phyllosilicate-rich Terrains from the Mex/omega Reflectance Data. American Astronomical Society, DPS meeting #39, #14.05

Sears, D. W. G. (2008) Glimmerings from the Past: Thermoluminescence Studies of Samples of the Moon. 39th Lunar and Planetary Science Conference, (Lunar and Planetary Science XXXIX), held March 10-14, 2008 in League City, Texas. LPI Contribution No. 1391., p.1801

Sears, D. W. G.; Roe, L.; Gawley, R.; Jones, M. A. (2008) Touch-and-Go Impregnable Pad (TGIP) for Lunar Exploration. 39th Lunar and Planetary Science Conference, (Lunar and Planetary Science XXXIX), held March 10-14, 2008 in League City, Texas. LPI Contribution No. 1391., p.1165

Sears, Derek W.; White, K.; Chevrier, V. (2008) The Sublimation Rate Of Solid CO2 Under Simulated Mars Conditions And Possible Implications. American Astronomical Society, DPS meeting #39, #17.08

Sedaghatpour, F.; Craig, J. P.; Sears, D. W. G. (2008) A Study of the Thermal History of Antarctic Micrometeorites by Thermoluminescence: A First Look

Seigar, Marc S.; Kennefick, Daniel; Kennefick, Julia; Lacy, Claud H. S. (2008) Discovery of a Relationship between Spiral Arm Morphology and Supermassive Black Hole Mass in Disk Galaxies. The Astrophysical Journal, Volume 678, Issue 2, pp. L93-L96.

Seigar, Marc; Kennefick, D.; Kennefick, J.; Lacy, C. H. S. (2008) A Relationship Between Supermassive Black Hole Mass And Spiral Arm Morphology In Disk Galaxies. American Astronomical Society, AAS Meeting #212, #52.03

Stewart, Ashley; Obi, K.; Bursick, S.; Kennefick, J. (2008) Improvement of Quasar Surveys Utilizing Infrared and Optical Data: II Spectroscopic Results. American Astronomical Society, AAS Meeting #212, #20.05

Ulrich, R.; Chevrier, V. F.; Coleman, K. A.; Dixon, J. C. (2008) Drag Forces on Boulders in Martian Gullies from Flow of Viscous Concentrated Salt Solutions. 39th Lunar and Planetary Science Conference, (Lunar and Planetary Science XXXIX), held March 10-14, 2008 in League City, Texas. LPI Contribution No. 1391., p.1336

Ulrich, R.; Chevrier, V.; Coleman, K.; Dixon, J. (2008) Drag Forces from Concentrated Salt Solutions in Martian Gullies. Workshop on Martian Gullies, held February 4-5, 2008 in Houston, Texas. LPI Contribution No. 1301, p.86-87

Ulrich, R.; Pilgrim, R.; Chevrier, V. F.; Roe, L.; Kral, T. (2008) Temperature Fields at Mars Landing Sites: Implications for Subsurface Biology. 39th Lunar and Planetary Science Conference, (Lunar and Planetary Science XXXIX), held March 10-14, 2008 in League City, Texas. LPI Contribution No. 1391., p.1341

Ulrich, R.; Pilgrim, R.; Chevrier, V. F.; Roe, L.; Kral, T. (2008) Temperature Fields at Mars Landing Sites: Implications for Subsurface Biology. 39th Lunar and Planetary Science Conference, (Lunar and Planetary Science XXXIX), held March 10-14, 2008 in League City, Texas. LPI Contribution No. 1391., p.1341

White, K. F.; Chevrier, V.; Roe, L.; Bryson, K. L. (2008) Sublimation Kinetics of CO2 Ice on the Surface of Mars. 39th Lunar and Planetary Science Conference, (Lunar and Planetary Science XXXIX), held March 10-14, 2008 in League City, Texas. LPI Contribution No. 1391., p.1178.

2.3 Education and Public Outreach

Our outreach activities are summarized in Table 5.

2.3.1 Public Lectures

The *Barringer lectures* is a public lecture series in the space center funded by the Barringer Crater Company. Lectures are held every spring and fall; this series is now in its 17th. year.

Dr. George Cooper, NASA Ames Research Center. February 11th, 2008 - "Meteorites, Comets, and the Origins of Life on Earth".

Dr. Clive Neal, University of Notre Dame. April 4th 2008 - *"The Ontong Java Plateau large igneous province: Recent results from Solomon Island fieldwork and ocean drilling".*

The space center gave the second of the annual *Arkansas Lectures in Space and Planetary Science* series of public lectures in 2007-2008.

19th September 2007 – "Microbial survivor: Life at the limits". Dr. Mack Ivey

14th November 2007 - *"Formation and evolution of the surface of Mars "*. Dr. Vincent Chevrier

20th February 2008 - *"Why did Alice say to Kitty 'Perhaps looking-glass milk isn't good to drink?' A brief explanation of handedness, from weak bosons to the double helix "*. Dr. Robert Gawley

26th March 2008 - *"Returning to the Moon and Mars using 21st Century technology "*. Dr. Alan Mantooth

2.3.2 Teacher workshops

Summer Triangle: Observing, Research, and Inquiry (STORI)

The STORI workshop for teachers was suspended this year for lack of funds. Nevertheless, Larry and Nancy Lebofsky – who taught the class in previous years – continued to circulate monthly newsletters to previous participants.

Webscopes

WebScopes is a workshop is led by Dr. Claud H. Sandberg Lacy who has developed the use of robotic observing techniques as a tool for use in the classroom. He has helped build robotic WebScopes in Fayetteville, Arkansas, (the URSA WebScope) and in Silver City, New Mexico (the NFO WebScope).

The WebScopes workshop is intended for teachers who want to learn more about observational astronomy using robotic observing techniques. They learn the basic concepts about how the sky pworks as well as the principles of digital imaging and image analysis. No specific science background is needed, just the willingness to work with others in a learning environment and a commitment to take what they learn back to their school.

Space Notes

The space center continues to publish its monthly newsletter, Space Notes that is widely circulated on campus and off campus to our colleagues at other institutions and to our senators and congressional representatives.

Meteorite magazine

The quarterly magazine Meteorite, for amateurs, collectors, dealers, educators, and researchers interested in meteorites to have a forum for communication is now in its third successful year of publication by the space center.

Center websites

The center continues to maintain a substantial central web site containing detailed information about our research, education, and outreach programs. We also have a number of additional websites about specific facilities and projects.

2.3.4 K-12 activities – visits, talks, and pre-college programs

The center hosted several K-12 groups from the region for tours of the space center and planetarium demonstrations that were organized by the student planetarium board. Our graduate students also made trips to area schools and libraries to give talks about our research to various groups. Our graduate students take part in teaching summer classes on space-related topics for various groups in the UA pre-college programs. In summer 2007 they team-taught a course about Mars. This summer we have added a second course about asteroids.

Table5. Summary of center outreach activities for 2007 - 2008

July 2007	Rob Pilgrim	K-4 talk	Farmington Public Library
July 2007	Kate Coleman	K-6 talk	Coleman's Children's Academy, Springdale
July 2007	Kathy Gietzen	K-5 talk	Harp Elementary School, Springdale
July 2007	Katie Bryson, Jon Craig	GT Scholars	Pre College program, UArk
July 2007	Space center visit	Nat'l Consortium of Specialized Secondary Schools for Math, Science and Technology	
Sep 2007	Mack Ivey	Public Lecture	Microbial 'Survivor': Life at the Limits
Nov 2007	Vincent Chevrier	Public Lecture	Formation and Evolution of the Surface of Mars
Nov 2007	Kate Coleman	7-9th grade talk	Washington Junior High, Bentonville
Feb 2008	George Cooper, NASA Ames	Barringer Lecture	Meteorites, Comets and the Origins of Life on Earth
Feb 2008	Bob Gawley	Public Lecture	Why Did Alice Say to Kitty 'Perhaps Looking-Glass Milk Isn't Good to Drink?'.
Mar 2008	Alan Mantooth	Public Lecture	Returning to the Moon and Mars Using 21st Century Technology

April 2008	Dixie Androes	Planetarium demonstration	NWACC Astronomy Class
April 2008	Planet. Board	Planetarium demonstration	Girl Scout Troop, Lowell
June 2008	C. Lacy	Teacher workshop	WebScopes in the Classroom
June 2008	Planet. Board	Planetarium demonstration	Jesus and Me Childhood Ctr group (7-9 yr olds)
June 2008	Kathy Gietzen, Kate Coleman, Travis Altheide, Dan Ostrowski	Pre-college programs	iCamp and Summer Institute
June 2008	Planet. Board	Planetarium demonstration	Boy Scout Troop, Bentonville

Cell and Molecular Biology

The Cell and Molecular Biology (CEMB) Graduate Program currently has 73 faculty (2 new faculty were added this year and 1 is in the process of joining). Dr Douglas Rhoads continued as program director completing his second year and beginning his third year.

The program anticipates being approximately on budget for this fiscal year. We currently project a budget for FY2009 of $127,310 for RA salaries, which will result in a cost overrun of $2400.

Students Completed	MS: 4 PhD: 8
Students Admitted	MS: 4 PhD: 17
Students in process of admission	MS:2 PhD: 6
Current Student Population	MS: 7 PhD: 49

Departmental Distribution of Students

Department	MS	PhD
ANSC	1	
BAEG		6
BISC	2	14
CHEG		2
CHBC	1	7
CSES		6
ENTO		1
FDSC	2	1
PLPA	1	2
POSC	1	10
total	7	49

Noncompetitive funding renewal

ABI-Bridging funds for Pharmalogical Vaccine Adjuvants. ABI 1/1/07-6/15/07 Total costs: $25,000 P.I. J. M. Durdik

Acquisition of a Laser Scanning Confocal Microscope for the Molecular Biosciences NSF 9/1/04-8/31/07 $296,862 P.I: J. Durdik [on departure of J. Kirby 6/06] co-PIs: M. Lehmann, R. Henry, W. Kunzel

Biosensor for Rapid Screening of Avian Influenza Viruses ABI 7/2006 – 6/2008 $150,000–Y. Li (PI), B. Hargis and S. Tung

Center for Protein Structure and Function NIH/COBRE Year 4; ~$8,000,000. total (9/05–8/10) F. Millett (PI). Subproject title: Protein Targeting. Subproject year 4 funding $110,000 Robyn Goforth, (PI); Ralph Henry, (Project Mentor).

Double stranded breaks in aged thymocytes NIH R15AG21896-017/01/03-8/31/07 Total costs: $213,750 Annual direct costs: $50,000 P.I.: J.M. Durdik

Efficient Bioseparation by Intertwining Strain, Chromatography, and Affinity Tail Design. NSF Year 3, $494,602 total (05/06 – 04/09) PI, Bob Beitle; Ralph Henry, CoI. (Sub contract to U. of Pittsburg $247,301)

Function of Cell Identity Factors in Tissue-Specific Programmed Cell Death NSF # 0641347 05/01/07 - 04/30/10 $ 330,000 (PI: Michael Lehmann)

Nanoparticle-based Fluorescent Biosensor for Rapid Detection of *Listeria monocytogenes* in Foods NAFSS-USDA/ARS #58-1935-6-633, 7/2006 – 6/2008, $214,216– Y. Li (PI), D. Fung, L. Bergman, J. Marcy and S. Tu

Pathogeneisis of Candida NIH R01 AI 051470-01A1 7/01/03-12/31/07 no cost extension for another year 12/31/08 Total costs: $1,077,206 Annual direct costs: $175,000 P.I. D. McNabb, Collaborator: Durdik

Recombinase-mediated targeted gene integration and excision for marker-free transgenic crops.USDA-CSREES grant no. 2006- 03691 PI: V. Srivastava

Role of herpesvirus of turkey in the expression of Smyth line autoimmune vitiligo. NIH R15 AR052670-01 (7/1/2005 – 6/30/2008); PI: G. Erf.

Therapeutic Methamphetamine Antibodies from Plants. *National Institute of Drug Abuse*, 2nd year no cost extension $1,242,211. total for 5 years (9/01 – 8/06; extended to 7/08)., Ralph Henry (PI); Joshua Sakon (CoI). Mike Owens (UAMS) is the PI for the Program Project titled 'Preclinical Testing of Antibody Therapy for (+)METH Abuse' funded for a total of *~$5,522,972.*

Undergraduate Research Center in Nanobiology..*Howard Hughes Medical Institute* Year 2: $1,500,000 total. (9/06 – 8/10) PI, Don Bobbitt (PI); CoI: G Salamo, R Koeppe, D Paul, and R Henry

Development of an immortalized chicken cell substrate for infectious laryngotracheitis virus (ILTV) propagation for vaccine production.US Poultry and Egg Association. 7/01/2007-6/30/2009. $110,000. P.I. B-W. Kong

Competitive new grants

Biosensor for Rapid, Sensitive and Specific Detection of Avain Influenza Virus H5N1 USDA/NRI #2008-35204-18662) 11/2007 – 10/2009–$375,000 Y. Li (PI), B. Hargis, S. Tung and L. Berghman

Evaluation of six chromosomal regions as QTLs for sperm traits negatively affecting male fertility in Cobb broiler breeders. Cobb Vantress, Inc; $31599; 10/07-8/08; DP Froman, DD Rhoads (PI)

Identification and characterization of anti microbial peptides in the egg. ABI N. Rath (Co-PI) $24,058.

Magnetic nanoparticle microfluidics for high efficien capture, separation and concentration of foodborne pathogens NSF/STTR 7/2008 – 6/2009 $150,000–Y. Li (PI for university) and A. Wang (PI for company)

Protein Targeting to the Chloroplast Thylakoid Membrane: Structure of a chloroplast signal recognition particle;*Department of Energy* (DOE); $450,000 total for 3 years (8/07 - 7/10) R Henry (PI). CoI: T.K.S Kumar, Robyn Goforth.

Pulmonary Arterial Hypertension: Avian Model of Complex Vascular Lesion Development; NIH R15; $150,000; 4/08-3/10; N Anthony, G Erf, DD Rhoads, R Wideman (PI)

The Control of Growth and Metabolism by Effectors of the TOR Signaling Pathway. NIH 1R15DK079277-01, 08/09/07 - 07/31/10, $ 150,000, PI: Michael Lehmann)

Validation of an animal model for human pulmonary arterial hypertension. Arkansas Biosciences Institute; $74,610; 7/07-6/08; N Anthony, G Erf, R. Wideman, DD Rhoads (PI).

Bacterial Artificial Chromosome (BAC) clone for infectious laryngotracheitis virus (ILTV). Animal Health Project, Arkansas Agricultural Experimental Station. 10/01/2006-9/30/2007. $12,500. P.I. B-W. Kong

Identification of virus encoding microRNA for infectious laryngotracheitis virus (ILTV). Research Incentive Grants, Arkansas Agricultural Experimental Station. 7/01/2008-12/31/2009. $10,000. P.I. B-W. Kong

Ralph E. Powe Junior Faculty Enhancement Award to Yuchun Du from Oak Ridge Associated Universities (ORAU) Consortium; $10,000, May, 2008.

Peer-reviewed Publications

Ananthamurthy K, KM Kathir, A Kight, RL Goforth, R Henry, TKS Kumar. (2008) 1H, 13C and 15N resonance assignments of the C-terminal domain of the 43 kDa subunit of the chloroplast signal recognition particle. Biomol NMR Assign 2(1):37-39.

Ananthamurthy, K., K. M. Kathir, A. Kight, R. Goforth, R. Henry, and T. K. S. Kumar. (2008) 1H, 15N, 13C resonance assignments of the C-terminal domain of the 43 kDa subunit of the chloroplast signal recognition particle. Biomolecular Resonance Assignments, 2, 37-39. 2. Rajalingam,

Chawla R, Nicholson, SJ, Folta, KM, and Srivastava V (2007) *Transgene-induced silencing of Arabidopsis phytochrome A gene via exonic methylation*. Plant Journal 52: 1105 – 1118.

D., K. M. Kathir, K. Ananthamurthy, P. D. Adams, and T. K. S. Kumar. An efficient method to prevent degradation of recombinant proteins by thrombin (2008) Anal. Biochem., 375, 361-363.

Daily, A.E., Greathouse, D.V., van der Wel, P.C.A and R.E. Koeppe II (2008) Biophys. J. 94, 480-491. Helical distortion in tryptophan and lysine anchored membrane-spanning alpha helices as a function of hydrophobic mismatch: A solid-state deuterium NMR investigation using the GALA method.

Dong, W., T. Zhang, J. Epstein, L. Cooney, H. Wang, Y. Li, Y. Jiang, A. Cogbill, V. Varadan, and Z.R. Tian. 2007. Multifunctional nanowire bioscaffolds on titanium. Chemistry of Materials 19(18): 4454 -4459.

Essential roles for apoptosis-inducing factor (Aif) in the T cell lineage. S Srivastava, H Banerjee, A Chaudhry, A Khare, A Sarin, A George, V Bal, J M Durdik, and S Rath. 2007. Journal of Immunology 179: 797-803.

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A Pradhan, M Li, L. Cooney, and Y. Li. 2007. Survival, growth, and death of *Salmonella* and *Listeria* in raw chicken breast meat during refrigerated and frozen storage. Presented at IFT 2007 Annual Meeting, July 28 to August 1, 2007, Chicago, IL. Poster # 098-10.

AE. Daily, JH. Kim, OS. Andersen, RE. Koeppe II (2008) Biophysical Society 52nd Annual Meeting, Long Beach, CA. Abstract 2100. Evaluating Side-Chain Hydrophobicity using Bilayer-Spanning Channels: Serine-containing Gramicidin Channels.

C.D. Smith, N.B. Anthony, G.F. Erf, R.F. Wideman, D.D. Rhoads. Chromosomal Regions Contributing to Development of Ascites and Pulmonary Hypertension, in the Chicken. Plant and Animal Genome, San Diego, CA, Jan 2008

CL. Mazzanti, E Flagg, DV. Greathouse, JF. Hinton, RE. Koeppe II (2008) Biophysical Society 52nd Annual Meeting, Long Beach, CA. Abstract 2044. Structural Studies of the Transmembrane and Cytoplasmic Domains of Anthrax Toxin Receptor.

D Li, J. Wang, Z. Ye, Y. Ying, and Y. Li. 2008. Self-assembled monolayer-based piezoelectric flow immunosensor for the quantification of *Escherichia coli* O157:H7. Poster P1.46 presented at the 10th World Congress for Biosensors, May 14-16, 2008, Shanghai, China.

DD Rhoads. Analysis of Developmental Regulation of Novel ncRNAs Expressed in the Reproductive Tract. AR Station Report, USDA NC1008, Jan 2008.

DP Froman, DD Rhoads. Mapping of Chromosomal Regions Affecting Fertility Traits in the Rooster. AR Station Report, USDA S1020, Nov 2007.

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H Wang, Y. Li, and M. Slavik. 2007. Simultaneous detection of multiple foodborne pathogens using quantum dot fluorescence labels in an immunoassay coupled with nanobead immunoseparation. Presented at IFT 2007 Annual Meeting, July 28 to August 1, 2007, Chicago, IL. Poster # 058-15.

J Garrett, X Wu, K Ye. A pH-independent glucose indicator for intracellular glucose measurement. 2007 AAPS National Biotechnology Conference, San Diego June 24-27.

J. Sakon PST Leena, O. Matsushita, Collagen Binding Characteristics of Collagen Binding Domain from Clostridium Histolyticum Class I Collagenase. J. Bone Mineral Research. abstract from ASBMR Annual meeting 2007.

JM. Durdik and JE. Hesse. VDJ recombination in old thymocytes. Asilomar, the 45th Mid-Winter Conference of Immunologists, Pacific Grove, CA Jan 28-31, 2008.

JM. Froyd-Rankenberg, NJ. Anderson, RE. Koeppe II, DV. Greathouse. (2008) Biophysical Society 52nd Annual Meeting, Long Beach, CA. Abstract 2079. Investigation of "Half-WALP" Peptides in Presence of Model Membrane Lipids using 2H NMR Spectroscopy.

JR Garrett, X Wu, S Jin, and K Ye. Genetically Engineered Glucose Indicators for Visualization of Glucose within Living Cells. The 10th World Congress on Biosensors, May 14-16, 2008, Shanghai, China.

L Cooney, Y. Li, R. Tian, W. Dong, M. Slavik, and H. Wang. 2007. UV catalysis with novel TiO_2 nanofiber coating and its bactericidal activity against *E. coli* O157:H7. Presented at IFT 2007 Annual Meeting, July 28 to August 1, 2007, Chicago, IL. Poster # 098-23.

L. Kannan, N.C. Rath, R. Liyanage, J.O. Lay Jr. Graduate Research Symposium sponsored by Career Development Center in the University of Arkansas in March 2008, Fayetteville, AR. *Regulation of thymosin beta 4 in chicken macrophages by Toll like receptor activation.*

L. Kannan, N.C. Rath, R. Liyanage, J.O. Lay Jr. INBRE in November 2007, Fayetteville, AR. *Identification and characterization of beta 2 defensin in chicken and turkey.*

L. Kannan, N.C. Rath, R. Liyanage, J.O. Lay Jr. Sigma Gamma Delta Honor Society in Febuary 2008, Fayetteville, AR. *Thymosin beta 4 in chicken macrophages.*

L. Kannan, N.C. Rath, R. Liyanage, J.O. Lay Jr.. Poultry Science Association in July 2007, San Antonio, TX. *Identification of antimicrobial peptides in avian heterophils using MALDI TOF MS.*

L. Kannan, R. Liyanage, J.O. Lay Jr, N. C. Rath. 5th International Conference on Innate Immunity, June 2008, Crete, Greece. *Regulation of thymosin beta 4 in chicken macrophages.*

M Faulkner and J Durdik. Enumeration of double stranded breaks in developing thymocytes in young and aging mice. American Association of Immunologists 2008, San Diego, CA April 5-9, 2008.

M.A Sales, V. K. Shivrain, L. Beers, E. A. Alcober, K. Y. Yun, N. R. Burgos, and B. G. de los Reyes. Genome-wide analysis of the nitrogen stress transcriptome of rice. International Weed Science Congress. Vancouver, Canada. June 23-27, 2008.

M.A Sales, N. R. Burgos, V. K. Shivrain, and Y. I. Kuk. (2008, March). *ALS* mutations in red rice confer tolerance to imazethapyr. Gamma Sigma Delta Student Research Conference. University of Arkansas, Fayetteville.

M.A Sales, V. K. Shivrain, N. R. Burgos, and Y. I. Kuk. (2008, January). Mutations in the acetolactate synthase gene of imazethapyr-tolerant red rice. 61st Annual Meeting of the Southern Weed Science Society, Jacksonville, FL.

M.A Sales, V. K. Shivrain, N. R. Burgos, K. Y. Yun, and B. G. Reyes. (2008, February). Genome-wide analysis of the nitrogen stress transcriptome of rice. 48th Annual Meeting of the Weed Science Society of America, Chicago, IL.

M.A Sales, N. R. Burgos, V. K. Shivrain, and Y. I. Kuk. (2007, November). Mutations in the acetolactate synthase gene of imazethapyr-tolerant red rice. 11th Annual Research Conference of the Arkansas Crop Protection Association, Fayetteville, AR.

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N.C. Rath, W. E. Huff, G. R. Huff, K. S. Rasaputra, L. Kannan, V. Durairaj, N.B. Anthony, H. D. Chapman, G. F. Erf, P. Waknell, F. D. Clark.. 10th Avian Immunology research group

meeting, Gold coast, Australia. *Ovotransferrin as a nonspecific marker of health problems in chickens*. June 28th, 2008

R Wang, Y. Wang, K. Lassiter, and Y. Li. 2008. Interdigitated array microelectrode based impedance immunosensor for detection of avian influenza virus H5N1. Poster P1.91 presented at the 10th World Congress for Biosensors, May 14-16, 2008, Shanghai, China.

S. Nicholson, V. Srivastava. *Missouri Plant Biology Symposium*, Columbia, MO, May 28-30.

SC. Munnaluri, GM. Raymond, CE. Lang, PA Cleves, DD Rhoads. Analysis of a Novel Set of Non-Coding RNAs Produced in the Chicken Reproductive Tract. Plant and Animal Genome, San Diego, CA, Jan 2008.

T. Ponnapakkam, O. Matsushita, J. Sakon, R.C. Gensure Weekly administration of a novel parathyroid hormone-collagen binding domain fusion protein increases bone mineral density by more than 15% percent in normal mice. J. Bone Mineral Research. Abstract ASBMR annual meeting 2007

V. Srivastava. *Oklahoma State University*, Department of Biochemistry and Molecular Biology, Stillwater, OK, Sept. 7th, 2007.

V. Srivastava. *World Congress on In Vitro Biology*, Tucson, AZ, June 14 – 18, 2008. Invited talk.

V. Srivastava. *XVI Plant and Animal Genome Conference*, San Diego, CA, Jan 12 - 16, 2008. Invited talk.

X Wu, X Wang, S Jin, S., K Ye. Display of functional H5N1 hemagglutinin fragment on yeast surface: A first step for the development of an oral vaccine. 2007 AAPS National Biotechnology Conference, San Diego June 24-27.

X. Wu and K. Ye, Development of Recombinant Yeast Influenza Vaccines, 2008 Biomedical Engineering Society Annual Fall Meeting, St. Louis, Oct. 2-4, 2008.

Y Li, R. Wang, Z. Ye, B. Hargis, S. Tung, and L. Berghman. 2007. A portable biosensor for in-field detection of avian influenza viruses. Presented at IAFP 2007 94th Annual Meeting, July 8-11, 2007, Orlando, FL.

Y Li, Y. Xiong, C. Ruan, H. Huang, H. Wang, S. Tu, and G. Paoli. 2008. Magnetic bionanobeads and quantum dots based optical biosensor for rapid detection of *Listeria monocytogenes*. Paper O91 presented at the 10th World Congress for Biosensors, May 14-16, 2008, Shanghai, China.

Y Li. 2007. Biosensors and their applications in biosystems engineering. Invited lecture for in College of Biosystems Engineering and Food Science, Hangzhou, China, November 30, 2007.

Y Li. 2007. Biosensors technologies and their applications in biological detection. Invited lecture for in College of Biological Science at Ningbo University, Ningbo, China, December 5, 2007.

Y Wang., R. Wang and Y. Li. 2008. An optimized interdigitated array microelectrode based immunosensor for detection of avian influenza viruses. A poster presented at IBE 2008 annual meeting, March 6-9, 2008, Chapel Hill, NC. *The winner for the first place of the Graduate Student Poster Competition.*

Kong B-W and Lee JY. Recombinant vaccine for infectious laryngotracheitis virus (ILTV). 2008. Plant and Animal Genome XVI. San Diego, CA

Lee JY, Wooming A, and B-W Kong. Comparison of primary chicken embryo cells for propagation of infectious laryngotracheitis virus (ILTV). 2008. Annual Meeting for Poultry Science Association. Niagara Falls, Ontario, Canada

Ma, Y., I. Hanning, and M. Slavik. 2007. Stress induces an adaptive tolerance response and virulence gene expression in Campylobacter jejuni. ASM South Central Branch. Little Rock, AR. P. 54.

Hanning, I., and M. Slavik. 2007. Capture and survival of C. jejuni within Poultry Significant Biofilms. Conference of Research Workers in Animal Disease. Chicago, IL. P. 103.

Hanning, I., A. O'Leary, and M. Slavik. 2007. PCR-Based Assay for differentiation and detection of Pseudomonas aeruginosa isolated from poultry environments. International Poultry Scientific Forum. Atlanta, GA. P. 32.

Hanning, I., and M. Slavik. 2007. Mechanisms of biofilms formation by Campylobacter jejuni. ASM biofilm conference. Quebec City, Quebec, Canada. P. 119.

Research Recognition Awards

G. Rangani, 3rd place, PhD poster competition, Gamma Sigma Delta, University of Arkansas, 2008.

L. Kannan, Awarded First in the Poster Presentation Sigma Gamma Delta Honour Society, University of Arkansas, Feb 2008.

L. Kannan, Certificate of Excellence award, Immunology section , Poultry Science Association, San Antonio, Texas, July 2007.

L. Lindley. Attended the summer workshop on molecular evolution (and extended topics session) at the Marine Biological Labs in Woods Hole, July, 2007.

M. Sales. Outstanding Research Paper (First Place, PhD) awarded by the Gamma Sigma Delta Honor Society for Agriculture-University of Arkansas Chapter, Fayetteville, AR for the paper entitled "*ALS* mutations in red rice confer resistance to imazethapyr." March 2008.

M. Sales. Outstanding Research Paper (Third Place, PhD) awarded by the Arkansas Crop Protection Association, Fayetteville, AR for the paper entitled "Mutations in the acetolactate synthase gene of imazethapyr-tolerant red rice." November 2007.

Office for the Studies on Aging

The Office for the Studies on Aging (OSA) was established in August 1999 to explore educational, community service and research issues and needs related to aging and older persons. The mission of the OSA is to coordinate university resources to address gerontology needs and to facilitate better community interface between university resources and the needs of older adults.

In its seventh year of operation, the Office for Studies on Aging has continued to be proactive in reaching out to the university community and into Northwest Arkansas to identify needs and to target resources that may respond to those needs.

The Office has been particularly successful in fundraising and research support this year. Co-directors, Ro Di Brezzo and Barbara Shadden received funding from the Arkansas Biosciences Institute to continue their caregiver health initiative as well as an award from the Women's Giving Circle to provide valuable information about health to local caregivers. A proposal submitted to the NIH AREA program has received a favorable funding score. The Office also received two generous donations from long-time supports, Bob and Louise Garnett.

In addition, the Office has graduated its first students from the Graduate Certificate in Gerontology program and enrollment in the certificate program continues to increase.

In the spirit of the mission of the OSA, the following initiatives were completed this year:

Campus and Community Collaborations

- Collaborated with the College of Education and Health Professions Dean's Office to host a reception honoring the 3rd Annual Aging Well Creative Writing Award Recipients on November 29, 2007.

1st prize: *Thomas Lavoie, Staff*
2nd prize: *Tyler Copeland, Graduate Student*
3rd prize: *Deb Sabo, Staff*

- Continuation of collaboration with Area Agency on Aging and facilitation of interactive projects involving University and AAA.
- Established an internship site at Butterfield Trail for two interns (Fall and Spring). Interns were responsible for developing and maintaining exercise programs for the residents.
- OSA Co-Directors advise institutional chapter of Alpha Phi Omega, an honor society for students and faculty interested in gerontology.
- Co-Directors represent OSA and College of Education and Health Professions on Gerontology Certificate Steering Committee.
- Developed and hosted two workshops for campus community and Northwest Arkansas community. Fall 2007: "A Journey Through the Legal Maze of Living Wills, Health Care Directives, Powers of Attorney" - (December 6, 2007). Spring 2008: "Aging Parents: Will I Be Ready? Keeping a sense of humor and maintaining health" - (April 29, 2008).
- Developed area of specialty within public policy Ph.D.

Development Efforts

- The Office for Studies on Aging received $10,500 from the Women's Giving Circle for the proposal entitled *Meeting the Health Needs of Family Caregivers.* This project included a series of workshops for caregivers about physical and mental health topics (December 2008).
- The Office for Studies on Aging received a third $5,000 donation from Mr. and Mrs. Bob Garnett (December 2007). $2000 of this donation was used for the 3rd Annual Aging Well Writing Contest to be held in Fall 2007.
- C & C Services donated $1500 to the OSA foundation account. This money was donated to help sponsor student research involving aging studies.

Grants

- Shadden, B.B., Di Brezzo, R., and Ganster, D. (Revision Submitted). Salivary Cortisol Response to Managing Dual Roles of Work and Caregiving, National Institutes on Aging (R15). $150,000.

Gerontology Certificate

- The Critical Issues in Aging course (GERO 5023) was offered. Seven students (3 in the GERO certificate program) were enrolled under instructor Barbara Shadden, OSA Co-Director and GERO Certificate faculty.
- One meeting of the GERO Certificate Steering Committee was called this year.
- The OSA maintains membership in the Association for Gerontology in Higher Education (AGHE), the only national organization devoted primarily to gerontology education.
- Dr. DiBrezzo taught Field Experience in Gerontology in Summer 2007 and is scheduled to teach it again in 2008.

Student Services

- The OSA continues to provide office space to the delta sigma chapter of Sigma Phi Omega, the national academic honor and professional society in gerontology, at the University of Arkansas.
- Two Exercise Science students worked through the Office to conduct exercise programs in area senior centers. Kelly Williams provided fitness consultation at the Fayetteville Senior

Activity Center, while Matt Griswold conducted an exercise class at the Springdale Senior Activity Center.

- The Office for Studies on Aging sponsored Careers in Aging week (April 9 – 13) at the UA campus. Activities included a viewing of the documentary film, *Mind Games*, an OSA open house, and presentations about careers working with older adults.

Abstracts

- Gray, M., DiBrezzo, R., Shadden, B., and Fort, I. (2008). Comparison of methods to assess abdominal adiposity. *Research Quarterly for Exercise and Sport: Research Consortium Abstracts Supplement, 79(1), A-15.*
- Gray, M., DiBrezzo, R., Fort, I., Lirgg, C., Riggs, C., and Shadden, B. (2008). Effect of power and resistance training on bone mineral density. *Research Quarterly for Exercise and Sport: Research Consortium Abstracts Supplement, 79(1), A-22.*

Presentations

- DiBrezzo, R., Fort, I., Oliver, G., and Adams-Blair, H. (2008). Bone health for athletes of all ages. *2008 AAHPERD Convention and Exposition.* Fort Worth, TX, April 11, 2008.
- Powers, M., Gray, M., DiBrezzo, R., Shadden, B.B. (October 18, 2007). Bone Mineral Density and Percent Body Fat of Caregivers and Non-caregivers. Poster presentation presented at the Annual Meeting of the Central States Chapter of the American College of Sports Medicine, Springfield, Missouri.

Grant Reviewer

The Co-Directors for the OSA served as grant reviewer for Alzheimer's Association and American Federation on Aging.

Service Activities of Co-Directors

ALS Support Group - facilitator for all monthly group meetings. This group meets the information and support needs of persons with ALS and their families.

ALS Association - Chair of Patient Care Services Committee for the local chapter of ALSA (2005). Ongoing development of Loan Closet (now have 6 augmentative communication devices housed at the UA Speech Clinic) and development of Resource Guide.

Technology support services for persons with ALS - involves evaluating technology needs, including travel to the home for those who cannot physically be transported to our clinic.

Stroke Support Group of NWA - founder and facilitator of stroke support group which meets monthly in Rogers, AR.

Regional Representative, National Aphasia Association - respond to concerns of residents in Arkansas and surrounding states.

Reflections Memory Care, Inc. Board Member, 2006 to present. This organization will be creating a unique residential and treatment facility for older adults with dementia in the Springdale level.

This year, the Office for Studies on Aging has actively worked to increase the opportunities for students to study gerontology and aging studies at the University of Arkansas. In addition, the OSA continues to effectively address the need to connect currently fragmented resources in services to older adults, by collaborating with other aging researchers on campus and providing educational opportunities for students in the community.

Biotechnology Center

The Biotechnology (Biomass) Center is the home for the University of Arkansas Herbarium. Offices for museum personnel are located in the Center as is the curation laboratory.

The Center continues to house the food safety research efforts of Professor Michael Johnson of the Department of Food Science as well as the Agricultural Research Services Laboratories and Offices. It also houses Genesis client BioBased Technologies, the Research and Development arm of the BioBased companies.

University of Arkansas Press

The University of Arkansas Press gross sales were up for the third consecutive year. While the Press avoided an industry-wide trend of record-setting returns, our own returns increased only slightly and we ended the year at exactly the same volume as last fiscal year, no small feat in the current market.

As has become the norm, our sales in FY08 were strong in all sales categories: front list, backlist, hard bound, paperback, trade book (general interest) and classroom sales. In addition, the “other income” category (poetry, journals, and distributed books) shows a slight improvement over last fiscal year and a 100% increase over two years ago. It is notable that 1st quarter sales were at a record high in FY08, as were sales for the first six months of the year. Gross sales continued to impress through the remainder of the fiscal year but higher than normal returns depressed the robust receipts of the first two quarters.

Expense management continues to be a positive feature of the Press's operation. Due to continued staff development, overhead increased by 1.9% but discretionary expenses were reduced by 9%.

Staff development continues apace with new strength and professional enhancement of Press operations across the board. As warehouse manager, we were able to hire a new University of Arkansas graduate who had worked at the press all four years of his undergraduate tenure. We have increased our speed and efficiency dramatically, while at the same time continuing the very strong record of error-free fulfillment. We added a new acquisitions editor by way of internal promotion and, likewise, promoted from within to add an assistant marketing manager. With one promotion we increased our ability to get new titles and, with the other, strengthened our ability to promote the press and increase sales revenues. Likewise, a staff replacement in

editing/production has shown results in producing shorter production schedules, which enhances our ability to more efficiently market our seasonal lists.

The Press continues to add clients to our distribution and warehousing business unit. In Spring 2008 we added the Butler Center for Arkansas History to our catalog and our warehouse and in the Fall we will add Moon City Press (a joint publishing effort of Missouri State University and UALR) to our catalog. These new clients add visibility to the Press and revenues to our bottom line.

Some miscellaneous highlights of FY08

For the first time in many years, the press had a warehouse sale and over 11,000 books were sold in just over 24 hours! Hundreds of people dropped by and everybody bought something.

A major event was the benefit concert by Lucinda Williams. A joint project of the University Press and University Advancement, some $60,000 dollars were raised to establish an endowment which will give a $5,000 prize in Miller Williams' name for one of our annual poetry selections. The first prize will be awarded in 2010.

Fire Baton, by Elizabeth Hardaway, won the Library of Virginia book prize.

War on Error author, Melody Moezzi, was chosen Georgia Author of the Year in the non-fiction category. She was interviewed on NPR's "All Things Considered" in January and in Publisher's Weekly as well. The website *Iranian.com* ran excerpts from *War on Error* and *Sin: Selected Poems of Forugh Farrokhzad.*

You're the Enemy, poems by James Allen Hall, was selected for consideration by the Los Angeles Times. Among a number of excellent reviews, the book was called "brilliant and brave" by *Library Journal*. The book has sold out its first printing after only 6 months.

From deep in our backlist, a poem from Jo McDougall's book *Towns Facing Railroads* was featured on NPR's "Writer's Almanac" as was a poem from *New and Selected Poems* by Philip Appleman.

The Military Order of the Stars and Bars gives three book prizes annually. For the first time in its history, all three prizes were awarded to books from a single press—in 2008, the University Of Arkansas Press. The books were *The Death of a Confederate Colonel*, *Portraits of Conflict: A Photographic History of the Civil War in Tennessee,* and *Confederate Guerilla*. In addition, *Death of a Confederate Colonel* was selected by *Foreword Magazine* as one of the top 10 University Press books of the year.

The University of Arkansas Press continues to explore ways to enhance its program by utilizing the opportunities provided by the digital world. The Press blog *Bookmark* went live in 2008, enabling us to add a more familiar voice to our internet communications and provide more frequent updates about reviews, signings and other Press happenings. We are participating in the Google Book Search and Amazon Search Inside programs, which provide consumers the

opportunity to search the digital versions of our books for terms of interest. These programs allow consumers to discover our books, know more about what's inside, and feel confident making online purchases.

The Center for Mathematics and Science Education
Eisenhower National Clearinghouse Access Center
NASA Educator Resource Center

The Center for Mathematics and Science Education (CMASE) is located in the West Avenue Annex and supported through the University of Arkansas Graduate School. This center is an outgrowth of the University of Arkansas Science Education Liaison Office begun sixteen years ago as a K-12 science education outreach facility for the University. Currently, CMASE is one of twelve science, mathematics and technology education centers working in conjunction with the Arkansas Department of Higher Education (ADHE) and the Arkansas Department of Education (ADE) as a professional development network of mathematics and science centers on university and college campuses around the state.

The main objectives of the center continue to be 1) to assist the University of Arkansas in K-16+ education outreach, 2) to coordinate University of Arkansas participation in state K-16 science and mathematics proposal initiatives, 3) to provide regionally beneficial grant-funded programs for K-16+ education, 4) to provide access points for dissemination of educational materials, resources and information, and 5) to link the University of Arkansas with common education allies throughout the state and nation.

Through CMASE, annual University-sponsored activities such as University Day, the Northwest Arkansas Regional Science and Engineering Fair, Springfest, and various teacher and student programs are still top priority. Day-to-day educational outreach information continues to be sent to local, regional, and state education entities through email listservs, web page information, and regular mail. Grant writing, specifically for Center outreach activities, continues and, as needed, is provided to other departments and colleges requesting assistance for pertinent grants. The maintenance of the University of Arkansas K-16+ Outreach program is the first layer of responsibility for CMASE.

The second layer of CMASE is as the Arkansas National Aeronautics and Space Administration Educator Resource Center (NASA ERC). As the only Arkansas NASA ERC, CMASE is responsible for warehousing and disseminating NASA materials provided by NASA HQ in Washington, D.C. and NASA Marshall Space Flight Center in Huntsville, Alabama, to the state's educators. In general, all state NASA ERCs are responsible for providing regular updates on NASA programs and materials in the context of email, webpage, and workshop information distribution. Educational materials and information are supplied to CMASE/NASA for local, regional, and statewide dissemination to Arkansas teachers through mail and workshop presentations. Webpages, specifically created for the Arkansas NASA ERC, provide a database of all materials and information available for statewide educator access.

The third layer of CMASE is as one of seven partners in the Arkansas Discovery Network (ADN) that provides connectivity with partnering museums and informal science education around the state. The Donald W. Reynolds Foundation funded a five-year, $7.4 million grant to bring museum quality exhibits to rural schools around the state in the form of traveling museum

exhibits, presentations, and a 40ft interactive travel van. CMASE is the northwest Arkansas partner and will act as the northwest coordinator for the ADN partnership's education outreach.

Within the past year, CMASE has had the following grants funded:

- ADE: Math Instruction Specialist $ 84,500
- ADE: Science Instruction Specialist $ 84,500
- Arkansas Science and Technology Authority $ 15,000 (several grants)
- EPA: WATERS $ 20,400 (follow-up continued into 08-09)
- NCLB: ADHE Teacher Enhancement $ 112,000
- NASA: AR Educator Resource Center $ In kind
- Reynolds Foundation: Discovery Network $7,400,000 (year 3 of 5)

During the past year, the CMASE director, mathematics specialist, and science specialist have, to list only the major components, provided science/mathematics/technology content professional development to:

- 2016 In-Service Teachers - 70 workshops (2 - 6 hours/day)
- 624 Pre-Service Teachers - 14 ½-day classes and workshop sessions (2-3 hours/session) where student teachers were served from UA, UAFS, JBU, and NWACC
- 60 In-Service Teachers – 4 weeklong institutes with statewide attendance during June and July
- 500 In-Service Teachers –professional national and regional states' conferences

Because teachers influence from 30 to 150 students per day within their classes, the number of students impacted by these education outreach opportunities, if properly estimated, would literally be in the tens of thousands of students who benefit from teacher to classroom implementation through CMASE activities.

Regional K-12 (informal/formal education community) activities -

- University Days: 1,000+ k-12 teachers and students with pre-service students, faculty and staff
- Northwest Arkansas Regional Science and Engineering Fair: 1,400+ students, parents and teachers
- Springfest: 1,500+ children and general public
- Mystery of the Mayan Medallion (ADN traveling exhibit): 3,163 students, teachers, and general public
- Good Vibrations (ADN traveling exhibit): 5,717 students, teachers, and general public
- 5 ½ day sessions for Fayetteville Library Super Science: 155 2nd -6th grade students/parents
- Walton Arts Center Beakman 2 day, hands-on presentation for K-8: 1,500 students/teachers
- 2 Arkansas Discovery Network KIDSQUEST parties: 170 K-6th grade students/parents
- 14 STARLAB (traveling portable planetarium) sessions: 560 teachers and students

TOTAL: 18,170 directly served within the K-12 informal and formal education community

The director and specialists were involved in 275 total days of regional, state, and national travel.

Of these, eighty involved regional meetings with UA faculty, area Education Service Cooperative members, school representatives, and other regional outreach educators. One hundred and twelve days involved in-state (out of the northwest region) meetings dealing with the annual Arkansas Curriculum Conference state teachers' conference, the Arkansas Discovery Network, the Network of Math and Science Centers directors, math/science specialists' statewide planning, ADHE/ADE professional development, and other various statewide professional development programs/projects. The remaining eighty-three days of travel were spent attending out-of-state meetings and conferences giving invited presentations/workshops. These presentations were given at NASA conferences, the Space Exploration Educators' Conference, the National Science Teachers Association annual national conference, the National Council for Teachers of Mathematics annual regional and national conferences, and the GLOBE international conference.

Records are also kept for those who visit the Center. During the past year, approximately 1,200 have registered as on-site visitors in order to obtain information and resources from CMASE/NASA. An estimated 200K (yes, that is thousands) email contacts were sent through personal communication and listserv mailings and 5,800 pieces of education materials such as teacher guides, posters, and lithographs were distributed.

Another important part of CMASE is interaction with faculty in creating proposals, working with ARSC and COEHP students, and UA "general education outreach" business. This interaction occurs weekly to monthly and is not listed within the overall categories of activity.

During the past year, the CMASE director has served/continues to serve as:

1) Conference Chair the annual state teachers conference held in Little Rock
2) Secretary on the Northwest Arkansas Museum Board
3) Nationally-elected Board member to the Triangle Coalition in Washington, DC.
4) Lead author for the NASA K-4 Elementary GLOBE program: "The Scoop on Soils" children's book
5) Lead author for the Beaver Lake Watershed's 1st grade education curriculum model
6) Curriculum writer for the Walton Arts Center's *Beakman* performance and hands-on interaction with K-12 students

CMASE has expanded over the past three years to encompass the entire second floor of the West Avenue Annex. This has allowed concurrent teaching during the year as various departments and centers need space for CMASE-related classes. It has been especially be useful in organization of the ever growing materials and resources available at the center for teacher and faculty use.

During the 2007-2008 school year, the COEHP held regularly scheduled classes at CMASE because of the availability of technology and K-12 materials. The Center will be made available to the COEHP for the 2008-2009 school year. This partnership showcases what CMASE has to offer student teachers/faculty and provides COEHP with hands-on materials and resources not readily available on campus.

Future Plans are to continue to provide:

a) On-campus science, mathematics and technology outreach programs for undergraduate and graduate education majors;
b) College of Education and Health Professions pre-service teacher workshops and opportunities for UA students to become more involved with education outreach;
c) Education outreach for K-16+ science, mathematics and technology teachers and student;
d) Grant funded professional development sessions, workshops and institutes for K-16+ teachers;
e) Science, mathematics and technology materials and resources to K-16+ teachers;
f) Education listserv and web page mentoring to local, regional and state education networks.

There is the possibility that CMASE will move under the supervision of the College of Education and Health Professions' Department of Curriculum and Instruction. Currently, a memorandum of agreement between the Vice-Provost for Research/Dean of the Graduate School and the College of Education and Health Professions is being constructed. [Editorial note: The transfer of CMASE to the College of Education and Health Professions will occur on July 31, 2008.]

Testing Services

Executive Summary

The mission of Testing Services is to assist students in achieving advancement in their chosen educational fields or careers. To accomplish this mission, Testing Services provides quality academic testing and scoring services that incorporate current technology in an environment of continuous improvement. The office conforms to nationally recognized professional testing standards including state-mandated regulations. These mandatory academic tests provided for the regional and campus communities are consistently rendered with an attitude of service that demonstrates value in human relationships, personal excellence, human dignity, diversity, and commitment to lifelong learning. The office of Testing Services promotes responsible academic, fiscal, legal, ethical and equitable practices within an environment of continuous quality improvement and technological advancement.

Testing Services administers many graduate and professional school admission tests, professional certification and licensure tests, exemption tests and exams offered by other state and national testing programs. The office also administers national exams such as GRE, LSAT and PCAT as well as institutional admission tests such as ACT, TOEFL and MAT. An example of exemption tests is the Advanced Composition Exemption Exam. Placement assessments like the Math and Reading Placement Tests, COMPASS and ELPT are also administered in addition to credit-granting tests such as CLEP and NOCTI. Another population served by this office is students in distance learning programs. A complete list of tests offered by this office on a regular basis is included in Appendix A.

During 2007-08 Academic Year approximately 12,000 students and prospective students who were satisfying admission/degree requirements at UA and other institutions were tested.

Considering the University's goal of significantly increasing the student body by the year 2010, the demand for testing will grow, and the gap between testing that is needed and testing that can be provided will be even greater.

To better manage limited space and personnel resources while increasing services to current students, alumni, and northwest Arkansas residents, Testing Services offers many test sessions during Saturdays, Sundays and evenings. During the past year, a total of 477 tests were administered: 142 sessions administered Saturdays, 23 administered late afternoon or evening hours, and 9 sessions administered Sundays.

Often, UA students, staff or northwest Arkansas residents must satisfy testing requirements of other institutions to fulfill educational, certification, or licensure programs. Testing Services provides individual and correspondence test proctoring services to support the needs of these individuals. Also, standard test administrations are scheduled through special request for those taking tests not normally administered by this office. During the past year, Testing Services accommodated 121 individuals for such tests.

Testing Services is committed to serving test takers with disabilities by providing services and reasonable accommodations that are appropriate given the purpose of the test. Nonstandard testing accommodations are available for test takers who meet testing companies' requirements. Testing Services accommodated students' special testing needs by providing non-standard administrations to test takers with disabilities (e.g., visual, physical, hearing, learning, etc.). In the 2007-2008 Academic Year, 30 examinees with documented disabilities requested and received non-standard testing accommodations.

With the exception in the month of June where Testing Services administers the most tests, demand for testing is highest between November and February. (See Appendix B) The competition for space to administer tests continues to be a major challenge. Test sessions are scheduled using Testing Services' Computer-based Test Center (CBT) containing only 15 computers, the new GMAT Center with 10 computers and paper-based testing seating 45 examinees. To support large state and national test administrations such as Praxis, tests are administered on Saturdays and Sundays in other buildings across campus. This year a total of 9 tests were administered on Sundays. Classrooms in Kimpel Hall and computer labs in the Walton College of Business with over 75 seats/computers are used to support the large numbers of students who are required to test during peak times.

New Initiatives

During the past year, some changes took place in administration formats of the existing computer-based testing programs. Testing Services adapted to many changes that took place this year and added new exams to accommodate more test-takers in the larger community. Included in this category are the Kryterion, Texas Educator Certification Program (TEC) and IQT Testing.

Over the past years, Testing Services has generated ideas to increase funding for the office by advertising proctoring services as an option for those who are taking online classes or are participating in distance learning programs across the country. Students who attend an out-of-

state college or university, a college that does not provide testing services, or participate in an external degree or distance learning programs can test here at the University. Also, proctoring services is provided for individuals who are not able to test on a regularly scheduled test date, or for those who are required to take a test which is not offered at the University of Arkansas. An individual administration is any test administration that's purposely given to an individual in a standard manner. Proctoring services are provided per student request at a time mutually convenient for both the student and testing staff.

With the hard work of the office staff posting this information on Testing Services' website, the results have been successful and additional revenue was generated. During this fiscal year a total of 121 such tests were administered and an extra $6000 was generated for the office.

COMPASS is an ACT-developed advising, course placement, and retention tool which was used specifically to assess non-traditional students' skills. Although Testing Services began scheduling and administering the reading part of the COMPASS during the New Student Orientation in the summer of 2006, this year it started administering the COMPASS reading, writing and math test. A $25 test fee was approved and was charged to students to partially offset the cost of registration, test administration staff and score reporting for this test.

Specific Accomplishments of 2007-08

<u>Collaborating with UA departments</u>

- Collaboration with the Center for Students with Disabilities by reinforcing testing companies' deadlines and providing time for review and follow-up correspondence with regard to students with special needs.
- Collaboration with the Registrar's Office to identify eligible Advanced Composition Exemption Exam (ACEE) students.
- Collaboration with the New Student Office by scheduling and administering the Developmental Reading and Math Placement Tests with each orientation session.
- Collaboration with the Graduate Studies Department of Walton College of Business in regard to the new GMAT contract and test administration at UA.
- Collaboration with the College of Education Nursing Department to schedule and administer a series of nursing exams to their students each semester.
- Collaboration with deans, academic advisors and major professors to inform students of their eligibility and register to take the Advanced Composition Exemption Exam during 2007-2008 Academic Year.
- Cooperation and collaboration with different departments on campus to receive SLPT topics for students who are interested in obtaining a teaching assistantship.
- Collaboration with the Office of Admissions to streamline joint processes regarding admission tests and referrals to Testing Services.
- Collaboration with the Honor's College by administering the CLEP exam with the first few orientations specifically to accommodate honor students.
- Collaboration with the New Students Office by providing them with CLEP brochures and an information sheet to be included in student orientation packets.
- Organizing and scheduling all institutional tests to accommodate the needs of different departments on campus.

Collaborating with Other Partners in Education

- Complying with the continuing changes pertaining to the CBT tests such as TOEFL, GRE and GMAT.
- Establishment of the new GMAT Center in collaboration with Pearson VUE.
- Collaboration with area high school counselors by accommodating their students with disabilities with ACT information and non-standard testing.
- Collaboration with area high school counselors to share information regarding the CLEP testing program with their students.

Expanding Test Program Offerings

- Expansion of services by increasing the number of tests.
- Successful negotiations and signing of contracts with three different testing companies with terms and agreements that allow Testing Services to serve students first and foremost and providing the office with the financial benefits of these test additions. Following are the new added tests:
- Texas Educator Certification Program (TEC) - 5 hour exams for Texas certifications.
- Kryterion Host - contract signed March 2008 - Industry Testing Programs that serve our community.
- ISO IQT Quality Testing - contract signed March 2008 - to serve those who want to demonstrate their qualification for a specific certification within the IQT academic institution.
- Implementation of e-COMPASS as an alternative to the ACT for the non-traditional students beginning fall 2007.

Streamlining Procedures

- Maintaining Testing Services website so information is available to students 24 hours a day/7-days a week. The site provides students with test dates and deadlines, registration procedures, test preparation, registration forms, other relevant test information, and links to testing companies and their websites.
- Working with the ISIS team, Admission and Registrar's Offices to determine Testing Services' needs for ISIS reports and inquiries.
- Development of an on-line test registration system for the Advanced Composition Exemption Exam.
- Processing and monitoring all test registrations and issuing admission tickets.

Managing Resources Efficiently

- Worked with College of Business and Pearson VUE to get the new GMAT contract signed with terms and agreements that are financially beneficial to Testing Services.
- Generating additional revenue for the office through new exams and ending the year with an income of over $82,000 by these tests.
- Purchasing new computers and servers for the Computer-Based and GMAT Test Centers with assistance from College of Business to get a discount.

Ongoing Programs

Test Administration - Testing Services during FY08 administered 477 sessions of standardized tests 2007-08 to approximately 12,000 students. The number of students tested this year exceeds the previous years.

National test dates are set by the testing companies and usually fall on Saturdays. Institutional test dates, including CBT dates, scheduled by Testing Services on weekdays, evenings and weekends are liable in accommodating students' schedules and the University's admission requirements and orientations schedule.

Law School Admission Test (LSAT) -- Beginning with the June 16, 2008 exam, student IDs are no longer acceptable for admission to LSAT. All test takers are required to show a valid (unexpired) government-issued photo ID bearing the test taker's signature, such as a passport or a photo driver's license. All candidates registered for the June LSAT were sent an e-mail reminding them about this new ID regulation. This regulation is also included on LSAT admission tickets.

GRE General Test – Educational Testing Service (ETS) was planning to launch the revised *Graduate Record Examinations* (GRE) General Test in the fall of 2007. Later on ETS issued a news release announcing cancellation of the revised GRE General Test. The primary reason for canceling the test was access for test takers. It would not have been possible to assure complete access for all fall 2007 test takers despite the size and growth of the Internet-based Testing (iBT) network. ETS finally determined that the potential risk to testing access outweighed the benefits of immediately moving to the new format. The GRE General Test will continue to be offered worldwide in its current computer-based, continuous testing format.

Effective July 1st, GRE examinees will be required to reschedule or cancel no later than three full days before their appointment (not including the day of the test or the day of the appointment). For rescheduling and cancellation performed before July 1st, the current deadline of ten full days before the appointment will apply. The rescheduling fee and partial refund amount will remain unchanged.

Test of English As a Foreign Language (TOEFL) – TOEFL iBT is an English-proficiency test designed to assess English-language skills in academic settings. The test fee has changed and the new fee will be effective for transactions performed beginning May 1, 2008 was $150.

Non-Standard Test Administration – Non-standard testing accommodations are available for test takers who meet the Americans with Disabilities Act (ADA) eligibility criteria. Testing Services is committed to serving test-takers with disabilities by providing reasonable accommodations deemed appropriate. All requests for accommodations must be approved in accordance with the particular testing companies' policies and procedures, except for test takers who require only minor modifications to the standard testing environment due to documented medical needs. Minor modifications include special lighting, adjustable table or chair, and breaks for medication or snack. Documented medical needs may include diabetes, epilepsy, or chronic pain. These test takers must submit a letter of support from a medical doctor or other qualified professional

stating the nature of the condition and the minor modifications requested. The letter with the appropriate registration form and fee are sent to the testing company for final approval.

In the 2007-2008 academic year, Testing Services tested 30 examinees with documented disabilities on an individual basis. Please see Appendix C for a complete list of different disabilities accommodated by Testing Services. Every effort was made to accommodate each and every student with a disability who needed to test at the University of Arkansas. This includes qualified individuals with disabilities who appear at the site with personal assistive devices or animals, such as service animals (dogs or other animals trained to assist), wheelchairs, walkers, canes, braces, speech or hearing aids, and other communication or mobility enhancing technology or animals.

Graduate Management Admission Test (GMAT) Transition – Director of Testing Services met with representatives from College of Business to assist with the negotiations with Graduate Management Admission Council (GMAC) so that a GMAT Center can be established at UA.

Here is a summary of all the proposed changes that GMAC agreed upon:

- Fee paid per administration of the test: GMAC understands the economics of the testing center and agreed to Pearson VUE paying the $20 and $10. GMAC will pay the UA the difference of $7 per test administered and $17 for no shows.
- Administration of other Pearson-VUE tests: As an institutional test site, UA will NOT have to offer the other Pearson VUE certification tests.
- Inclement weather payment policy: Pearson VUE attorneys struck this clause so that the University will not have to compensate examinees in case the center closes.
- Mixed testing: Testing Services can administer the GMAT and the GRE at the same time.
- Saturdays and Evenings: Testing Services can administer the test at days and times that are convenient to university students.
- days/month: GMAT should be scheduled and offered at least 2 times or more per month as dictated by demand at the University.
- Computer-Based Test Center: The center is not dedicated for the exclusive use of the GMAT. The server must be a dedicated server and it purchased by Testing Services. The test stations can be used for other tests.
- Springdale Pearson VUE – the GMAT will NOT be offered in the Springdale office.

The problems associated with the new GMAT vendor were finally ironed out and a new contract was signed with the GMAC in December of 2006! Afterwards a meeting was scheduled with representatives from the Walton College to attain and acquire the necessary financial assistance in the undertaking of such a project as Testing Services was unable to fund a large project like this by itself. Approval was obtained.

Director of Testing Services worked diligently to oversee the construction project of the new GMAT Test Center. She met with other offices to acquire additional office space for this project. The office staff also worked with Pearson VUE to meet all of the technical and facility requirements as set forth by GMAC. Jacob London, Administrative Assistant, contributed much effort in the setup of this center. He found, ordered and assembled all furniture and equipment as

well as installing and testing all software for the GMAT delivery stations. This helped the office budget tremendously by saving so much money.

Due to the critical need of serving the northwest Arkansas community as well as others from surrounding states, the University of Arkansas became a Pearson VUE Center with a capacity of 6 examinees per administration so that the GMAT could be administered here. The transition of the GMAT exam to a competitor's testing network, Pearson VUE, impacted the associated revenue generated by this test in the last couple of years. As a result the GMAT Center was established with some financial assistance provided by Walton College's Dean. Once the costly renovations were completed, training for the staff was scheduled for September 2007 and the first test was actually scheduled in November 2007.

The GMAT® exam is administered in an individualized environment, in the quiet and privacy of separate computer workstations. Testing premises are audio and videotaped. Test takers are provided with an official score report when they finish their exam and before they leave the center.

A new scanner was purchased for the test delivery along with cameras and new monitoring equipment. New furniture and computers for the delivery of the GMAT were also purchased. Staff became certified to administer the GMAT and have since successfully completed their annual recertification status.

Testing Services strives to provide each testing candidate with the utmost in service and test environment. The office is currently working to improve the room temperatures during the months when the A/C to the building is off.

Testing Services also monitors the testing site availability calendar on a regular basis to ensure that it always has seats available for students who want to register for the GMAT at the University of Arkansas Test Center. The number of seat openings is reviewed on a weekly basis and new test sessions are opened as others become full to accommodate students.

Medical College Admission Test (MCAT) – Thomson Prometric delivers the computer-based MCAT on behalf of the AAMC, but University of Arkansas is not yet established as a center for this exam. Meeting the testing company's hardware, software and other specifications will create a lot of extra work on the part of Testing Services, but the office is working to obtain authorization to start giving this exam again.

Proctoring Services – When students cannot test during a regularly scheduled test date, they may request an individual administration. This does not apply to nationally scheduled tests, but does include tests such as MAT, NOCTI, and independent study, internet-based exams taken for other colleges and universities and distance learning exams. These tests are administered per student's request at a time mutually convenient for both the student and Testing Services' staff and test schedule. Students requesting these *standard* administrations are charged an individual administration fee in addition to the test fee. There were a total of 121 individual administrations during the 2007-2008 Academic Year.

Proctoring services include:

- Scheduling of the examination and collection of the proctoring fee directly from the student or school, as preferred by the school
- A quiet, well-lighted area within supervisory distance of the proctor
- Verification of any instructional materials allowed during the examination process
- Security of the sealed examination until it is opened in the student's presence at the beginning of the examination session
- Identification of the student by photo I.D. and verification of the student's signature on any certification accompanying the examination
- Return of all papers, including scratch sheets, examination questions, and the completed certification/forms directly to the school
- Termination of the examination, collection of exam materials, and immediate notification to the school of improper conduct on the part of the student or any evidence that there has been a violation of the examination process

College Level Examination Program (CLEP): The CLEP Principles of Accounting examination became unavailable as of July 1, 2007. This exam was removed from the CLEP software and was replaced by the new CLEP Financial Accounting examination, which is designed to assess student mastery of the skills and concepts required for success in a first-semester financial accounting course. The test fee has changed to $70 effective July 1, 2008.

Registrar's Office was informed since the University has a credit-granting policy for Principles of Accounting so that this office can set a policy for Financial Accounting before July 1.

Praxis: The Praxis service enhancements and changes planned for the 2007-08 testing year are noted below. The changes include:

- *Test takers will be required to pay the registration fee only once during a testing year.* Beginning with the September 2007 test date, a test taker only had to pay the registration fee the first time they register during the 2007-2008 testing year. Any subsequent registrations within the testing year did not require a registration fee and if test takers submitted a registration fee when one was not required, that fee was automatically be refunded.
- *Emergency registration replaced standby testing*. Unlike standby testing, emergency registration guarantees the test taker a seat. Test takers who must take a paper/pencil test but missed the regular and late registration deadline dates, have an opportunity to use emergency registration up until the Friday one week prior to the test date. Emergency registration is available only by registering online, and the fee for this service is $75.
- *Pass/Not Passed information* was provided on Praxis I score reports beginning with the September 2007 test date regardless of whether the test taker took paper-based PPST, CPPST or a combination of either format.
- ETS continually reviews the processes and procedures used for test development, test delivery, scoring and reporting. This year they paid special attention to low volume tests and as a result they decided to reduce the number of administrations for their low volume tests. As a first step, Praxis titles with an annual testing volume of less than 200 was offered on a limited basis. Currently ETS is looking at limiting these titles to the four administrations when they offer paper-based PPST. However there are also some titles

that have less than 100 test takers annually and as they further investigate each test title they may determine that these are not the highest volume test dates for each title. They may then need to adjust the dates on which they are offered.

- Another big change came regarding the use of social security numbers. ETS cannot require a social security number be provided upon registration because there is case precedent that denial of a service to an individual who refuses to provide his or her SSN number is unlawful. ETS has strengthened the language on registration materials to strongly encourage test takers to provide it and reminded states that have SSN requirements to provide specific language regarding this requirement to be listed on state pages.

Texas Educator Certification (TEC) - Beginning September 4, 2007, the Texas Educator Certification Program began offering seven new computer-administered tests in Internet-based testing (iBT) format:

- Bilingual Education Supplemental (Test Code 1102)
- English as a Second Language Supplemental (Test Code 1154)
- Generalist 4-8 (Test Code 1111) – Calculators (TI-30X IIS) will be provided by the test center (see below)
- History 8-12 (Test Code 1133)
- Mathematics 8-12 (Test Code 1135) – Examinees must bring their own calculators (see below)
- Music EC-12 (Test Code 1177) – See below for listening section procedures
- Physical Education EC-12 (Test Code 1158)

No scheduling, rescheduling, or cancellation will be performed by Prometric or local University test centers. The new tests will have the same appointment length (five hours) as the current tests.

Diversity

Testing Services underwent multiple staff changes, and upgrades to address the office's increased responsibility and workload partly due to the implementation of the new student information system, ISIS in the last couple of years.

Efforts - In compliance with the university's and the testing companies' polices, test supervisors and proctors are recruited, selected and trained in order to operate the center on a nondiscriminatory basis. To meet this responsibility, the Director of Testing Services hires workforce as required and makes certain that they meet the qualifications given in the test administration manuals and that they reflect the same ethnic and gender ratios as the expected examinees.

Goals – Promote retention of international students by providing services in a congenial atmosphere that fosters relationships and a sense of community among the diverse population groups at UA. These include

- Continue collaboration with all University offices regarding the diverse population and their needs, e.g., Center for Educational Access, Veterans Upward Bound, etc.
- Continue to facilitate accommodation of students with disabilities and administer tests based on their needs and the testing companies' approval.
- Maintain collaboration with Ozark Literacy Council by referring international student spouses to their ESL program.
- Assist in creating a diverse campus environment by establishing and maintaining ties with individuals internationally to assist with recruitment of international students to the University of Arkansas.
- Promote retention of international students by providing services in a congenial atmosphere that fosters relationships and a sense of community among the diverse population groups at UA.
- Provide time for office staff to participate in multicultural events on campus or in the community regarding services provided to the diverse UA population.
- Continue providing support to international students in the Spring International Language Center by providing general test preparation workshops.
- Continue partnership with and support International and Graduate Admission Office to increase the number of graduate and undergraduate students from an underrepresented group such as Iranian students.
- Attend National College Testing Association (NCTA) Conference in order to increase knowledge of how to properly administer tests to a diverse population.
- Assist in developing ties that boost the likelihood that prospective graduate and undergraduate applicants from Iran will enroll.
- Facilitate information exchange and enhance support by connecting new Iranian faculty/staff/students and their families with others in northwest Arkansas.
- Continue educating community members through responding positively to requests for presentations from students, faculty and various off-campus groups, e.g., Multicultural Center of NWA, Altrusa International of Fayetteville, NWACC, churches, public schools, etc.

Challenges and Barriers

Loss of Tests/Income The changes in the tests, formats and schedules impacted the testing volumes and associated revenue generated by these tests here at the University. Testing Services established alternative sources of testing revenues to replace the lost income from tests administered previously. Three new contracts were negotiated and signed with different testing companies and testing for these new exams began in spring of 2008.

Additional revenue had been created for Testing Services through administering the Grammar, Spelling and Punctuation Exam (GSP) for the Journalism Department last year, but toward the end of the fall semester the Journalism Department decided not to have their students tested anymore as it was necessary to tutor them in some subjects before they started taking certain classes. Beginning in fall 2007, all journalism students had to pass the GSP before they were allowed to enroll in Fundamentals of Journalism (JOUR 1033), and a course that is pre-requisite to all writing courses in the Journalism Department. The passing rate for this test was low and

the Journalism Department decided not to test their students any more. Additional income generated for the office through this exam was lost this year.

Staff There were no staff changes within the office this year. The skills required by Testing Services' staff is not commensurate with the pay they receive; as a result, the office continues to lose staff members who were able to find higher-paying positions within or outside the University. With some help from Human Resources Jacob London's position was changed from Secretary II to Administrative Assistant I in December of 2007 so that he could earn a bit more income.

Equipment and Office Furniture Purchases The CBT Center has testing stations that are at least four years old. ETS notified Testing Services that all computers in the center need to be replaced by the end of 2008.

Beginning in 2005, ETS offered a grace period during which the required schedule for replacing testing stations was relaxed. Now they are transitioning back to the standard replacement schedule in the following steps:

- By the end of 2008, testing stations that are at least four years old from their original purchase date must be replaced.
- In 2009, ETS will resume the 36-month replacement cycle specified in the ETS Computer-based Testing Agreement.

The latest HP and Dell test station specifications forwarded to Testing Services. These specifications are approved by ETS and Prometric. They also meet the requirements for MCAT testing stations so that we can begin giving this test again.

Before ordering new equipment, centers are advised to allow ETS to review their purchase order to ensure that it meets all specifications. Once a delivery date is known, arrangements will be made for a site visit by a Prometric technician to complete the setup of your new equipment.

Since Walton College of Business purchases so many computers a year and receives a discount, Testing Services Director has requested that they include CBT computers in their order. At the time of this writing, computers are not ordered yet.

Testing Environment Improvement On a regular basis, students complain about the heat in the Computer-Based Test/GMAT Centers, as there is not adequate ventilation in these testing rooms. Responding to the varying needs of these centers, the old fan coils were removed and new ones with controls were installed to enhance the quality of the air conditioning in the CBT Center. Unfortunately even with the updated fan coils, the present air-conditioning in both centers, CBT and GMAT, is not adequate.

The old cooling system needs to be upgraded so that it can accommodate the large number of computers and large volume of test-takers who test at these centers on a regular basis. In the interim period, Testing Services has purchased a high capacity water cooler to help offset the

heat and to reduce the number of complaints and to make the students' testing experience more pleasant.

Website Management Constant updates to the testing schedule/calendar and other necessary changes made it mandatory for Testing Services to hire a qualified staff member, Jacob London, who was capable of updating this site on a regular basis. This work was done previously by a technical staff member from Graduate School. Testing Services purchased a computer program for the sole purpose of managing the testing website, which is called Adobe Studio8. This web design program is a solution for creating interactive websites, applications, user interfaces, presentations, mobile device content, and other digital requirements, while keeping the website current with test dates and registration deadlines.

Student Parking Testing Services has parking needs at times outside of the standard 5-day, 8:00 a.m. to 5:00 p.m. schedule. This office administers exams required for entry into undergraduate, graduate and professional programs. These exams are given every Saturday a.m. approximately 50 weeks of the year. People who take these exams schedule them in advance and pay to take them. Many of these people are unfamiliar with the University of Arkansas' campus. Some have driven quite a distance in order to take the needed test(s). Some have handicapping conditions. With the construction of the new dorm, Maple Hill, on every Saturday since school began in August, there has been virtually no parking even for the test administrator and proctors who arrive an hour to two hours prior to the test at 7:00 a.m. Test-takers who are registered for a partial exam or arrive late suffer competitive disadvantages compared with those who are able to take the test for the entire period available. Having nowhere to park and consequently becoming anxious before test time can cause these examinees to obtain low scores, delays in admission or they could lose access to programs or universities they desire. All tests are administered with very short windows by which people must check in and begin taking the test. Rescheduling delays can be months, as they have to be done through the testing company and with their authorization. Therefore, unnecessary delays can jeopardize students' education, careers, visas and time.

Testing Services successfully negotiated with the Director of Parking and Transit Office to come up with a solution to this problem. It was decided that the second and third rows of parking from the south in lot 40 be designated as parking for Testing Services staff and students on all Saturday mornings from 6 am until 1:30 pm. Signs were installed in appropriate locations indicating this rule. All residents residing in and all employees working in the Maple Hill District will receive an email, notices will be posted in all the buildings, and the building executives will be notified of this change. A notice will also be posted on University Headlines and in the Traveler explaining the change. For the first two weeks, the Parking staff will barricade the driveways to remind students in the area of this change. After that, Parking staff will periodically monitor the lot. Examinees display a permit issued by Testing Services to identify them as a test-taker so that their car is not towed.

Testing Services is charged the hourly rate for signed reserved spaces for 32 spaces for seven hours a day for 50 days a year. This amounts to approximately $5,000.00 per year to secure these parking spaces for staff and examinees.

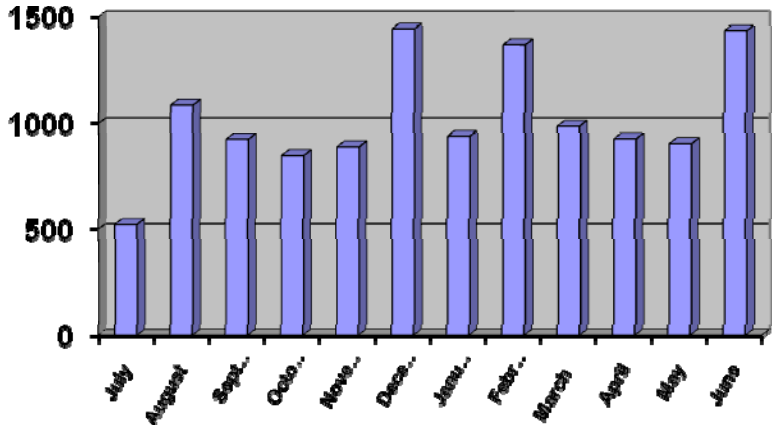
Appendix A

Testing Services is charged with the responsibility of administering standardized academic tests given at this institution. This office administers such academic tests as:

- Arkansas Assessment of General Education (AAGE)**
- ACT Assessment, national and residual versions
- Advanced Composition Exemption Exam
- ASSET**
- COMPASS*
- College Level Exam Program (CLEP)*
- English Language Placement Test (ELPT)
- Foreign Service Written Exam (FSWE)
- Fundamentals of Engineering (FE)
- Graduate Record Exam (GRE)*
- Graduate Record Exam (Subject)
- Grain Merchant Exam (GM)
- Grammar, Spelling and Punctuation Test (GSP)**
- ISO Testing*
- Kryterion*
- Law School Admission Test (LSAT)
- Miller Analogies Test (MAT)*
- Medical College Admission Test (MCAT)
- Multi-State Professional Responsibility Exam (MPRE)
- Math Placement Test (MPT)
- National Board of Professional Teaching Standards (NBPTS)*
- National Occupational Competency Testing Institute (NOCTI)
- Pharmacy College Admission Test (PCAT)
- PRAXIS I (Pre-Professional Skills Test or PPST)*
- PRAXIS II (national Teacher's exam)
- Reading Placement Test*
- School of Nursing Assessments/ERI*
- SLPT (Spoken Language Proficiency Test)
- Test of English as a Foreign Language (TOEFL)*
- Test of English for International Communication (TOEIC)
- Texas Educator Certification* (TEC)
- Individual test administration based on special needs (disabilities)
- Correspondence tests for students who need to complete assessments for another institution
- Distance Learning Exams
- Exams for students receiving degrees from overseas institutions

*Denotes computer-based exams
**Was discontinued after spring 2007

Appendix B – Number of examinees per month



Appendix C

The assessment of students with disabilities has taken on considerable importance since the passing of the Americans with Disabilities Act (ADA) of 1990. Under ADA, a "disability is defined as (a) a physical or mental impairment that substantially limits one or more life activities, (b) a record of such an impairment, or (c) being regarded as having an impairment despite whether or not the impairment substantially limits major life activities." ADA requires that assessment of individuals with disabilities be performed with any reasonable accommodations being made.

Testing companies offer specialized administrations for examinees with common types of disabilities through test centers such as Testing Services here at the University. Depending on the disability, some accommodations permit continued administration in group settings; others require individual administration. For example, assessments may be available in enlarged print, Braille, and audiocassette versions for those with visual disabilities. In these cases, time limits can be enforced or extended by authorization given to the office from the testing companies. Test takers may be given extra rest breaks, a reader, an amanuensis (a recorder), a sign language interpreter, allowance of a medical device in the testing room, convenient test taking locations and assessment times, distraction-free test environment, individual test administration, enlarged font on the PC monitor, and other accommodations as needed to meet the examinee's particular requirements. Accessibility to the testing site also needs to be considered.

The following special needs students were accommodated by Testing Services during the 2007-2008 Academic Year.

- Students with visual impairments
- Students with hearing impairments
- Students with learning disabilities
- Students with motor disabilities
- Students with emotional disabilities

Office of the Vice Provost for Research

Vice Provost for Research

Dean and Vice Provost Collis R. Geren continued to serve in FY2008 as the Vice Chair of the Arkansas EPSCoR Committee and as the head of the Arkansas Department of Defense EPSCoR (DEPSCoR) and Department of Energy EPSCoR efforts. He also served on the Arkansas Space Grant and NASA EPSCoR Committees. Dr. Geren also acts as the project director for Arkansas' DEPSCoR proposal. He served on the Executive Committees of University of Arkansas Technology Development Foundation and the Mack Blackwell Transportation Center. Dr. Geren managed the interactions of the University's faculty with Van Scoyoc and Associates. Dr. Geren managed the fellowship programs of the Graduate School including the Benjamin Franklin Lever and those resulting from the Walton endowment. In FY 2008, the Vice Provost continued his service on the Board of the Arkansas Science and Technology Authority and the Board of the Arkansas Science, Technology, Engineering, and Mathematics (STEM) Coalition. Recently, he has been asked to serve on the Arkansas Discovery Network Board and as University of Arkansas representative to the Arkansas Research Alliance.

Associate Vice Provost for Research

Professor Dennis W. Brewer continued as Associate Vice Provost for Research as a half-time position during the academic year and full-time during the summer months. Dr. Brewer teaches one course each semester as part of his half-time position in the Department of Mathematical Sciences.

Dr. Brewer made several trips during FY08, where he was primarily representing the Vice Provost for Research at meetings sponsored by university consortia and funding agencies. These meetings included

- World Conference on Research Integrity, Lisbon, Portugal
- Oak Ridge Associated Universities Council Meeting, Oak Ridge, Tennessee
- NASA Space Grant Consortium Board meetings (7), Little Rock, Arkansas
- Beaver Lake Working Group Meetings (2), Springdale, Arkansas

Dr. Brewer was responsible during FY08 for special initiatives and projects related to

- Facilitating the creation of the High Performance Computing Center
- Representing (with Dr. Geren) the University of Arkansas on the NASA EPSCoR Space Grant Committee
- Serving on the 2010 Commission
- Serving on the Advisory Council for the Great Plains Network
- Making the keynote speech at Graduate School Orientation
- Managing a research project funded by the Walton Family Foundation to establish quantitative water quality standards for Beaver Lake
- Managing the university's response to funding solicitations which limit the number of proposal submitted by a single campus

- Nominating faculty for the Ralph Powe Award sponsored by Oak Ridge Associated Universities
- Chairing an advisory committee for the Office of Research and Sponsored Programs
- Providing administrative support for the Research Council, especially as it relates to inquiries into cases of research misconduct
- Providing administrative support for establishing the Applied Sustainability Center (now funded by the Walmart Foundation)
- Assisting in the establishment of new research centers and maintaining accurate records of existing centers
- Organizing and conducting six workshops for graduate students on topics related to the responsible conduct of research and preparing future faculty
- Co-chairing (with Dr. Pat Koski) an exploratory committee on Preparing Future Faculty which will offered its first course in Fall 2007 and is preparing a certificate proposal
- Serving as co-principal investigator on a funded NSF Noyce Scholarship Program for prospective math and science teachers
- Supervising (with Dr. Amy Apon) a linux cluster administrator for University of Arkansas supercomputers
- Chairing a search committee which successfully filled two vacant positions of Technology Licensing Officer
- Generally facilitating and nurturing cross-campus research collaboration and funding competitiveness
- Managing information technology support for all units reporting to the Vice Provost for Research and Dean of the Graduate School
- Researching a means of providing on-line education in the responsible conduct of research for graduate students
- Developing a survey (with Dr. Ronna Turner) of campus research services
- Undertaking the revision of the campus policies on research misconduct
- Researching means of providing faculty and students with software tools to detect plagiarism.
- Prepared a nomination for the Joseph B. and Toby Gittler Prize awarded by Brandeis University.

Assistant Vice Provost for Research - Finance and Administration

During fiscal year 2008, Ms. Gail G. Piha continued in her role as Assistant Vice Provost.

In the 2007-2008 year,

- Ms. Piha attended monthly college business/financial officer lunch meetings which are held to promote better communication between academic colleges and schools.
- Ms. Piha continued to serve on the Graduate School's Staff Performance Evaluation committee, renamed the PAC Committee (Performance Advisory Committee).
- The Graduate School took over "ownership" of room 6, suite 12, and room 105 in Ozark Hall after the Center for Applied and Spatial Technology (CAST) left Ozark Hall in the summer 2007, and there was some shuffling of rooms with the Department of Geosciences. The Office of Recruitment utilized room 105 for their operation. Dr.

William Warnock, Director of Program Assessment, who was previously housed in the Dickson Street Annex, was relocated to room 6. Ms. Piha, Mr. Rau, Ms. Hartwell, and Ms. Diane Cook were relocated to office areas within suite 12. The part-time Public Policy secretary, Ms. Patty Snodgrass, who was immediately replaced by Ms. Latricia Shoals, was also relocated to suite 12. The final office space within suite 12 remained vacant but reserved for a planned graduate student center which is scheduled for occupancy in Summer 2008.

- Ms. Piha was selected the Employee of the Year for 2006-2007 by the Staff Senate in Category I: Professional/Non-faculty – Administrative. As such, she served on the Employee of the Quarter/Year Selection Committee for 2007-08 which met quarterly to select the employees of the quarter in each of five categories.
- Ms. Piha collaborated on a proposal to occupy Davis Hall which can house the Graduate School including the dean's office, recruitment, and admissions, and Research Support and Sponsored Programs.
- Ms. Piha served as the United Way representative for all units reporting to the Dean of the Graduate School/Vice Provost for Research.
- Ms. Piha agreed to take over the editorship of the Graduate School newsletter, beginning with the Fall 2008 issue.
- Ms. Piha agreed to take over the responsibility of electronic records/scanning for the Graduate School, working closely with admissions. Two additional admissions positions were proposed and approved during the budget process for FY09 to facilitate the future needs of data entry and scanning.

During fiscal year 2008, Mr. Michael D. Rau, reporting to Ms. Gail Piha, continued in his role as Accounting Tech II.

In the 2007-2008 year,

- Mr. Michael Rau provided all administrative and accounting support for Ms. Piha as well as for the Director of Graduate Fellowships, Ms. Vicky Hartwell. Mr. Rau also managed the accounting for all sponsored students which involves the removal of class charges on sponsored students' account, ensuring that charges are posted correctly in BASIS and for generating invoices to sponsoring agencies.
- Mr. Rau filled in for the administrative secretary for the Office of Graduate Recruitment while she was on maternity leave for over 3 months, temporarily relocating his work station to 106 Ozark Hall.
- As part of his IT responsibilities, Mr. Michael Rau managed the IT Inventory and handled all IT purchasing. In all, a total of $25,970.73 was spent on hardware, $29,258.95 was spent on software, $4,558.93 was spent on toner, and $7,002.47 was spent on accessories/ miscellaneous.
- Mr. Rau initiated and completed an inventory tag system for all IT equipment for the Graduate School, allowing for better tracking of equipment based on date of purchase.
- Following a campus initiative, Mr. Rau, along with our IT tech team members, Mr. Paul Byers and Mr. David Boddie, investigated what would be involved to migrate our office over to Microsoft Outlook/Exchange. He researched the software, talked to IT personnel, attended training sessions, and provided invaluable support to all of our staff during the

migration. He also arranged training sessions for Graduate School staff members with UITS personnel.

Survey Research Center

1. Significant achievements and changes, both positive and negative

Projects The projects completed and undertaken by the Survey Research Center (SRC) during fiscal year 2007 to 2008 are listed in Table 1. The SRC engaged in 55 projects during the year. The staff completely administered 56 surveys during the year (44% of the projects) and wrote reports for 64 percent of the projects. The SRC entered data as the focus of four projects (4% of all projects), (but data entry played a role in 40 percent of all the projects (n = 22)), analyzed data as the focus of three projects (5.5% of all projects) and drew University sample for students and/or faculty. The organization did preliminary work on six projects during 2007 to 2008 and followed up on four projects.

Table 1. Projects Begun and/or Concluded in 2007 to 2008

Projects	Types of Investigators
Surveys	
University of Arkansas	
Statewide Political Survey	Faculty, University of Arkansas
NWA Survey on Various Topics, April 2008	
Attempted Statewide Survey on Various Topics	
Survey of Residents of NW Arkansas for Participation in Focus Group	Graduate student and faculty advisor, University of Arkansas
Survey of Members of an Association for Participation in Focus Group	Graduate student and faculty advisor, University of Arkansas
Survey of Undergraduate Alumni and their Employers	Department, University of Arkansas
Survey of Graduate Alumni	Department, University of Arkansas
Survey of Undergraduate Alumni and their Employers	Department, University of Arkansas
Survey of Undergraduate Alumni	Department, University of Arkansas
Survey of Undergraduate Alumni	Department, University of Arkansas
Survey of Undergraduate Alumni and Employers	Department, University of Arkansas
Survey of Undergraduate Alumni	Department, University of Arkansas
Survey of Undergraduate Alumni	Department, University of Arkansas
Survey of Alumni Who Withdrew from a College	College, University of Arkansas
Survey of Students Participating in Summer Study	Department, University of Arkansas, NSF
Survey of Peruvian women on community	University Faculty and Staff Member

Projects	Types of Investigators
needs, development	
Survey of University students on tobacco issues	Administrative, University of Arkansas
Survey of University of Arkansas students on graduation-related issue	Administrative, University of Arkansas
Survey of Residents of Urban Users of Water from a Regional Watershed	University of Arkansas, Funded externally
Survey of Regional Science Teachers for Interest in Graduate Studies	Faculty, University of Arkansas
Survey of University of Arkansas Students and Faculty on Experiences with and Attitudes about Advising	Academic Advising Council, University of Arkansas
Attempting to Find a Feasible Way to Survey Alumni Regularly for Accreditation Purposes	Graduate School
Survey of Particular County Extension Agents in Arkansas on Preferences for Information Provision	Extension Director and Specialist
Governmental Agencies	
Survey of City Residents	Local government
Survey of Urban Residents of a Watershed in NWA – Experimental Group, Pre- and post-training surveys and pre- and post-training report	Partnership of University of Arkansas Cooperative Extension, Local Water Utility(ies), non-profits with government funding
Survey of Urban Residents of a Watershed in NWA – Control Group, Pre- and post-training surveys and pre- and post-training report	Partnership of University of Arkansas Cooperative Extension, Local Water Utility(ies), non-profits with government funding
Non-profits	
Post-treatment surveys of attendees of a local open-air market and report	Non-profit
Preliminary Study of Residents of a Medical Service Area	Non-profit in conjunction with at least one other non-profit
Data Entry	
Entry of Health Data	State Agency
Entry of Health Data	State Agency
Data Provision	
Selection of samples from the University of Arkansas population of students	Six Faculty and/or Graduate Students
Data Analysis	
NWA Survey on Various Topics, April 2007, analysis of data for one client	
Analyzed Data from Evaluation of Teaching Methods	University of Arkansas Faculty
Analysis of NWA Omnibus Survey Data	Regional governmental agency – non-profit
Evaluation	

Projects	Types of Investigators
Evaluation of an educational program	Government
Evaluation of Statewide Training by Paper Survey, 3rd wave	Non-profit
Evaluation of a literacy program in Benton County, 1st Year Report	Two non-profits
Evaluation of a literacy program in Benton County, 1st Part of Year 2	Two non-profits
Evaluation of a literacy program in Washington County, 2nd Phase Report	Non-profit
Evaluation of a literacy program in Washington County	Non-profit
Evaluation of project in the Bentonville Public Schools, 2nd year, report	Government
Evaluation of project in the Bentonville Public Schools, 3rd year start	Government
Evaluation of a set of educational modules on non-profit law, 2nd year	Non-profit and University of Arkansas Faculty
Evaluation of a set of educational modules on non-profit law, 3rd year	Non-profit and University of Arkansas Faculty
Evaluation of two medical education projects and report, 2nd year	UAMS
Evaluation of two medical education projects, 3rd year	UAMS
Evaluation of a training program for non-profit leaders, 2nd year	Non-profit
Evaluation of a training program for non-profit leaders, 3rd year	Non-profit
Evaluation of a training program for non-profit leaders, 1st year; unexpectedly truncated	Non-profit
Evaluation of a training program for non-profit leaders, 2nd year	Non-profit
Evaluation of a training program for non-profit leaders	Non-profit
Other	
Survey of Random Sample of (Another State) Regarding Employment	State agency in conjunction with the university of that state
Attempt to Determine Feasibility of Re-instituting a National Longitudinal Survey for Colleges and Universities	SRC in conjunction with the Graduate School

Client Critiques of the SRC's Work

Clients of about seven of the 55 completed projects have evaluated the SRC and some projects from 2006 – 2007 were evaluated during 2007 – 2008. The omnibus surveys have numerous

participants so some evaluations remain to be done on these, but also many of the projects were completed so late in the year that evaluations will need to be conducted during 2008 - 2009. Furthermore, it seems onerous to evaluate every year when the service is somewhat repetitious and the initial evaluation is very positive. The evaluations are usually held with Dr. Koski and Dr. Longstreth or Noel Sharif after projects have finished. The evaluations are very positive overall. Some examples follow.

Telephone Surveys

Advantages cited by clients (similar comments are grouped):

- They got the information they needed; it was "top notch." In previous surveys this client had done, they viewed the questions as leading. This time they used a federal survey and, with input from the SRC, the questions were stated more objectively.
- Client was very happy with the final product.
- The director is great to work with: listens well, comes to visit and delivers.
- Both pre- and post-data are being used by many groups. They are used to craft the educational programs resulting from knowledge gained by the study.
- The national agency funding the study was impressed with the study's design and results, as well as the interviewer training.
    - The funder asked for the Quality Assurance Plan (design, etc.) designed by the SRC director and client team administrator to use in training others for similar efforts.
- The client believes that although they had to shorten the questionnaire, it provide information sufficiently.
- Communication worked well.
- The SRC adhered to the time line and was able to adjust when the client needed to change the time line.
- Although the report was late, it was written in an easily understood format. It was written with a better understanding and more objectivity than if the clients had written it themselves.
- Met response-rate targets; incentives and methods of maintaining contact with respondents and delivering incentives were key.

Face-to-face/Self-administered Surveys

- Very professional, courteous, not disruptive of market.
- The Grantor was very impressed with report. The report was considered so well written that it was held up as a glowing example to the whole group of agencies that had been funded.
- Did the survey in a timely way on short notice and this was appreciated.

Web Surveys

- Setting up the survey was great. Development of the questions was excellent – the SRC tracked down answer to questions.
- The outcome was excellent and well explained in the report and individual presentation.
    - The analysis of use of tobacco by type of respondent was helpful in generating feedback by decision makers. It stimulated dialogue.
    - They commented that "you put your heart and soul into it and it really reflects it."

    - As a result the SRC director was asked to advise the University committee.
- The sample was fantastic, and consequently this client returned to the SRC immediately to obtain another sample.
- The client trusts the director. Anything the client has a concern about the director will answer it in language the client can understand and will explain it well.
- Timely reports, well written. The reports explicate the topics well and provide the needed information.

Evaluations

- The evaluation not only helped the funder, but also helped the evaluated agency in determining its accomplishments and needs.
    - The SRC has identified things the client hadn't thought of. They've added components to their program they haven't thought about as a result.
- The client has been very pleased – each year more than the previous one. It's been a pleasant process because both the client and SRC look at things at opportunity paths rather than as problems.

How the SRC could improve its services

- This client lost their project coordinator toward the end of the survey, therefore there were difficulties in ending the survey and having the report completed by the needed date. Communication wasn't as smooth as it normally is.
- When pulling samples subject to stringent criteria, the SRC needs to be sure that all members of the sample conform to those criteria, i.e. "Pull better queries."
    - Add a note in the introductory letter alerting parents or others who might realize they or their offspring are in the sample erroneously to let the SRC know.
- It took too long from the start to the finish of the project. (Project included an extensive report.)
- Communicate better, e.g. let the client know that the project manager left and thus, how the project will be rescheduled.
- Should have weighted data in one case that oversampled a particular group.
- The IRB's limits were viewed as overzealous and deleterious to the study.
- How to balance report deadlines with lateness of client in providing needed information.

How Results Have Been Used

- Results have been used:
    - To develop an educational program for residents of a large watershed – homeowners, construction companies and others;
    - As the main part of the project report to a funder because the report was so comprehensive and well written.
    - To help other non-profits conduct their business better.
    - To help institute a new campus-wide policy and inform the community about it.
    - To help the region determine needed policies.

Progress on goals set for 2007 to 2008, including improvements made

1) The top goal of the SRC is to serve the campus community, especially faculty.
   a) In 2007 – 2008, the SRC Director and Research Assistant introduced the SRC during new faculty orientation and the Director and Assistant Director during graduate student orientation. Greater efforts were not made because the SRC was operating at capacity.
   b) Approximately 78 percent of the projects done by the SRC in 2007 – 2008 were done for faculty, graduate students, administrators, departments or Cooperative Extension specialists and/or agents from the University of Arkansas. At least 19 University faculty and three graduate students were involved in the 55 projects[*] on which the SRC has worked this year. In addition, work was done for 10 University administrators, one Cooperative Extension specialists and/or administrators, one agent and six department chairs. Thus, a total of 40 faculty, graduate students, administrators, departments (department chairs), or Cooperative Extension specialists, program leaders, administrators or agents have been served.
   c) Altogether the SRC has written more than 22 proposals for at least 20 faculty and/or administrators.

2) Serve more graduate students
   a) Service to graduate students declined in 2007 – 2008 very slightly, from four in 2006 – 2007 to three.

3) Continue the two new omnibus surveys, but learn the nature of the demand for these surveys and how best to market them
   a) Arkansas Omnibus Survey
      i) New strategy of writing and using return postcards was tried. Effectiveness was limited – possibly due to the change in administrations and/or the possibility of recession.
   b) NWA Omnibus Survey
   c) Only the NWA Omnibus Survey was conducted
      i) The surveys offer University educators and administrators, government agencies and nonprofits excellent means for collecting data quite inexpensively.
      ii) They offer the SRC opportunities for publicity
         (1) In selling the surveys, SRC staff spend hours contacting and re-contacting faculty, state agency administrators and nonprofit leaders and/or publicists and thus inform them that the SRC exists and what services it can offer
         (2) Articles have been published in regional newspapers, been carried on radio stations in Central Arkansas and locally
            (a) Television, radio and newspaper coverage were especially good during June 2008 when the results of the spring NWA Omnibus Survey were announced. The topic was consumer sentiment.

4) Seek new level of projects
   a) SRC conducted more projects this year than on any year in the past.

[*] Some projects contain more than one survey and some were begun last year, but the data were analyzed this year.

b) Have written three challenging proposals for funding for regional and/or national projects for two different sets of faculty at the University of Arkansas and for a faculty team from Oklahoma.
c) Completed a sizable (for the SRC) longitudinal project for a local consortium of educators, public service providers and nonprofit groups funded by a federal agency through Cooperative Extension. Each of these organizations now knows about the SRC and its services. This work builds upon work done seven years ago for Cooperative Extension.

5) In order to achieve the budgetary goals, the SRC analyzed its performance through an annual report and will do so again this year.
   a) SRC used both the annual report that we submit to the graduate school and an internal annual report for the analysis.

6) Personnel
   a) Decide on the assistant director's responsibilities and possibilities
      i) Partially complete
   b) Replace the Research Project Analyst
      i) Done
   c) Replace the receptionist effectively
      i) Some improvement, but not finished.
   d) Improve hiring and training procedures of part-time staff
      i) Assign task to the Office and Staff Coordinator
         (1) This has worked well.
      ii) Start grappling with the commitment to hire students
         (1) Idea stage only.
   e) Improve interviewer training and supervision
      i) Update training modules
         (1) Done to some extent
      ii) Put training modules onto website for easier access
         (1) Not done.
      iii) Hire another full-time person to supervise telephone surveys or create a full-time position that would encompass the computer technician position with a supervisor
         (1) Develop a better system for determining progress of interviewers more quickly and effectively
         (2) Neither of these has been done; insufficient work for full-time supervisor.
   f) Need a website manager
      i) This has been secondary to other more pressing work.

7) Improve the efficiency of operations and achieve budgetary goals
   a) Use the accounting tools available to track project costs
      i) Have project budgets every other week regularly throughout the year.
         (1) Except during the budget reconciliation time period, June 20 through July 25
            (a) If, however, a phone or other survey is running during June or July and selected budgets are needed weekly, they will be provided
               (i) Largely accomplished.

ii) Empower managers to realize the options they have that they may not have realized
(1) Accomplished to some extent.

b) Formalize procedures
i) Continue writing and revising procedures as appropriate.
(1) Done.
ii) Assign the "Office and Staff Coordinator" position with the task of updating procedures or bringing them up for reconsideration.
(1) Accomplished somewhat.
iii) Teach people to use the procedures, critique the procedures and reinforce their use
(1) Constant effort.
iv) Make the file of procedures searchable.
(1) To be done.

c) Improve time management of projects
i) A new manager is very good about managing within time budgets and is both demonstrating and teaching.

d) Improve quality control on phone surveys
i) Refine and expand, if needed, currently used techniques.
(1) Instituted a more systematic procedure for evaluating calls and interviewers.

e) Seek standardization of work stations with minimal investment
i) Developed a front-end for listed telephone and web surveys
(1) Done.
ii) Improved the way that paper questionnaires are programmed
(1) To be done.

f) Bill mid-term in projects more often.
i) Establish a schedule for the accountant to follow when an on-campus project is approved
(1) Done.
ii) Establish a schedule so that the accountant may remind Research Accounting about mid-term billing
(1) Done.

g) Continue efforts to reduce costs.

h) Reduce the size of reports the SRC writes, but retain the meaning
i) Continue training the Research Assistant in technical writing
(1) Done.
ii) Aim to hire a Research Project Analyst who can or is also willing to write
(1) Done, and training is in process.
iii) Simplify reports
(1) Reports are being simplified, but more effort is needed here.

8) To improve proposal writing and budgeting
a) Decrease turn-around time for proposal writing and budgeting – Some improvement
b) Budget more realistically – some improvement has been made.

9) Computer hardware and software
a) The University server, Gizmo, has been quite reliable
i) Computing Services has, by and large, informed us about scheduled maintenance.

ii) SRC and two different groups of UA Information Technology Services staff have met and decided on some strategies for working together; technical needs were discussed.

b) This was the fourth year of an annual computer replacement plan
   i) Downtime for repairs of in-house computers has been minimal.
   ii) Replaced the SRC's web survey server.
   iii) All lab computers have been upgraded within the past two years.
      (1) In 2006 – 2007 lab stations were standardized from programming and software points of view.
      (2) The goal was to standardize the lab hardware during 2007 – 2008 and this was done.

10) Ensure that the SRC's space within Hotz Hall is well maintained
   a) All leaks, except the rare, but perennial wall of water from above the west window, seem to have been repaired.
   b) Director continues as co-supervisor of the building.

Employees

Numbers and types of hourly employees the SRC employed during academic year 2007 – 2008 are listed in Table 2.

Table 2 Number and types of hourly employees during 2007 - 2008

	Regular hourly employees		Temporary Hourly Employees		Total
Semester	Students	Community Members	Students	Community Members	
July 1 - Oct. 31, 2007	19	3	40	27	89
Nov. 1, 2007 - Feb. 28, 2008	15	1	20	13	49
Mar. 1, - June 30, 2008	13	2	27	18	60

Appendix: Publications and Presentations 2006-07

The compendium of publications and presentations by faculty members at the University of Arkansas is compiled as a separate volume and can be accessed from the Graduate School website.