



**Redesign Implementation at The University of Arizona:
From our Core Program to Academic Outreach**

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The University of Arizona

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Overview

As a result of both *Changing Directions* and the *Redesign Study* of the Arizona University System, The University of Arizona is strengthening its role as a premier student-centered research institution by explicitly adopting a dual mission approach. On the one hand, we are “focusing for excellence” on our main campus, which is programmed for controlled growth in student numbers, thereby retaining and enhancing our national stature as an AAU research-extensive institution (the only one in the state). On the other hand, we are working to complement this stature by extending the horizons of our several educational Outreach programs to reach a broad range of students and other constituencies throughout the State and beyond. We are, after all, distinctive in Arizona as its Land Grant university. That means we should *both* selectively build up the national and international importance of our world-class research and educational innovations *and* extend appropriate versions of those efforts to both urban and rural communities throughout our state. We believe that we can maximize our value to the people and the State of Arizona by advancing the boundaries of human knowledge through research in domains of wide cultural and economic significance -- and then by delivering this knowledge directly to Arizona’s people.

This balance is precisely what the UA is committed to achieving, especially to the point of expanding and even better coordinating its Outreach programs as one of its major contributions to System Redesign. This means that the “boundaries” of our service to Arizona’s students are almost endless. Such an *unlimited* University of Arizona, in fact, greatly modifies any previous talk of “capping enrollment.” Though the Tucson campus in its present situation will run up against limited space eventually, our *many* educational outreach efforts do now and will continue to provide numerous possibilities for spreading the UA’s educational benefits throughout Arizona and beyond.

Discussions and planning are therefore under way among UA educational outreach units, most particularly on our Task Force on Academic Outreach, all of which will assure that the UA will remain on course as a major U.S. Land Grant institution. In the report of the Kellogg Commission on the Future of State and Land-Grant Institutions, *Returning to Our Roots: The Student Experience*, the authors cite three ideals for fulfilling the land-grant mission: becoming truer learning communities, becoming more learner-centered in approach, and providing an accessible, welcoming environment that meets student needs up close and at a distance. These goals are knitted into the very fabric of UA educational outreach, as well as into the core academic programs on the original Tucson campus.

Mission Differentiation

Our dual approach: The “focus for excellence” mentioned above applies particularly to our “*Core Programs*,” which encompass the academic degree programs offered in traditional *and* newly learner-centered formats to students (mostly but not exclusively full-time) who come to campus in Tucson (or to the Phoenix Biomedical Campus) to take courses and pursue studies leading to bachelor’s, master’s and doctoral degrees. All these students work within, and benefit from, our Core focus on world-class research and creative endeavor, features so strong at the UA that we rank among the top 15 public universities in research funding, even as more comprehensive rankings by such entities as *US News* place us among the top 50 public institutions. We plan to climb in those more general rankings as our focused excellence strategies increase measures of student success over time. High-quality teaching is vital to our public and Land Grant role, but for us it must be based on, and give students access to, research and creativity that are the most cutting-edge by international standards.

Alongside our Core Programs, however, which will continue to grow moderately in well-focused areas of world-class stature, we remain eager to serve an even greater, and ever-increasing, array of students through the full range of what we call “*Academic Outreach*” (or just Outreach). For us this term includes several components, all of which are of equal value to us in serving a wide variety of students: our branch campus, UA South; our Cooperative Extension programs throughout the state under our College of Agriculture and Life Sciences; our Office of Continuing Education and Academic Outreach (hereafter “CEAO”) with its *many* different credit and non-credit programs (the enroller of by far the most Outreach students today); the various forms of distance learning we provide via CEAO, UA South, KUAT-TV Multimedia, Telehealth, and our contributions to the Arizona Universities Network (AzUN [part of CEAO], formerly Arizona Regents University); and the Arizona Area Health Education Centers (AHEC) and the Mel and Enid Zuckerman College of Public Health (MEZCOPH) , which are together taking university medical care and education widely to rural populations throughout Arizona, currently under large-scale funding from a state grant underwritten by lottery dollars. Even before we expand these, as we plan to do, individual registrations for credit courses offered through these units in 2004-05 (though a few of these registrations are from one person registering multiple times) totaled at least 21,011 course registrations (see Attachment A). Whether or not there is some further Core-program growth, it is through these Outreach programs, all capable of expansion and further development, that the University of Arizona will make its most dramatic contributions to serving many more students, as well as the wider public, within System Redesign.

The UA, then, is different from its sister institutions in Arizona in fostering this *dual* mission with a particular balance between its research-extensive and educational “Core” and its forms of “Academic Outreach” (all discussed further below). However much Core disciplines will change and become more interdisciplinary (thus gradually redefining degrees) on our main campus, our most deliberately innovative degree

programs, graduate and undergraduate, are being and will be offered through UA South, Cooperative Extension, CEAO, MEZCOPH, and the AzUN system. These include a new Bachelor of Applied Science and a new Bachelor of Science in Commerce degree at UA South, which is also about to propose its own Masters in Teacher Education in consultation with our College of Education. UA Cooperative Extension in Yuma, in partnership with Arizona Western College and NAU, offers a BS in Agricultural Systems Management unique to that site. CEAO's Evening and Weekend Campus currently offers 5 bachelor's degree programs, which enroll over 3,000 students, and are proposing to offer 5 more. Available from the UA (or soon to be) online via the Network, meanwhile, are entirely distance-based *graduate* programs in such areas as the School of Information Resources and Library Science (SIRLS), Nursing, Optical Sciences, and Engineering (this last option being offered through a Tri-university arrangement across the Arizona System).

New Initiatives in Graduate Education: Indeed, because of UA's premier role in Arizona as a site for graduate education based in research, our Graduate College is accelerating its capacity to be highly responsive to the need for applied graduate education, both in Tucson and around the state. As graduate education becomes more critical to career advancements, we recognize that access issues apply increasingly to graduate as well as undergraduate education. In addition, we want to provide better access for non-traditional and place-bound students. This means we are planning to increase the opportunities for flexible scheduling, including off-campus and distance education, at the graduate level. CEAO is currently working with the Graduate College to develop new Certificate Programs using distance modalities. UA South, too, offers us an opportunity to meet the graduate needs of students in the Sierra Vista/Douglas area and other parts of Southern Arizona.

At the doctoral level, we are increasing opportunities for *professional* doctorates, which offer students a relatively new kind of degree. The University of Arizona has a new professional doctorate in Audiology, and planning is under way for a doctorate of professional nursing, augmenting our current, highly ranked PhD degree in Nursing, which can be achieved largely online. The Doctor of Nursing Practice (DNP) program is designed for nurses seeking a terminal degree in nursing practice and is an alternative to research focused doctoral programs (i.e. Ph.D. programs). A practice-focused doctorate prepares nursing graduates for the highest level of nursing practice beyond the initial preparation in the discipline. This degree will target nurses who want to pursue doctoral education, but who want to focus on practice rather than research. This degree was adopted by the American Association of Colleges of Nursing (AACN) in October 2004 as the highest level of preparation for clinical practice, and AACN member institutions voted to move the current level of preparation necessary for advanced nursing practice roles from the master's degree to the doctorate level by the year 2015. The Council of Graduate Schools has projected that professional doctorates will increase as more professional associations demand a higher level of training. To be successful, we need to look beyond traditional Ph.D. preparation and consider alternative modes of delivery, as we have already started to do to a great extent.

We are also working to develop liaisons and joint programs with universities in Latin America, a source of outstanding sponsored graduate students. Soon we will announce an agreement between Mexico's CONACYT (that country's national science foundation) and the UA covering 100 graduate students per year. Other agreements are under way with select universities within Mexico. On the UA's main campus, new doctoral programs are being planned in Statistics and Women's Studies. All these efforts will be successful, however, only if we can supply sufficient fellowship and assistantship funds to support the recruitment of top-quality graduate students and the retention of them all the way to the attainment of their doctorates. At this point, we need more such funding to be competitive with peer institutions at the doctoral level.

At the master's level, meanwhile, the following initiatives are the UA's growing ways to provide better access and meet workforce needs through graduate study:

- We are encouraging more programs to develop dual degrees. This is an excellent way to marry the more academic programs with more applied programs. We have begun several MS/MBA programs and more are in planning stages. SIRLS is working with our College of Law to offer a dual degree in Law and Information Resources and Library Science.
- Degrees such as the Professional Science Masters are another way to combine applied skills and traditional academic skills. A new PSM program in Economics is in the planning stage.
- An implementation proposal for a master's in Human Language Technology is well under way.
- We are also looking at alternative delivery and scheduling for some graduate degree programs. The new Executive MBA, operated through both our Eller College and Continuing Education, offers a model for ways to offer graduate degrees to full-time working adults during non-working hours and over weekends.
- We are developing a framework for "3/2" programs which will allow students to earn both a bachelor's and a master's degree in 5 years, typically through 3 years of undergraduate study and 2 years of graduate study.
- We are working to develop separate and unique applied graduate programs at UA South, as well as to coordinate offerings between South and the main campus. UA South is putting together a proposal for a M.Ed. that will focus on students seeking alternative certification. Comparable to the highly successful UA College of Education "Teach for Tucson" model, South will offer a Master of Education degree coupled with post-baccalaureate certification. In the longer term, we will be working with them to develop other master's degrees in Educational Leadership, Applied Engineering (especially Intelligence and Communications), and Homeland Security. We will particularly develop an Educational Technology

master's degree at UA South, since this program has a unique workforce niche and is increasingly in high demand.

In addition to all this, we have recently established guidelines for an increased number of *graduate certificates*, which are already or soon to be available in various high-demand specialties. Some certificates will be partly or entirely online, and some will be offered off-site. To date, we have formally approved graduate certificates in:

- Clinical Oncology Research
- Optical Sciences (through CEAO)
- Clinical Research
- Gerontology (through CEAO)
- Information Resources and Educational Leadership
- Maternal and Child Health
- Public Health Preparedness
- Several post-Master's certificates in Nursing (all online):
 - Psychiatric Mental Health
 - Healthcare Systems
 - Healthcare Informatics
 - Adult Nurse Practitioner
 - Family Nurse Practitioner

Certificates are also in various planning stages in

- Women's studies
- Early Modern Studies
- Dendrochronology
- Speech & Hearing
- Geographical Information Systems
- Remote Sensing
- Aquaculture
- Culture, Theory and Society
- Preservation Studies
- Economic Geology
- Genetics
- Mining and geological engineering (including health and safety for high risk industries)
- Controlled Environmental Agriculture
- Educational Technology
- Museum Studies
- Communication and Public Relations

We want to stress particularly that much of our graduate education into the future will be accomplished through distance learning, off-site education, and academic outreach. Nursing, in particular, has been a leader in distance learning, offering its current Ph.D. in Nursing and all of their graduate certificates entirely online. Optical Science and Engineering also make extensive use of distance education and KUAT-TV

Multimedia. Currently our other outreach activities are offered through CEAO and UA South, as well as individual core-program departments. One of the Graduate College's goals is to better utilize and integrate these resources, as well as other units such as the Learning Technologies Center. In addition, graduate teaching is conducted at the following off-campus sites:

- College of Medicine-Phoenix
Supports third and fourth year medical students at Phoenix hospitals and provides a base for UA programs in Phoenix – which will soon be expanded to first- and second-year medical students.
- Arizona Materials Laboratory
The science and engineering of materials hold the key to advances in many areas of high technology, from integrated circuits and chip carriers to turbine engines and optical waveguides.
- Boyce Thompson Arboretum
American Southwest's oldest arboretum and botanical garden, which is located near Superior, Arizona.
- Cooperative Extension Offices
These offer community outreach programs in every county of the state, many to post-graduates.
- Kitt Peak Observatory
Home of research facilities for two divisions of the National Optical Astronomy Observatories (NOAO): Kitt Peak National Observatory and the National Solar Observatory. A great deal of front-line graduate education takes place here.
- Science and Technology Park
A research and development facility designed for fast-paced, high growth technology companies, from start-up to maturity. One of the nation's premier research and development facilities, it offers sites where graduate students both study and intern.
- Santa Rita Experimental Research Station

The Faculty Reward Structure: Given this overall dual approach, faculty in our Core Program will be evaluated and rewarded in the future – with teaching continuing to be *very* important -- much as they are now within the guidelines for Post Tenure Review passed by the Board of Regents. This structure at the UA already recognizes the different roles associated with the different missions of its academic units. Each faculty member has an assigned differentiated workload, wherein each one (based on the mission of their department and college) determines the amount of time he or she will devote to teaching, service/outreach, and scholarship. In units where teaching is central to their missions, faculty devote more of their time to the instructional and educational mission of the unit. That is the basis on which their annual performance reviews, promotion and tenure or continuing status, and any salary adjustments are based. There are also university-wide awards that recognize and reward excellence in teaching. Thus the mechanisms for recognizing and rewarding faculty engaged in the scholarship of teaching are already in place at the University of Arizona. What is lacking is adequate funding for merit to support and enhance the existing reward structure.

The evaluation and reward system for our Outreach program faculty, though, is and will be somewhat different. Tenure-track and contract faculty at UA South have the same academic credentials as faculty in disciplines on the Main Campus, but their responsibilities differ in several ways. First, UA South is a teaching-intensive institution, and, in general, faculty there are expected to teach heavier loads with more preparations than their counterparts in the UA's core program. The typical teaching load for UA South faculty ranges between 60% and 80% of their total responsibility, while the main campus teaching load is typically 40%. Second, the research requirement is quantitatively less than on Main Campus, and its focus may be more in the nature of "application" rather than "discovery" in certain disciplines. Third, almost all UA South faculty members fulfill part of their service obligation by involvement with local organizations and agencies. Education faculty have strong connections to local schools in which student teachers are placed for observation and training, while other faculty supervise internships with community organizations, as well as government and social service agencies. UA South faculty also provide extensive outreach programs for public schools, local businesses, non-profit agencies, and Fort Huachuca. The UA evaluation and reward system for faculty has consequently been modified at UA South to reflect these differences, especially South's teaching and outreach emphases. Teaching faculty at our Cooperative Extension stations, meanwhile, are on "continuing" or "continuing-eligible" appointments (as opposed to "tenure" and "tenure track" ones) because of their distinct responsibilities for community outreach, field work, and instruction. Under that status, they too have a separate evaluation and reward system appropriate to their unique commitments.

Student Enrollments

Within our Core Program: Stimulated by the ABOR Changing Directions Initiative and the University's "focused excellence" efforts, a substantial enrollment management reorganization and planning effort has been undertaken on our main campus, beginning in 2003. This effort has culminated in the development of a comprehensive enrollment management plan, which is described in *The University of Arizona Undergraduate Enrollment Management Overview and Strategies: Marketing, Recruitment, and Retention*. With the assistance of a national consulting firm and broad participation across the campus:

- Extensive data have been gathered and analyzed;
- National best practices have been identified;
- Goals have been established;
- General strategies have been identified; and
- Detailed action plans have been written.

Within this scheme, five recruitment goals now provide the framework for the student enrollment aspects of the University's redesign efforts, especially (but not only) in undergraduate education. These goals are:

1. Ensure fiscal responsibility by an efficient use of financial aid and an appropriate mix of undergraduates, including enrollment into academic disciplines.
2. Manage the overall capacity of the University to achieve and maintain appropriate main campus capacity, *using all of our Outreach efforts to address increasing demand for enrollment*, as needed.
3. Increase the enrollment of new freshmen each year from African American, Asian American, Hispanic, and Native American populations.
4. Increase the academic preparation of new freshmen each year.
5. Increase the number of transfer students and then maintain the size of that group.

Overall strategies and detailed action plans have been written to achieve these goals. Many of these action plans are currently under way; others will begin as dictated by timing and resource availability.

Consistent with these undergraduate enrollment management goals and within capital facilities parameters and our planning boundaries in Tucson, the University of Arizona plans to reach a main campus overall enrollment of about 40,000 students over the next five years (with current total enrollment at about 37,000 students) and then to maintain that level of enrollment overall. To achieve that level, admission of new freshmen will be maintained at about 5,750-6,000 students, transfer enrollment will grow slightly from 1900 to about 2000 students, and graduation rates will be increased. UA main campus freshmen are predominantly traditional age, full-time students, whereas transfer students are a much more heterogeneous population. As our goals indicate, increasing access for academically qualified students with attention to diversity *and* maintaining fiscal responsibility are essential aspects of this plan.

In addition, consistent with our standing as a premier research university, the numbers of graduate students will be increased modestly to achieve a level (25% of total enrollment) more comparable to that of our AAU peers. Currently 23% of the University's enrollment is at the graduate level. The number of non-resident undergraduates, in turn, has dropped for the past three years to 28%, which has had a negative impact on our fiscal situation, as well as on the geographic diversity that enriches the classroom experience. Efforts are under way to reverse this decline, then achieve and maintain a level of non-resident enrollment consistent with the level of three years ago. We have made great progress towards this end in our new enrollments for 2005-06.

Enrollments in our core programs at the developing Phoenix Biomedical Campus, meanwhile, can be roughly projected as 2,000, with no more than half of these students pursuing their first professional degree (MD or PharmD) and at least half at more advanced levels. We cannot project with confidence the year in which these goals will be attained, due to uncertainties about funding facilities and developing research programs. But the year 2015 is a reasonable estimate.

Within Academic Outreach: Predicting enrollments for Outreach programs is speculative because enrollments are not limited by facilities (which can be leased or be computer-

based) or faculty (who can be engaged on a temporary basis as required.) Enrollments will be determined by competition in the marketplace. There is no theoretical limit on UA South enrollments in its current operating model, which depends on 2 + 2 offerings with community college partners and professional master's level education on demand.

In the more immediate future, though, UA South could accommodate 4,000 students (headcount) by 2010 with the current base budget, the \$2 million decision package, which we are submitting for FY07; incremental additional state funds for enrollment growth (e.g., 22:1); and modest tuition increases. Indeed, with even greater infusions of state revenue and private contributions to support faculty, staff, operations, and facilities, UA South has the potential to grow at an even faster rate to meet the enrollment expectations of the state as defined by ABOR for the year 2015.

Moreover, if these plans are augmented in ways that our Outreach Task Force is now discussing, the enrollment potential continues to expand at and beyond UA South. The decision package just mentioned could bring in resources to expand UA South offerings far beyond Sierra Vista and could also allow the credit side of CEAO in Tucson to serve thousands more students a year in Evening and Weekend versions of our core majors. Both CEAO and UA South, as well as our College of Agriculture and Life Sciences, can also offer more credit classes (now limited) at Cooperative Extension sites throughout Arizona. We even anticipate increased graduate enrollments through our specialized distance ed. programs on the AzUN network. If we are obliged to attach a FTE enrollment to the potential of our academic outreach programs, we project 20,000 FTE students beyond our core by 2025.

Undergraduate Education

Within our Core Program: Undergraduate education at the UA in Tucson will be excellent by the familiar national standards of higher education. The emphasis must be on intellectual quality, rather than short-term perceptions of marketability. The evidence available from America's finest universities demonstrates that academic quality by traditional standards succeeds in the commercial marketplace as well as the marketplace of ideas, and the commitment of the UA Core Programs must be to excellence by these standards. Absolutely essential to quality by academic standards is the excellence of the faculty, so the excellence of the professoriate – including competitive support for that excellence so that we retain our best -- is a central value at The University of Arizona. We need to direct the largest portions of all our means of support to maintaining the quality of education at the UA and the high quality of research and creativity on which that educational quality depends.

To be sure, the accessibility of programs at such high levels will become somewhat more limited over time as the academic qualifications for freshman class admission rise at the UA main campus. But let us be clear: *The UA will **not** become an "elite" university academically, with qualifications for freshman class admission guaranteed only for the top 25% of Arizona high school graduates, a group which we will **always** reach beyond.* Our Core Programs will continue to be more accessible than that.

At the same time, in evolving from the UA's present low selectivity status, we will improve graduation success rates and elevate our academic reputation nationally and internationally.

The quality of UA undergraduate education, after all, depends partly on the academic preparation of our students. Currently, the University falls near the bottom among AAU universities in terms of student preparation. In *The University of Arizona Undergraduate Enrollment Management Overview and Strategies: Marketing, Recruitment, and Retention*, strategies designed to meet undergraduate recruitment and retention goals are described. Many of these strategies have been designed to increase the academic preparation of our entering students. Some of these strategies are under way and more will be implemented during the coming year. Over the next 10 years, the goal is to increase student preparation commensurate with the quality of our curriculum and faculty. This effort may mean that some students, who currently qualify for admission to main campus core programs, will need to choose from other alternatives as they begin their postsecondary education. Our Outreach avenues will provide some of these options.

Other enrollment management strategies on our main campus are aimed at improved student access and retention. The University is committed to making undergraduate education as accessible as possible for students who are adequately prepared. Accessibility strategies have been developed both for students enrolling directly from high school as well as for students transferring from community colleges. Balancing the need to maintain access in a state as diverse as Arizona with the need for better prepared students is not an easy task. Nonetheless, University enrollment and retention goals include increasing diversity on the main campus and increasing graduation rates for diverse populations.

A key to all this remains affordability. This and other means to access have been significantly addressed by the ABOR decision to increase the Regents' Set-Aside from 9% to 14% and by President Likins' directive to increase that level of need-based financial aid by another percentage point to 15% at the University of Arizona. This increase in aid has been successfully targeted to Arizona Pell-eligible students, as well as to other needy Arizona undergraduates. We are determined to achieve a consistent balance between appropriate tuition at the top of the bottom third of America's 50 senior public university costs and the awarding of enough financial aid to needy, as well as meritorious, students, thereby ensuring access to qualified students while also raised the preparation and success rates of all the students we serve in our core program in Tucson.

Within our Academic Outreach programs: These will continue to be *highly* accessible academically, admitting Arizona high school graduates in the top half of their classes and welcoming community college transfers with few restrictions. The UA Academic outreach programs should become increasingly accessible, too, in the place and time of their course offerings, particularly as enrollments grow. Granted, the affordability of UA Outreach programs will depend to some extent on State and Federal financial support coming either to students directly or to the UA and its Outreach programs. But these

programs will remain financially accessible, since they employ a low-cost delivery model, with substantial reliance on temporary facilities, temporary faculty, teaching-intensive appointments, and widespread uses of information technology. Consequently, the price to students for these expanding Outreach programs will be as low as any educational option in the marketplace. Educational affordability and accessibility, in fact, are already enhanced by the lower differential tuition at UA South and by South's model of embedding the University in the communities it serves to offer degree programs in partnership with community colleges.

This approach, we must hasten to emphasize, is not a lowering of "quality" for the UA. "Quality" is a term that requires definition. An organization of high quality is an organization that achieves its mission objectives superbly well. UA and UA South have different missions, but both will be accomplished superbly well. Educationally, quality means excellence of instruction at a level appropriate to the particular program a student is pursuing and at the level of preparation required of students in each program. We are determined to keep to that standard in our Outreach programs, as well as our Core programs. These options will offer high quality for cost as perceived by the enrolled students, or this target audience of ours will pursue other alternatives. It must be said, however, that traditional academic (ie., core faculty) perceptions of quality do often conflict with commercial (including student) perceptions of quality, and we acknowledge that this distinction will occasionally be perceived by some who compare the Core and Outreach programs of the UA.

In the meantime, Information Technology (or IT) is already having a transformational influence on learning at all levels, and this trend – one that we already embrace in ways suited to our dual approach -- will accelerate over time. For the UA *Core* programs, on the one hand, the primary impact of IT will continue to be the enrichment of learning via courses offered online (some of them via CEAO and AzUN) that we accept for transfer if they are not UA classes. We will also, as we have shown above, continue to expand our online offerings of specialized *graduate* degrees in particular, even while we contribute substantially to distance offerings that can lead to undergraduate degrees at the other Arizona universities. One reason all this is possible is a transformation that will continue to include the UA: the turning of what was Arizona Regents University (ARU) into the Arizona Universities Network (or AzUN). We are participating supportively, and with due consultation with our System counterparts, in AzUN, even though it is led primarily out of NAU (as it should be). We can do so, in part, because one of the UA's singular contributions, among many, to the state-wide TRIF program (the Technology and Research Initiative Fund based on dollars raised by Proposition 301) is "Anyplace Access for Arizonans," an initiative led by Dr. Sally Jackson, our Vice President for Learning and Information Technologies. This effort, especially dedicated "to the truly underserved" and bolstered by newly-recruited technical experts and the targeting of funds to important state needs (health care, science education, indigenous peoples, etc.), will support better lives and work for Arizonans by:

- Making advanced degrees and certificates available at a distance from campus;
- Offering information resources that can increase on-the-job productivity; and

- Expanding information and reference services to the entire state.

As a further consequence, our Outreach programs will also benefit by being able to expand distance-learning access to students constrained by space and time. UA South is growing its distance education options to reach students all over the state of Arizona, augmenting what the main campus offers selectively via the Network and Anyplace Access. The means of this expansion include several avenues. UA South course offerings via distance education can be somewhat expanded, as can the establishment of more computer-center facilities in Southern Arizona, as resources permit, so that students in low-income settings can have access to courses online. Our Cooperative Extension offices throughout the state also serve, and can serve even more, as sites where students of all ages, often from rural Arizona, can access computer-based instruction and courses offered online by both our core and our outreach programs. CEAO in Tucson has been involved in distance education for years and has the capacity to work with UA faculty to develop many different types of distance learning courses, all of which either can or will be made available through AzUN and Anyplace Access for Arizonans.

Community College Partnerships

Within our Core Program: The UA in Tucson has close transfer and articulation relationships with Pima Community College and all the other community colleges in Arizona. We have UA counselors at Pima and elsewhere working to help students prepare for and make the transition to us. The academic advisor at CEAO's Evening and Weekend Campus works closely with Pima to facilitate the transfer process of many working adults. The state-wide online Transfer Model also helps students more easily track which courses taken at community college will transfer to which courses at the UA – and which requirement each transferred course meets. We have even enhanced these relationships by our new Joint Admissions Program, in which students in the top 25% of their high school graduating classes who have not chosen a state university yet can be admitted both to Pima and UA at once and begin their progress toward graduation with coordinated course work and counseling. By all these means, UA Core Programs on the Tucson campus are readily accessible to community college students who complete an approved associate's degree or the AGECE (ie., general education) curriculum, and many UA students now incorporate Pima courses into their UA curriculum. Because attrition is still high among our freshmen, the fraction of UA baccalaureate recipients who begin as community college transfers is significantly higher than the 25% that would prevail if every new student graduated.

Within our Academic Outreach programs: Very special relationships exist between our off-campus credit programs and community colleges. That is especially true in the case of UA South, which is an upper-division institution only. First of all, it has been in a close partnership with Cochise College since that community college district was formed in 1964. As Cochise matured, the 2 + 2 model came into existence. In 1993, UA South moved to a campus adjacent to the community college campus in Sierra Vista and opened a classroom and office building. UA South now has five buildings in the Sierra Vista area, all but one constructed largely with private funds raised by the UA South

Foundation. UA South also offers courses in the City of Douglas for students in eastern Cochise County who have attended the Cochise College Douglas Campus.

From this base, the partnerships of UA South have continued to expand. In 2002, UA South was invited into eastern Pima County to provide baccalaureate opportunities in a new 2 + 2 partnership with Pima Community College East Campus and the Vail School District. Subsequently, classes have been offered at the Pima Community College Desert Vista and Downtown Campuses, as well as in the Vail School District. In 2003, UA South was invited into Santa Cruz County by the Provisional Community College Governing Board and the County Board of Supervisors to provide higher education opportunities in partnership with Cochise College. The FY07 decision package noted earlier, if awarded, could further solidify these relationships by providing the resources necessary for UA South to begin offering degree programs to students who have completed their freshman and sophomore years. Private donors in Santa Cruz County have stepped forward to offer not only land, but also to construct classroom and administrative facilities, in the city of Nogales for UA South, even as CEAO is already developing educational programs (by invitation) in Nogales too.

Meanwhile, UA South has forged new relationships in Graham County, and discussions are under way to provide higher education opportunities in the cities of Safford and Thatcher in conjunction with Eastern Arizona College. The mayor and council of the City of Safford have identified donors who have made land and financial commitments in support of this effort. Conversations with Tohono O'odham Community College have taken place too and will proceed as their college develops. At some time in the future, a 2 + 2 collaboration should be developed out of this important partnership to offer upper-division baccalaureate opportunities to these students.

Continuing Education near the UA main campus is also bound up with community college education. The majority of students in CEAO's Evening and Weekend Campus (most of them from underrepresented groups) come to do upper-division, degree-seeking work outside normal working hours *after* having completed their general education and other lower-division classes at community colleges. The aforementioned decision package proposed for FY07 includes resources for expanding these options in ways that will still depend on most such students doing their first two years at community colleges. We plan, if resources permit, to serve thousands more working adults with more possible bachelor's degree programs in this way.

Meeting Workforce Development Needs in High Demand Areas, especially through community college partnerships: The UA, through both its core programs and Outreach, is already making, and will increasingly make, major contributions to meeting the state's needs for nurses and educators. The University of Arizona College of Nursing (UA CON), for example, is working collaboratively with community colleges to address workforce development in nursing by developing community capacity to address the current shortage of qualified nursing faculty. Several factors have been taken into account as this endeavor develops:

- In discussions with the leadership at Pima Community College and Cochise Community Colleges on how the UA CON could be a resource in their efforts to address local nurse workforce shortages, what has become clear is the need for qualified nursing *faculty* to do the community college teaching in this area.
- For nurses residing in the rural and remote areas of Arizona, geographical distance often creates a barrier to accessing graduate educational programs offered at the three University nursing programs.
- The redesign of educational delivery systems, partly via online distance learning, offers a way of addressing the barriers of geographical distance and a shortage of qualified nursing faculty in local communities.
- The UA CON strategy builds on a workforce development approach emphasizing access to *graduate* educational programs to nurses residing in rural and remote areas of Arizona. UA CON is thus providing critical support to community-based nursing programs by delivering both the PhD and MS nursing programs via an online system.
- Nurses living in rural and remote areas, who aspire to careers as nurse faculty, now have the opportunity to pursue these educational goals and at the same time remain in their communities.
- Further, this delivery system of nursing education supports community colleges in their efforts to address local market demand by providing opportunities for nurses in the respective communities to acquire the necessary graduate degrees in nursing to qualify as nursing faculty.

In Arizona, one can become a Registered Nurse (RN) with an associate's degree from a community college, so the need for collaboration in this field is not vital for bachelor's candidates alone (although some other states do require bachelor's degrees for RN certification.) When an RN with an associate's degree, however, feels a need for further education or additional credentialing, the university provides that service by building on what the community college has already provided, and *later* these students can even become teachers of nursing out at community colleges themselves. This back-and-forth partnership between nursing education and the community colleges, of course, only augments the long-standing UA CON commitment to the Arizona Course Applicability System, designed as that is to provide transfer pathways for community college students to easily and expeditiously enter baccalaureate programs, including our bachelors program in Nursing.

The UA is also working on a ramped-up community college partnership for the education of *teachers*. Credentials for schoolteachers generally include a bachelor's degree, even in Arizona where charter schools provide many exceptions. Other states require a bachelor's degree in an academic discipline plus postgraduate study in the field of Education. Whatever Arizona finally decides about its criteria for teacher certification,

the universities are thus essential participants in teacher preparation (which is not the case for the preparation of police or firefighters). The current demand for teachers in Arizona therefore combines with the need for university participation in teacher preparation in ways that require close collaboration between community colleges and universities. Consequently, UA's College of Education Dean Ron Marx has discussed with Pima Community College Chancellor Roy Flores the prospect of a focused collaboration in a manner yet to be determined.

In the meantime, UA South is working closely with Pima Community College and Cochise College to meet the ever-present need for classroom teachers throughout Arizona. This cooperation has included sharing classroom and office space with both colleges and sharing education faculty with Cochise College. Since these collaborative efforts began, hundreds of additional elementary and secondary school teachers have completed their education programs through UA South and Cochise and Pima Colleges. As a result of the curricular autonomy granted to UA South by ABOR in 2003, moreover, the Teacher Education Division is currently developing a distinct teacher education program that will proceed through the UA South curriculum approval process before being presented for ABOR approval sometime in 2006 and to the State Board of Education in January 2007.

While all this is going on, too, we welcome the chance to address other critical workforce areas with degree options, mainly through Outreach. Until recently, universities awarded degrees in criminology (or, in our case, "Criminal Justice Administration") but not in "police science" or "fire science." As these jobs have become more knowledge-intensive, we know that associate's degrees have been developed in community colleges. As these fields have evolved, we acknowledge that police and firefighters with associate's degrees have begun to seek baccalaureate credentials. The UA is addressing that demand primarily through its new Bachelor of Applied Science degree (the BAS) at UA South. BAS degrees with Concentrations in Supervision, Agency Administration, Human Services, Network Administration, and Early Childhood Education have already been designed with workforce development needs in mind. Students with Associate of Applied Science degrees from community colleges can expand their academic horizons within these programs. Based on their academic preparation from the AAS, students with degrees in high demand areas such as nursing, fire science, and the administration of justice, in fact, now have the opportunity to complete a bachelor's degree at UA South using one of these concentrations, which can vary their requirements by occupational area. There thus do not have to be bachelor's degrees at community colleges at this time for Arizona students to pursue such educational options. The UA is increasingly providing these avenues through Academic Outreach.

Diversity

Within our Core Program: Diversity is an essential element of excellence throughout our main campus. Already among the most diverse research universities in America, the UA is determined to continue increasing its racial, ethnic, cultural, linguistic, and religious

diversity even as it pursues its standards of focused academic excellence. For example, we have reported for the Fall of 2004 that underrepresented minorities comprised 28% of the freshman class and 31.5% of the transfer population, the highest percentages in our history. When students from Arizona alone are considered, we enrolled 33.3% minority freshmen and 36.4% minority transfers. Within these statistics, the largest minority populations at UA were Hispanic students, who constitute 15.3% of the freshman class (19.5% of those from Arizona) and 21.4% of the transfers (25.6% of these from Arizona). In 2003 the UA ranked 15th among U.S. universities in awarding bachelor's degrees to Hispanics. Taken together, these figures cannot be matched by any comparable research university in America, and our enrollment management efforts are determined to improve them. At the same time, we are not resting in place at all. We are, for example, submitting a decision package for FY07 that would expand American Indian programs and services at our University.

The challenge that we face is becoming *more* diverse while we become more selective in enrolling students who are academically capable of graduation success. This challenge can be met, because qualified minorities are out there, but they must be persuaded to choose UA and stay with us. To this end, our outreach efforts to all minority and at-risk communities are rapidly expanding on many fronts:

Early Outreach

The University of Arizona has a long-standing commitment to the K-12 system and serves the educational pipeline in a variety of ways. UA campus leaders are keenly aware of the changing demographics that will impact the nation, including the increasing numbers of young Hispanic students entering the K-12 school system. In anticipation of this growth, thousands of promising young students are invited to UA and are introduced to the campus and academics through participation in outreach and recruitment programs designed just for them. For decades children have been stimulated by Flandrau Science Center programs on campus, and current plans to move the UA Science Center to Downtown Tucson's Rio Nuevo District will greatly enhance the accessibility of UA science programs to children in the region.

A number of academic colleges, including Medicine, Education, Humanities, Business, Science, Engineering, and Pharmacy also sponsor outreach activities and summer programs to expose prospective students to campus and their areas of academic specialty. Many of these efforts target low-income and first-generation college-bound students, most of whom are from Hispanic backgrounds. If program fees prohibit participation, scholarships often are provided.

The recent decision to combine the Office of Early Academic Outreach (EAO) and Minority Student Recruitment (MSR) has further strengthened the UA's efforts to reach ethnic minority students well before college age. In so linking outreach efforts such as Mathematics, Engineering Science Achievement (MESA), College Academy for Parents, and College Knowledge for Parents *with* recruitment efforts such as Outstanding Minority Senior Day, Minority Junior Day, and high school visits, this consolidated program allows prospective students to move seamlessly through UA enrollment

processes. In addition, this new unit consults with other units, such as the Chicano Hispano Student Affairs, to coordinate numerous requests for personalized campus visits received from schools and community organizations.

At the same time, charged with training future K-12 professionals, the UA College of Education collaborates with school districts to strengthen pedagogy and to discover new ways to impact student learning. The College offers distinctive programs addressing state-wide special education needs in cross-categorical undergraduate education, rehabilitation, and deaf studies. K-12 professional development is also not limited to the UA College of Education. It is not uncommon to find UA faculty and staff members from other academic areas, such as the Colleges of Science, Humanities, and Engineering, working with school administrators and teachers to increase student learning capacities.

Early Outreach targets students at all levels, it turns out, and will soon expand its program in Phoenix. Especially successful is the Academy for Parents for fifth-grade students in south side Tucson school districts. While the parents attend classes about how they can prepare their children for college, the children meet with instructors in a program that encourages them to plan for college. As a parent enthused in Spanish at the first graduation ceremony: “college for my children had been a dream; now it is a plan.”

The GEAR UP Grant

In addition, The University of Arizona has just learned that a grant proposal in which our institution is a partner has resulted in an award of \$1.56 million a year for six years, or \$9.36 million total. The funding agency is the U.S. Department of Education through its Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP). Local beneficiaries of the award will be about 3,325 students who have begun sixth grade this fall at 13 middle schools in Sunnyside and Tucson unified school districts. The program will move with this cohort through their 12th grade in Fall 2011.

This funding will support many things: professional development for teachers, counselors, and school administrators; the hiring of “college coaches,” who will work at the school site with students; the creation of MESA classes; summer program opportunities at UA and Pima Community College; sessions to educate parents and increase family engagement; and steadily available after-school tutoring. This program, we might add, is a further version of another GEAR UP grant (funded at \$2.7 million) that is entering its final year in Continuing Education and Academic Outreach.

PharmCamp

Another example of an outreach program is the highly successful PharmCamp of the College of Pharmacy. Students from three Tucson middle schools received a hands-on look at pharmacy careers. Faculty and student pharmacists give the student campers a look at pharmacy through interactive exercises in laboratories and workshops, engaging in projects and activities designed to show and teach the many aspects of pharmacy practice. The students participate in pharmaceutical compounding exercises to make such products as lip balm and anti-itch lotion. They visit a local community healthcare

clinic and pharmacy, tour the University of Arizona Main and Health Sciences Campuses, and learn about the development of new medicines, poison prevention and the treatment of venomous bites and stings, as well as how to prepare for health careers. Besides the College of Pharmacy, sponsors are the Arizona Health Sciences Office of Minority Affairs, UA Hispanic Alumni Association, UA Office of Early Academic Outreach, Tucson Unified School District, and Basha's Community Gift Program.

Continuing Education (CEAO), meanwhile, sponsors numerous camps that draw in young people from underrepresented groups. Their 22 camps in the summer of 2005 enrolled 380 students, many of them minorities. For the past three years, too, students from the Sells Indian Reservation have come to the UA campus to attend CEAO's Arizona Youth University.

New Start

UA New Start is another highly successful program, this one for incoming minority students during the summer before they begin college. In its 36 years, New Start has risen to meet many challenges and continues to be a defining experience for its student participants, staff, and faculty. This year has seen the highest student enrollment since 2002: 295, 25 more than last year. Recruitment for New Start was the most aggressive it has been in a number of years. Information about New Start was included in packets to all admitted students. Follow-up letters went out to all ethnic minority students, and outreach was conducted in targeted high schools. Data from this year's program are not yet available, but last year's assessment outcomes confirm that students who participate in the program are more likely to be retained through the first year of college and to graduate eventually.

Starting last year, New Start began to administer the College Student Inventory, a national instrument designed to gauge an individual student's motivation and propensity for dropping out. Students take this inventory within the first days of the program. Those whose scores indicate risk factors receive additional interventions from the New Start staff. This staff has reported that the use of the CSI assists them in addressing students' risk factors early, before they impact the students' ability to be successful. New Start, in the midst of all this, continues to be a very diverse program. Hispanic enrollment was at 61% and minority enrollment was at 87% this year. This is likely due, in part, to the aggressive level of outreach to minority students from Department of Minority Programs and Services, as well as the Office of Admissions & New Student Enrollment.

Retention Efforts

Over the last two years, the University of Arizona has committed to an intensive, data-driven, college-based effort to increase persistence and retention among students once they are here. A new office of Enrollment Management has been created and an Assistant Vice President for Student Retention appointed within it. This Assistant Vice President, in tandem with the Assistant Vice President for Multicultural Affairs and Student Success, have been charged with convening a University-wide committee to develop a strategic plan for retention, and that plan has recently been completed and approved. Admittedly, it sets forth ambitious retention and graduation goals. These

include increasing overall freshman retention from 79% to 85% and the six-year graduation rate from 55% to 70%. The goals are the same for all students, regardless of racial background, thus acknowledging the University's commitment to provide the necessary resources to support target populations who currently perform at differential levels.

In addition to the targeted programs historically targeted at minority and Hispanic students, we anticipate that many of the initiatives derived from our retention plan will impact persistence for all students, including (but not only) Hispanics. Two key efforts towards this end are being initiated this Fall 2005:

SuccessNet

Analysis of our institutional retention data showed that students who struggle academically very early in their first semester, especially in general education courses, are at high risk of academic failure. A high-priority action plan to address this issue has been created. It is an effective on-line system to identify students who are struggling academically as early as possible in the semester. The system builds a sense of collaboration and shared responsibility among those who support student academic success—faculty, college administrators, and academic advisors. Interventions for at-risk students can be set in motion *before* they end up on academic probation.

Specifically, SuccessNet will (1) collect referrals directly from instructors whenever they notice students who appear to be struggling in their classes, (2) automatically send those referrals to the appropriate academic advisor in the appropriate college (determined by the student's declared major), and (3) house all referral data for later analysis.

Math “Boot Camp”

The recent efforts to address retention and graduation issues at the UA have yielded undeniable (if not unexpected) data. Among these we have found clear evidence that success in mathematics, at any level, is one of the best predictors of overall academic success – and hence that failure to succeed in mathematics and other “gateway” courses greatly decreases student persistence. We have also found that those who have taken pre-college mathematics at a community college do not succeed in college mathematics at the rate college-qualified students should. Our institutional research suggests that students who “cross the boundary” from community college to the University are more likely to fail mathematics than students who stay in either the community college or the University for both their preparatory and required mathematics work.

Now that these data have been revealed, developing more effective pre-college mathematics instruction at the UA has become an institutional priority. As a result, in Fall 2005, the University Learning Center will begin to offer a non-credit 30-40 hour class (or “camp”) that will focus on the skills and abilities that the Math Department requires to place students in College Algebra. This class will be open to all, but it is intended primarily for students who have been placed at Intermediate Algebra levels by our Mathematics Readiness. In addition to better recruitment, it turns out, we are striving

to improve our “inreach” to at-risk students already enrolled, thereby enriching their experience at the UA and, we also believe, increasing the rate of graduation success among them.

Within our Academic Outreach Programs: These programs are particularly focused on providing more higher-education opportunities to minority populations. As a federally recognized Hispanic Serving Institution, for example, UA South takes seriously its commitment to this burgeoning population that has been under-served in the past. The primary strategy used by UA South to reach out to underrepresented racial/ethnic groups is to move the educational experience into communities to make education more accessible and affordable. UA South continues to partner with the City of Douglas to provide higher education opportunities to that community, which is 85% Hispanic. This embeddedness, coupled with lower tuition, further enhances our ability to open new horizons of opportunity to all students, particularly those from underrepresented groups.

In addition, UA South is entering the third year of a five-year Title V Partnership Grant with Cochise College. The purpose of the grant is to facilitate Hispanic students’ academic success as they transition from high school through Cochise College through UA South to graduation. This program has already successfully brought students from Cochise and Santa Cruz Counties into UA South baccalaureate education programs. Another program that facilitates educational access for the non-traditional students is UA South’s Early Learning Center, funded by a federal grant, which assists Pell-eligible students with child care while they attend UA South. As all of this goes forward, UA South’s parallel goal – like that of the main campus -- is to recruit diverse faculty who will reflect the diversity of its students.

The commitment to minority outreach by the Mel and Enid Zuckerman College of Public Health, in turn, is quite extensive. Among its many extensions are the Southwest Center for Community Health Promotion, the Center for Health Equity, the Rural Health programs, the Border Health Collaboration, the Bioterrorism Collaboration, and the Native American Health Collaboration. The details of these and other UA Public Health-affiliated programs (far more than we can enumerate) are most inspiring and affect rural and underrepresented populations to an unusual degree. One of the strongest demonstrations of the UA’s commitment to reach out towards underrepresented students, however, is CEAO’s Evening and Weekend Campus, which has a 41% minority enrollment (29% of the total enrollment being Hispanic students).

Research

Within our Core Program: Learning by discovery is at the heart of what we do at The University of Arizona, and this culture is evident at all levels. The Core activities of research and very advanced learning will continue to be focused on in Tucson, with the potential for rapid expansion in the Health Sciences taking place mainly through the Phoenix Biomedical Campus and the Scottsdale HealthCare Emergency and Trauma Center. As all these initiatives proceed, partly with the aid of TRIF support for targeted work on areas of special importance to Arizona, UA research will expand its capacity to

permeate regional economies within the knowledge-based global economy we now experience. In Arizona, after all, we have new mechanisms for translational research by way of TGen and C-Path, and we are spinning out new high-tech companies at an increasing rate through the UA's stepped-up program in Technology Transfer. The economic impact of the UA as a research university continues to and will strengthen the entire economy, improving the environment especially for healthcare and for education at all levels.

Within Academic Outreach: Though our Outreach programs are mostly teaching-intensive, they do and will nevertheless bring the results of our world-class research out into the many communities of Arizona in and beyond Tucson. Aside from the research of their own and with others that UA South faculty (nearly all with doctorates) bring to their students, for example, UA South as an institution, with the help of private donors, is building up its Patterson Observatory in Sierra Vista with the aid of world-class main campus faculty so as to offer to many more students and community members in Southern Arizona the benefits of our No. 1 programs in Astronomy and Planetary Science. Through Credit Outreach and Evening and Weekend Campus, the UA's Continuing Education office also brings working adults in touch with our core program's top research and creative faculty in several different majors (with the number of such majors able to double if we are awarded a decision package for FY07 in this area). Continuing Ed. also sets up distance learning and distance *video* programs for students beyond the main campus in such key UA research areas as Optical Sciences, for which Continuing Ed. partners with KUAT-TV right now to help our world-renowned Optical Sciences College offer distance programs via television. Perhaps the supreme UA vehicle for research outreach, however, remains our Cooperative Extension offices throughout Arizona's counties. These extensions of us are charged with bringing advanced research in agriculture, the life sciences, and family and consumer resources to the citizens of every county, often on a non-credit basis but through some credit avenues as well. Another decision package currently proposed for FY07 requests additional resources to extend the research-based education offered by Cooperative Extension to even larger numbers of students, all in coordination with the rest of Academic Outreach.

Resources

Program Resource Implications: It is impossible for the UA to estimate *all* its future costs, even those connected with its participation in a redesigned Arizona System. Some costs will come from implementing research or teaching grants and contracts that have not yet been applied for nor awarded and so cannot be completely anticipated. Rises in utility, insurance, and ERE costs, both on our main campus and our many extensions, have been so volatile – and so abrupt in their ascent -- that predicting these is hazardous at best. Arizona State budgeting practices ignore inflation, moreover, so any state agency or institution operating at a constant level must annually absorb inflationary costs. Actual budget reductions or rescissions in times of recession have not always been corrected when the economy has rebounded. The combined effect has been to force continuous reallocation of resources, a process which we are embedding in our culture at the UA. Assuming all this, though, we can still isolate some broadly estimated costs *specifically*

associated with the future under Redesign that we can indicate to our Board of Regents as we look ahead. We must caution, however, that this is not a complete list and is made up only of estimates that cannot predict all future inflationary factors.

Resource Implications for our Core Program:

* *New Personnel:* As our student population expands toward 40,000, along with expanded degree programs, particularly at the graduate level, we will need at least 130 additional faculty that can be paid for partly by increased tuition collections and partly by 22:1 funding from the state (assuming it is actually funded at the state formula, which we earnestly recommend for the sake of serving students well). However: to be competitive in faculty recruitment and retention, so that we maintain our high academic quality, we must make up as much as we can of the *gap between average faculty salaries at the UA and at least the 50th percentile salary levels at peer public research universities*. Based on a formal analysis by our Office of Institutional Research and Evaluation, the UA needs at least \$50.9 million in salaries and marginal ERE to close this gap *in addition* to the cost of increasing the faculty by at least 130 as the core program expands. There will also, of course, be a need for more Classified Staff (much more difficult to estimate, depending on the kinds of staff needed) as this expansion progresses.

* *Academic Facilities:* Over the next five years, to support more class space for students and research and creative space for grant-funded program expansions (which will service and employ graduate *and* undergraduate students), the main campus is adding 8 new buildings or large building expansions, several of them in the Health Sciences. The total cost of these is over \$400 million, with only some of that being debt-financed by the University itself (given the success of Campaign Arizona in raising private contributions). The challenges of the Phoenix Biomedical Campus, however, are unique and substantial. The cost for the first new educational facility for the College of Medicine at the location is estimated to be \$90 million, and other buildings must follow over time.

* *Residential Facilities:* There are no new Residence Halls planned on the main campus for the next three to five years, but there will be renovations of the existing ones as we work to house nearly all of each freshman class well. These will be funded by the additional auxiliary fees that students do and will pay this year and in the future.

* *Operating and Capital Needs:* The most critical need as we expand and maintain core program facilities is for building renewal funds, completely eliminated by the state for several years now. For fiscal year 2006, we have asked the state for \$34 million in this area, according to the legislated formula (rarely implemented). Unfunded building renewal for the last three years stands at \$88 million and counting. For new building maintenance, meanwhile, we have to budget at least \$2 million a year (for those volatile utilities, among many

other things), to which more must be added each following year as more buildings actually open. The total O&M budget request of the UA for FY06 is \$51.6 million.

* *Incremental Student Services:* As American university student bodies have become more heterogeneous in every way in recent decades, the need for student services has increased on all fronts: academic advising, healthcare, disability accommodation, multicultural support, recreation, policing, and so on. This process continues despite shrinking state resources. At UA the campus recreation center is financed largely with a \$25/semester fee that will expire in 2009; with ABOR approval students will be asked to extend that fee with no increase to pay for Rec Center improvements. This trend to self-help presents problems for other student services, however, since they cannot usually charge incremental student fees. Given our projected student growth to 40,000, we therefore estimate that the total cost for student services not covered by fees – combining all the above items -- will increase by approximately \$500,000 over the next three years.

* *Advancement of the Research Agenda:* Recent investments in research facilities have created new opportunities for competitively funded research at the UA, and we hope to have the faculty we need to realize this opportunity. Unfortunately, federal funding for research is stalled, with more competitors scrambling for more limited funds. There is no evidence that things will get better in the next three years. That simply means we must increase our “market share” of available federal research funds and continue to expand industry funding of university research. We are organized to do this job and focused on the effort, with TRIF funding helping us part of the way. As we proceed in this fashion, though, the ever-increasing costs of basic research support – including seed funding, human subjects training, technology transfer, and infrastructure – will likely require at least \$8 million additional over the next five years.

Resource Implications for Academic Outreach: If there is to be the enrollment growth anticipated by 2010 (noted above), UA South will require:

- 47 additional faculty, 25 new staff, and 100 additional part-time adjuncts
- New classroom/office facilities in Tucson, Santa Cruz, and Graham Counties; and a new facility for the Early Learning Center in Sierra Vista
- No student residential facilities are planned at this time.
- Of the five current buildings operated by UA South in Cochise County, four were constructed with private funds and only one was constructed using state appropriations. As a branch campus, UA South is operated independently from the Main Campus in regards to security, infrastructure, facilities, etc. As new buildings in Tucson, Santa Cruz, and Graham Counties materialize, new funds will be needed for maintenance, operations, technology infrastructure,

security, landscaping, etc. Although full build-out may require up to \$12 million, private donations are expected to offset as much as a third to one-half of this amount.

- An additional 10 advisors, 3 financial aid counselors, 3 admissions counselors, and other student services personnel to serve the 4,000 students who will be attending UA South.

At the same time, further resources will be needed, if many more students are to be served over time, by Continuing Education at the UA and by Cooperative Extension across the state. CEAO will require, under current cost rates for them, at least another \$800,000 in increased basic support (or “seed money”) to serve an additional thousand students beyond its current capacity in credit-bearing programs, though 60% of this cost will eventually be paid back by incoming tuition and program-fee dollars, given that Continuing Ed. is now designed to be largely self-supporting at competitive market rates for its services. A portion of those additional funds, to support an expansion of Evening and Weekend Campus, is being requested as part of a decision package for FY07. Cooperative Extension, meanwhile, will also need additional funding to maintain and expand its services, which have already been disproportionately affected by budget reductions. They have therefore submitted, and the UA supports, a proposed FY07 decision package for \$1.5 million in additional permanent funds.

Tuition and Fees Structures, including Financial Aid and Student Involvement: Within the Core program on our main campus, we plan to keep asking for tuition for in-state students that is at the top of the bottom third among the 50 senior public universities nationally (seeing as we are still well below that now). There is no other reasonable way that we can keep up with the rising costs, especially of top research-and-teaching faculty -- the foundation of a quality university education for undergraduates and graduate students – unless a portion of the funding needed to remain competitive for personnel is paid by the students (assisted by considerable financial aid, as noted below). In addition, we will maintain and/or request differential tuition beyond the base rate for selected UA colleges to pay the cost of professional programs (from Law to Medicine to Business to, we hope, Engineering and Architecture) that are markedly more costly, mainly for qualified personnel, and are differentially more expensive at most of our peer institutions, where differential charges for them are commonplace. The vast majority of these differentials will be at the graduate level, but we will request differential support for a very limited number of undergraduate professional programs as well, given the very high costs of instruction in those areas and the salaries students are likely to earn once these programs credential them via bachelor’s degrees. Distance education courses will be *either* covered within normal tuition, if they appear on the Arizona Universities Network via CEAO or “Anyplace Access” through TRIF, *or* charged for by the course at rates designed to be competitive with the charges of other distance providers.

Even as we say all this, however, we recognize that financial aid is essential to student recruitment and retention efforts and must be connected to both basic and differential tuition. The sharp increase in Regents Set-Aside (to 14%) and University

need-based aid (an additional 1% minimum) has already reduced or eliminated the impact of recent tuition increases on our neediest students. The University of Arizona has successfully supported its numbers of Pell-eligible students during this time. The University intends to maintain the current high level of need-based aid for Arizona undergraduates to help ensure access. The University has also engaged in a significant effort to more effectively use merit-based aid to meet its enrollment goals. This effort and the resultant changes are described in *The University of Arizona Undergraduate Enrollment Management Overview and Strategies: Marketing, Recruitment, and Retention*. Both need- and merit-based aid are essential to the recruitment of well-prepared students, many of whom would choose to leave or not come to Arizona if such offers were not provided. We also intend to honor all statutory tuition waivers at both the undergraduate and graduate levels. Other defrayments of tuition, especially differential tuition, will be handled by scholarships in set amounts rather than automatic waivers for whatever the current tuition charge is.

Within our Outreach programs, in turn, we find that the financial needs of rural students are even greater those of urban students. Approximately 60% of UA South students qualify for some form of financial aid: grants, waivers, or loans – which are, and will continue to be, made available to them through mandatory set-asides and solicitations for public and private scholarship funds. We anticipate the same level of need for the students at the new sites into which UA South hopes to expand, as noted above. This potential problem is mitigated somewhat by the fact that UA South now has, and will continue to have, differentially lower tuition at all its locations compared to the main campus. Continuing Ed. must charge the normal main campus tuition rates, as Cooperative Extension now does whenever credit instruction is offered at its sites, but all students who use these services are just as eligible as main campus students for the same levels of financial aid. Tuition that comes to these locations, if it is separate from main campus tuition, already requires deductions for the same financial-aid set-asides that are required by our core program.

For all this to work for many more students, though, additional state funding for financial aid *beyond present levels* is essential. Currently, Arizona has very nearly the lowest level of state funding for financial aid in the nation. Increasing the State commitment to financial aid would allow the University to redirect some of its financial aid to other critical needs, which would include increased outreach and recruitment efforts for our neediest students and expanded retention efforts aimed at less well-prepared students. The specific focus of such redirections would depend on the level of state support, the stipulations for that support, and University needs at that time. Meanwhile, an increase in state aid support would greatly help our Outreach students, especially at UA South. If the state were to assume responsibility for the funding that is currently mandated by the ABOR policy for financial-aid set-aside, up to 14% of tuition collections at UA South, now needed for financial aid, could be reallocated for additional faculty, student services, and operational expenses.

In all these discussions about tuition, differential tuition, and financial aid, students are heavily involved at the University of Arizona. The current administration

consults closely and repeatedly with elected student representatives, graduate and undergraduate, as tuition requests (including differential ones) are developed. The UA also supports and helps hold the many student hearings required in the tuition-setting process. The UA even requires colleges seeking differential tuition to consult with well-constituted groups of student representatives from the programs involved. Any official college request for differential tuition *must* include evidence of such consultation with students and accurate summaries of student responses to the idea of an increase in their costs. The Associated Students of the University of Arizona South, meanwhile, represents the students at all UA South sites and has developed or will develop site-based representative structures at all South locations to enable students to participate in tuition and fee discussions and hearings on a regular basis.

The Resource Needs of High-Cost, including Technology-intensive, Programs:

Within its core program, The University of Arizona anticipates continuing costs for technology in a variety of instructional programs at both the graduate and undergraduate level. A portion of this cost is associated with computing and telecommunications technology, and we have so far been unsuccessful in getting approval for a general student fee for information technology. We believe such a fee would be the fairest and most coherently manageable way to fund the escalating technology expectations of all students on and off campus.

Our current resources, while too limited, come from a variety of locations. In the early 1990s, UA committed to setting aside a certain portion of one tuition increase for student computing, and all of this money is now under the stewardship of the Office of Student Computing Resources (OSCR). OSCR provides open-access computing and multimedia labs all over campus and serves students with technical assistance and help-desk support. OSCR also administers the Technology Refresh Bank, which assists departments and colleges in managing special purpose computing labs and classrooms. In addition to these central resources, some departments and colleges fund their specialized technology resources through course and program fees. Computer Science, for example, has a fixed per-credit-hour fee whose proceeds maintain its student computing facilities. Other departments associate lab fees with specific courses, and one college (CALA) handles student computing needs by requiring students to purchase a suitably equipped laptop computer.

Both for computing and other high-technology requirements, however, it must be recognized that much of what is needed for study in high-tech fields is only available because of the pairing of research and education. UA generates about \$500M/year in research funding, and this funding is the primary source of technology for the science labs and other facilities needed to educate students in high-tech disciplines. In computing alone (that is, *not* including scientific instrumentation, media production gear, and other sorts of field-specific technology), research grants account for about \$10M/yearly in equipment and personnel costs within the departments. This adds very appreciably to what is centrally funded for student computing, and because it is spent in support of academic computing in the disciplines, it can be considered directly beneficial to

students, as it will continue to be if we continue our increases in research funding (and overhead) from outside sources.

In general, our plans for responding to the rising costs of technology in our Core Program include continued efforts to get approval for a Student Technology Fee, continued reliance on the educational benefits of active research programs, and the TRIF funding of Anyplace Access. Within Outreach, UA South has been very successful at supplementing private donations with state funds to meet the technology needs of degree programs such as computer science. The Patterson Observatory was built by private funds and will be used to develop community programs for K-12 and be integrated, as noted earlier, into the UA South education program. This Observatory creates a potential for the development of astronomy courses in the future as well as providing a valuable community resource to an extremely active, and internationally recognized group of local astronomers. Continuing Education, in its turn, funds technology internally through the revenue generated by such profit-making programs as its largely non-credit Center for Computer and Professional Education directed at a business and community audience. Cooperative Extension must support its technology through its usual state budget, now somewhat reduced, and so is including expenses for ramped-up technology in its proposed decision package for FY07. Anyplace Access via TRIF will also allow some expansion of UA South's and CEAO's efforts in technology-based education.

Accountability

Transparency of reporting with common definitions and formats is essential to accountability, and that transparency is possible through the use of existing mechanisms. The Regents Accountability Measures (RAM) currently include seven measures designed to assess university system-wide access, affordability, and graduation rates. In addition, the RAM includes five university-specific measures and an accompanying narrative. This report can continue to be used to provide state-wide and university accountability. Redesign efforts should fit easily into this accountability framework with only some slight adjustments, which the UA would be pleased to discuss.

In addition, since we operate in the national environment (as in competition for research funds), the competitive marketplace, with its comparative figures and rankings, is the best mechanism for accountability in certain areas. As part of a rapidly changing world, the UA must be willing to let itself be driven in part by market forces. Even in local markets, public universities and community colleges are today obliged to compete with for-profit educational providers in the marketplace – and we should accept having to do so in our own ways --particularly when electronic learning is considered.

Aside from these market considerations, though, we should develop measures out of what we already have, which has been arrived at with considerable study and discussion. Of course we can seek better ways to measure what we do, for purposes of accountability, but current ABOR policies already provide an enormous amount of data to measure the performance of our Core Programs and our many forms of Academic Outreach well into the future.

Student Registrations in Non- Standard Course Settings; 2004 - 2006 Academic Year

Delivery Type	Section Identifier												Grand Total	
	Correspondence	Evening and Weekend	Extension Distance Learning	Garbage Project	Guadalajara	Internatnl Programs	McNair Achievement Pgm	Project Access	Regular	Sierra Vista	Winter Session	WMBA Program		
Correspondence	3979													3979
Interactive TV				59										59
Video Tape				340										340
Web Delivered		451	29	392						2642	243	289		4046
In Person & Other		2563	1658	100	1	132	1952	88	38	1359	3461		1235	12587
Grand Total	3979	3014	1687	891	1	132	1952	88	38	4001	3704	289	1235	21011

Attachment A