



MEETING THE CHALLENGE

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dare to be great

A status report on the
University of Louisville's
Challenge for Excellence

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Challenge for Excellence

Fall 2001

TABLE OF CONTENTS

A message from the president	1
Meeting the Challenge.....	2
Five key questions	
Are more Kentuckians ready for postsecondary education?.....	8
Are more students enrolling?.....	10
Are more students advancing through the system?	12
Are we preparing Kentuckians for life and work?.....	14
Are Kentucky's communities and economy benefiting?	16

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A MESSAGE FROM THE PRESIDENT

The Commonwealth of Kentucky has a vision for the state and its colleges and universities. This vision, expressed through House Bill I in 1997 and energized through the state's Research Challenge Trust Fund, has set the University of Louisville on course to become a nationally recognized metropolitan research university by the year 2020.



U of L is committed to making the state's vision a reality through the Challenge for Excellence, a 10-year blueprint for the future initiated in 1998. The Challenge is the heart of a strategic plan that already has led to record public and private support, significant growth in nationally recognized research, increased interest in the university from highly qualified students, and new economic and community service initiatives benefiting citizens throughout the state.

This status report on the Challenge outlines our progress in addressing House Bill I and the state's vision for postsecondary higher education reform. We also take this opportunity to respond to five thoughtful and important questions posed by the Council on Postsecondary Education, the coordinating body for Kentucky's public colleges and universities:

- ◆ Are more Kentuckians ready for postsecondary education?
- ◆ Are more students enrolling?
- ◆ Are more students advancing through the system?
- ◆ Are we preparing Kentuckians for life and work?
- ◆ Are Kentucky's communities and economy benefiting?

I hope this report gives you a sense of the gains we've achieved as well as the challenges and opportunities that lie ahead. We offer a little history, some interesting facts and a look at where we've been, where we are and where we're going.

On behalf of the University of Louisville's trustees, faculty, staff and students, I extend our thanks to Gov. Paul E. Patton, Kentucky's legislators, our federal delegation, the Council on Postsecondary Education, U of L graduates, and the university's donors and partners for your support. We're only beginning to show what can happen with a vision, a strategic plan and great friends who believe in the university.

Sincerely,

John W. Shumaker
President

“Our vision for the University of Louisville is clear. We shall strive to become a preeminent metropolitan research university, nationally recognized for our success in advancing the intellectual, social, and economic development of our community and its citizens.”

The University of Louisville's Challenge for Excellence, 1998



THE CHALLENGE

In 1997, Kentucky legislators took a historic step to advance higher education throughout the commonwealth. With the passage of House Bill I, which outlined Kentucky's agenda to reform the state's postsecondary education system by the year 2020, each of the state's colleges and universities now had a clearly defined mission for the future.

The University of Louisville, according to the legislature's charge, would become “a premier, nationally recognized metropolitan research university” as part of a “seamless, integrated system of postsecondary education strategically planned and adequately funded to enhance economic development and quality of life.”

This unprecedented challenge to the 200-year-old university was met with enthusiasm—and some skepticism. Could the university set itself on a course to national prominence and maintain its urban roots? Could it stay focused on a goal more than two decades away? And, most importantly, could the university turn the state's progressive vision into a strategic plan leading to meaningful change?

U of L President John Shumaker knew that the answers to these questions would be found only with the help and commitment of the entire university community.

THE RESPONSE

House Bill I was just one of several factors signaling change at the university. President Shumaker had initiated a campus-wide discussion about the university's future even before the state passed the higher education reform bill. Greater Louisville Inc., Louisville's chamber of commerce, also had recently issued the Boyle report suggesting that U of L develop prominent research programs in areas closely connected to the local economy.

The president understood that U of L would need to take three major steps to unite the visions of the state, the city and the campus community into a strategic plan for its future.

- ◆ First, U of L would need to define the characteristics of a national metropolitan research university in order to build a shared understanding of its mission.

- ◆ Next, it must establish measurable, challenging goals tied to each characteristic in order to engage and stretch the university and its supporters.
- ◆ Finally, it must organize existing and new resources around these goals in order to stay focused and build on existing and developing strengths.

In the months following the passage of House Bill I, the university community—faculty, staff, students, trustees, friends, community leaders and others—tackled these steps as it worked on a 10-year plan to put the university on course to reach the state's goal of achieving national status by the year 2020.

This plan, introduced in January 1998, was called the Challenge for Excellence.



MAY. The passage of House Bill I marks the beginning of postsecondary education reform in Kentucky.

APRIL. Legislators enact House Bill 572 to establish the Kentucky Innovation Commission, which promotes research, innovation and technology-related business development.

JULY. The Donald E. and Delia B. Baxter Foundation makes a \$2 million commitment to help build a biomedical research facility at U of L.

JULY. Gov. Paul E. Patton creates a Research Challenge Trust Fund that provides “jump-start” funding to help Kentucky's research universities lay the groundwork to develop their research capacity.

AUGUST. Greater Louisville Inc. issues the Boyle report, which projects the role U of L can play in the community's economic development.

SEPTEMBER. *Success* magazine ranks the U of L College of Business and Public Administration among the 25 Best Business Schools for Entrepreneurs.





THE CHALLENGE FOR EXCELLENCE

The blueprint for the university's future known as the Challenge for Excellence included a list of visionary goals. It stated that by 2008 U of L would:

- ◆ Achieve a Carnegie classification reflecting the university's research and graduate education mission
- ◆ Have a national reputation for its quality undergraduate programs
- ◆ Have at least 20 nationally recognized research and graduate/professional programs
- ◆ Have 75 endowed chairs and professorships in key fields
- ◆ Graduate at least 125 doctoral students per year
- ◆ Increase federal funding to more than \$40 million annually and increase total sponsored funding to \$80 million per year
- ◆ Increase its endowment from \$255 million to \$500 million
- ◆ Increase significantly the number of business start-ups that develop from university research activity
- ◆ Increase the number of patents and licenses based upon university research
- ◆ Attain designation as a National Institutes of Health (NIH) Cancer Center
- ◆ Earn membership in the Association of Research Libraries
- ◆ Become home to a chapter of Phi Beta Kappa
- ◆ Earn membership in the Order of the Coif (law)
- ◆ Be recognized as a national leader for linking its resources to the needs of its community

In addition, the university would achieve national recognition through selective investment in research and academic programs meeting several criteria.

Each program must:

- ◆ Have clear potential to attain national eminence
- ◆ Enhance educational quality in undergraduate, graduate and professional programs
- ◆ Promote economic development
- ◆ Strengthen the educational and cultural institutions of its community

The Challenge further identified more than 50 existing, developing and emerging academic programs that would be targeted for investment. They fell into a number of categories:

- ◆ Medicine, health sciences and related fields
- ◆ Logistics and distribution
- ◆ Entrepreneurship and economic development
- ◆ Environmental studies
- ◆ Education
- ◆ Arts and humanities
- ◆ Urban and metropolitan studies
- ◆ Undergraduate education

The new Challenge for Excellence presented the university with a decisive mission and clear goals for programs and resources. It became the strategic framework that would guide the institution along the path toward becoming Kentucky's nationally recognized metropolitan research university.

JANUARY. U of L publishes the Challenge for Excellence outlining the university's vision for the next decade.

APRIL. The School of Dentistry dedicates a \$1.5 million, 40-station simulation clinic.



MAY. U of L and Jewish Hospital are chosen in partnership as one of five medical centers that will prepare for clinical trials of a new battery-powered, fully implantable artificial heart.

JULY. Gov. Paul E. Patton sets aside \$33 million in matching state funds for U of L research under the first phase of the Research Challenge Trust Fund program ("Bucks for Brains").

JULY. U of L invests \$13 million in "jump-start" funds in targeted programs.

AUGUST. Metropolitan College opens as a partnership among United Parcel Service, U of L, Jefferson Community College and Jefferson Technical College to provide reduced tuition for UPS workers at area institutions.



NOVEMBER. The Pennsylvania-based Institute for Cellular Therapeutics announces it will move to U of L as the first major research group to relocate in response to the state's new investments in higher education.

A STATUS REPORT

As the university enters the fifth year of its Challenge for Excellence, a status report is in order. The most obvious question is this: Has U of L made progress toward achieving the goals it laid out in 1998—goals that were inspired by the Kentucky legislature, the Louisville community and the university's faculty, staff and students?

The answer is a resounding "yes." The university is indeed a changed and changing place. In just four years it has attracted renowned scholars and researchers to join an already strong faculty. It has witnessed international medical firsts, attracted record levels of public and

private support, and invested existing and new resources in students, faculty and programs.

Much of the university's rapid progress can be attributed to the state's innovative Research Challenge Trust Fund, a legislative program that matches state funds with private donations to attract, retain and support outstanding researchers. Often called "Bucks for Brains," the program has encouraged private contributions, moved the university's research agenda forward rapidly and in turn attracted additional federal and private research dollars to the state. Kentucky is already seeing these investments pay off in economic development potential.



MILE STONES

JANUARY. A surgical team from U of L, Jewish Hospital and Kleinert, Kutz and Associates performs the nation's first hand transplant.



FEBRUARY. The Board of Trustees approves the Institute for Molecular Diversity and Drug Design.

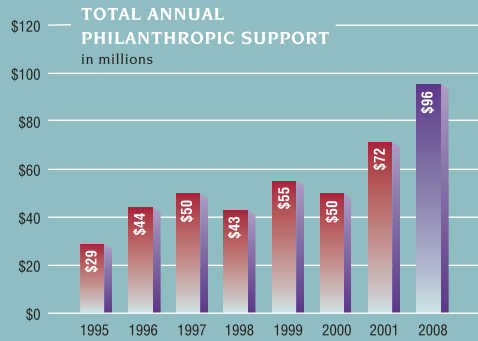
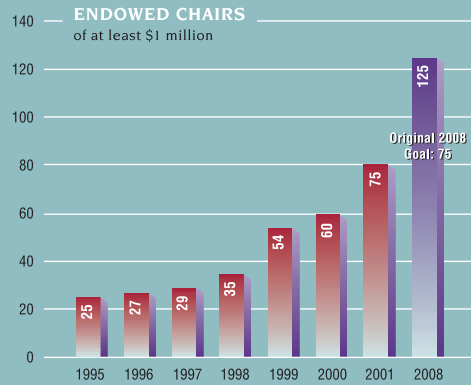
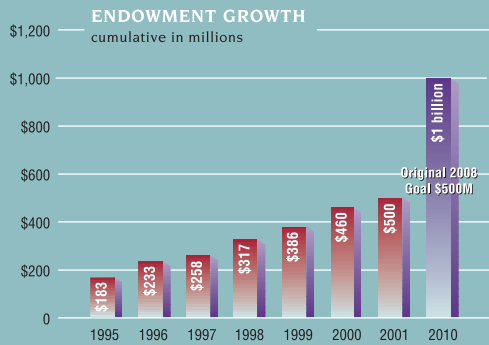
MARCH. An ad hoc committee on compensation recommends that U of L faculty salaries be brought in line with those at benchmark institutions in a five-year process beginning in 2000-2001.

MARCH. The Board of Trustees Academic Affairs and Student Affairs committees approve the Challenge for Excellence Undergraduate Scholarship Campaign to raise almost \$6.5 million by the 2004-2005 academic year.



OCTOBER. U of L dedicates the 115,000-square-foot Donald E. Baxter Biomedical Research Building.

AUGUST. MedVenture Technology Corp. announces that it will move its headquarters to the Health Sciences Research and Business Park.



Besides the progress generated by Bucks for Brains, the university already has accomplished one of its major goals—changing its Carnegie classification to reflect the increasing depth of its doctoral and research programs—eight years early. In 2000, the Carnegie Foundation for the Advancement of Teaching, an organization that groups institutions according to the

nature of the degrees they offer and the level of research they conduct, issued a new classification listing U of L among the 3.8 percent of universities considered Doctoral/Research—Extensive.

In fact, the university has reached other goals years ahead of schedule and set its sights even higher for 2008 and beyond. It achieved its initial goal of \$500 million in total endowment in 2001, thanks to the generosity of alumni, friends and legislators, and is now targeting \$1 billion by 2010. U of L's endowment is now in the top 20 of public universities in the nation and the largest in the state. U of L also met its initial goal of 75 endowed academic chairs or professorships in 2001 and has raised this goal to 125 by 2008.

The Challenge has evolved over the past four years,

NATIONALLY RECOGNIZED PROGRAMS AND INITIATIVES

Current

- ◆ Cardiac assist devices
- ◆ Entrepreneurship
- ◆ Hand and microsurgery
- ◆ Kentucky Pollution Prevention Center
- ◆ Metropolitan College
- ◆ Molecular biology of myocardial ischemia/infarction
- ◆ Transplant immunology

On the Horizon

- ◆ African-American theater
- ◆ Birth defects
- ◆ Music
- ◆ Proteomics

* privately developed

SELECTED FACILITIES IMPROVEMENTS DURING THE CHALLENGE FOR EXCELLENCE

- ◆ Donald E. Baxter Biomedical Research Building (completed)
- ◆ Cardinal Park campus and community recreational facilities, phases I and II (completed)
- ◆ Bettie Johnson Residence Hall* (completed)
- ◆ Ghens Science Hall and Rauch Planetarium (completed)
- ◆ MedCenter One* (completed)
- ◆ Delia B. Baxter Biomedical Research Building (in progress)
- ◆ Medical-Dental Research Building renovation (in progress)
- ◆ Biomedical/ITRC Innovation Center (in progress)
- ◆ Belknap Campus Research Building (approved by state)
- ◆ Ekstrom Library expansion (planned)
- ◆ Additional residence hall* (planned)
- ◆ Shelby Technology and Business Campus (planned)

JUNE. President John Shumaker unveils Challenge for Excellence Phase III, a plan to redirect more than \$21 million in existing funds into priority areas, including scholarships, faculty and staff salaries and library resources.



AUGUST. Bettie Johnson Hall opens; the residence hall for Metropolitan College and U of L students is named for a Louisville Municipal College alumna and U of L benefactor.

AUGUST. The Carnegie Foundation for the Advancement of Teaching classifies U of L as a Doctoral/Research University—Extensive. Only 3.8 percent of American colleges and universities are so ranked.

OCTOBER. U of L achieves an African-American freshman retention rate of 78.2 percent.

OCTOBER. U of L is the only school in Kentucky to achieve or make progress on all eight Council on Postsecondary Education equal educational opportunity goals.

FEBRUARY. U of L announces creation of three \$2 million chairs in neurosurgery.

JULY. The REACH Center, an initiative to work with students and faculty to improve student retention, opens.

JULY. Groundbreaking ceremonies take place for the \$41 million Delia B. Baxter Biomedical Research Building.

JULY. Gov. Paul E. Patton sets aside an additional \$100 million, including \$33 million for U of L, in matching funds as the second phase of Bucks for Brains.

AUGUST. U of L and Jefferson Community College team up for the Pathways to Success program. The program allows students who are ineligible for admission to U of L to attend JCC to increase their academic standings to gain guaranteed admission to U of L.

AUGUST. U of L dedicates Cardinal Park, which includes track and field, hockey, softball and soccer fields.

SEPTEMBER. The National Institutes of Health awards \$8.5 million to the Kentucky Spinal Cord Injury Research Center at U of L, the largest NIH grant in university history.

NOVEMBER. The Association of Research Libraries announces it will review U of L for membership in 2001, a year ahead of schedule.

CHALLENGE INVESTMENT AREAS

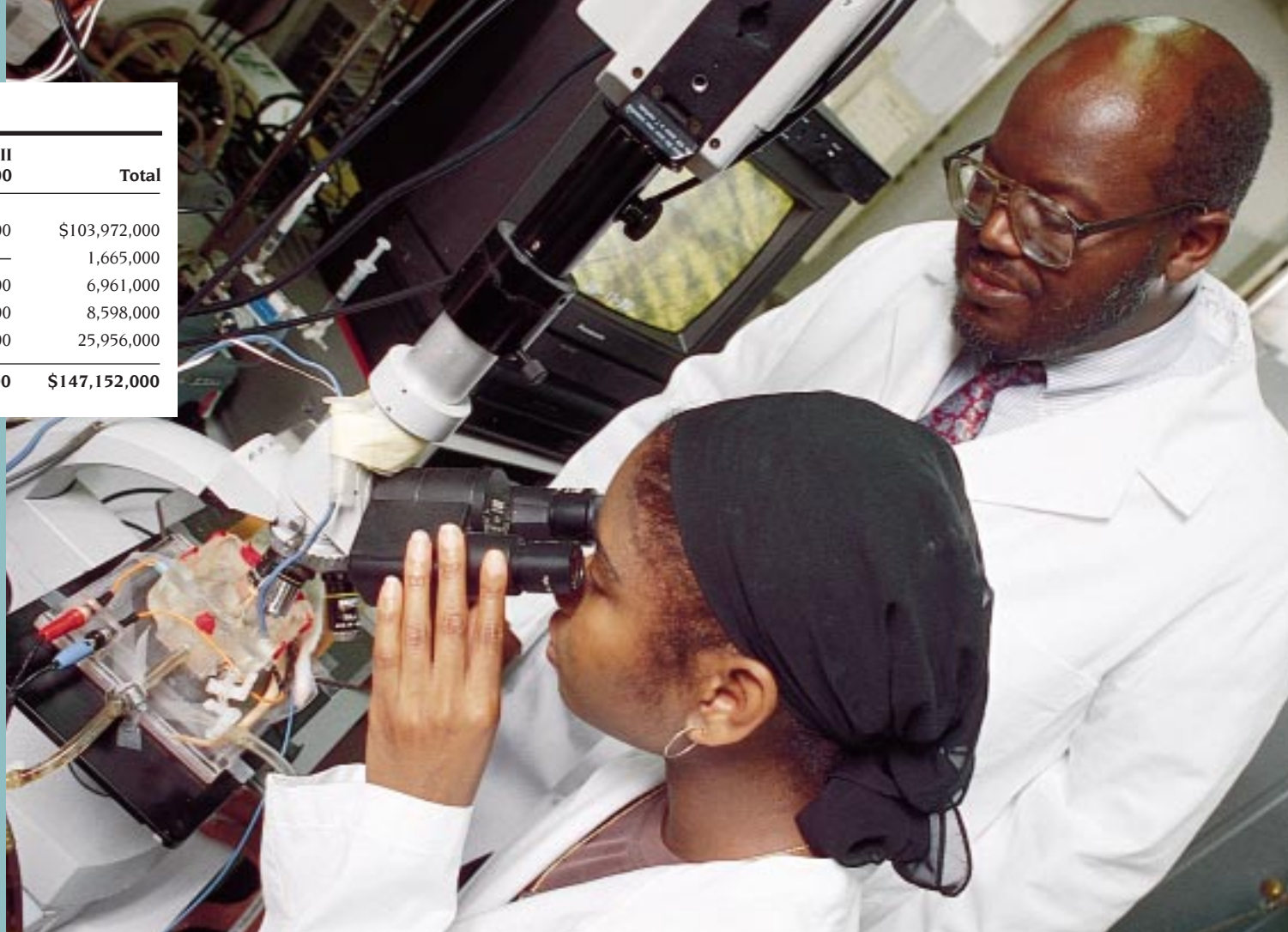
Thematic Area	Phase I 1997	Phase II 1998	Phase III 2000	Total
Molecular Medicine and Biotechnology	\$7,950,000	\$50,706,000	\$45,316,000	\$103,972,000
Early Childhood Education.....	265,000	1,400,000	—	1,665,000
Entrepreneurship	661,000	6,000,000	300,000	6,961,000
Logistics and Distribution.....	398,000	5,200,000	3,000,000	8,598,000
Other	4,546,000	3,360,000	18,050,000	25,956,000
Total	\$13,820,000	\$66,666,000	\$66,666,000	\$147,152,000

leading to additional goals that support the university's initial vision. They include targets for ACT scores and retention and graduation rates, competitive salaries to help retain and attract outstanding faculty and staff, and construction of new academic facilities.

In addition, the university is upgrading library holdings to qualify for membership in the Association of Research Libraries, a national academic

indicator of research prominence. It is laying the groundwork to join the Order of the Coif, which recognizes the nation's top law schools, and to become home to a chapter of Phi Beta Kappa, a selective honor society that marks excellence in the liberal arts.

U of L is on track to achieve these goals—as well as all other goals set forth through the Challenge for Excellence—by 2008.



APRIL. The technologically advanced Ghens Science Hall and Rauch Planetarium opens to the public.

APRIL. U of L trustees approve a vision for diversity to “foster and sustain an environment of inclusiveness.”

APRIL. U of L announces a partnership with Louisville Medical Center Development Corp. to open a new technology innovation center in downtown Louisville.

FEBRUARY. U of L, Jewish Hospital and Kleinert, Kutz and Associates surgeons perform the nation's second hand transplant.

FEBRUARY. The Our Highest Potential initiative combines plans for eight new endowed chairs or professorships at U of L with a grassroots community effort to address issues of importance to Louisville's African-American community.



JUNE. Minerva Ventures, a private venture capital company that will be a business incubator for university research and corporate partnerships, is launched.

JULY. U of L surgeons perform the world's first totally implantable artificial heart surgery at Jewish Hospital.

JULY. A \$12.5 million gift from the estate of Charles and Theresa Grosscurth is the largest individual gift in the university's history.



JULY. Gov. Paul E. Patton joins U of L President John Shumaker and University of Kentucky President Lee Todd to announce increased collaboration between the state's two research universities, including a joint Washington, D.C., office.

AUGUST. U of L achieves its endowment goal of \$500 million and sets a new goal of \$1 billion.

AUGUST. U of L reaches its endowed chairs goal of 75 and sets a new goal of 125 by 2008.

SEPTEMBER. U of L surgeons perform the world's second totally implantable artificial heart surgery at Jewish Hospital.

ASSESSING PROGRESS

U of L President John Shumaker distributes a quarterly “scorecard” to update the university community on progress toward goals established in the Challenge for Excellence. The table below includes excerpts from the scorecard.

CHALLENGE FOR EXCELLENCE	1995	2001	2008
<i>Annually measured progress toward Challenge for Excellence objectives</i>			
Total endowment.....	\$183 million	\$503 million	\$1 billion*
Total annual philanthropic support	\$29 million	\$72.4 million	\$96 million
Federal funding for research and development in the sciences and engineering (expenditures)	\$9.8 million	\$29.9 million	\$107 million
Total extramural funding for research and development (expenditures)	\$14.6 million**	\$38.4 million	\$137.6 million
Number of doctoral graduates annually	61	65	125
Number of chairs endowed for more than \$1 million	25	75	125^
Number of nationally recognized academic programs	1	7	20
<i>Annually measured indicators of institutional effectiveness</i>			
Average ACT score for all entering freshmen	20.7	22.6	24.5
Year-to-year freshman retention rate for all full-time freshmen	69.7%	70.8%	78%
Six-year graduation rate for first-time, full-time freshmen seeking bachelor's degrees.....	29.9%	32.3%	45%
Undergraduate African-American students (Kentucky residents only)	13.9%	14.4%	16.6%
Licenses and U.S. patents based upon U of L research.....	NA	47	continued growth
Business start-ups and incubations.....	NA	48	continued growth
Royalties and associated income.....	\$10,626	\$353,416	continued growth
<i>Strategic quality goals</i>			
Salary catch-up			
Faculty (compared to benchmark institutions)	(\$5.9 million)	(\$3.2 million)	0
Staff (compared to appropriate employment markets)	(\$9 million)#	(\$2.4 million)#	0
National Institutes of Health Cancer Center designation	Apply in 10 years	Planning grant to be submitted in 2002	
Carnegie Research—Extensive status		Achieved	
Association of Research Libraries Membership.....		Site visit in October 2001	
Phi Beta Kappa chapter.....		Will apply in 2003	
Order of the Coif (Brandeis School of Law)		Will apply in 2002	

* The endowment goal was raised to \$1 billion after the university reached its original goal of \$500 million in 2001.

** Total extramural funding for research and development in the sciences and engineering (expenditures).

^ The endowed chairs goal was increased to 125 after the university reached its original goal of 75 in 2001.

Estimated.

THE FUTURE

Few if any universities could have moved as quickly and decisively as did U of L when challenged by its state and community to become even better. This energetic pace will continue and even accelerate in the remaining years of the Challenge.

As it approaches the mid-point of its strategic plan, U of L envisions notable progress in developing top-ranked academic programs, attracting and graduating well-prepared students in all disciplines, contributing to new knowledge and economic development through research, and earning the continued support of those who have invested in its progress. Past and future investments of the legislature, donors, community leaders, foundations, federal agencies and others will grow exponentially to make this progress possible.

The university will continue to work to upgrade faculty and staff salaries to be in line with benchmark institutions and appropriate employment markets—a critical factor in its ability to provide world-class education and service. The university also hopes to further expand and develop its research growth on behalf of the state through the extension of the Research Challenge Trust Fund in the next biennium.

A national metropolitan research university also



requires exceptional facilities for students and faculty. A third health sciences center research facility to complement the Donald E. and Delia B. Baxter biomedical research buildings is one priority, as is funding for research equipment. Also on the agenda is a renovation of the Natural Sciences Building on Belknap Campus to complement the university's increasing emphasis on life-sciences research and education.

U of L also hopes to continue its community and public service initiatives through Louisville's “Community at E-Main” initiative, a technology development center; the Kentucky Pollution Prevention Center, which serves businesses and communities across the state; the West Jefferson County Task Force, which monitors environmental health issues in west Louisville; and the Trover Clinic in Madisonville,

which connects U of L medical students to a community in need of health care.

Also on the agenda is the long-term conversion of the university's Shelby Campus into the Shelby Technology and Business Campus, a center that will focus on research and development in areas that match the university's mission and the community's vision for high-tech corporate development.

All of these plans—and the greater goals of the Challenge strategic plan—are in direct response to House Bill I and to the economic development goals of the surrounding community and the state. They also support the Council on Postsecondary Education's “Vision for 2020,” an agenda for Kentucky higher education that complements House Bill I.

U of L has made tremendous progress in a few short years due to the vision of Gov. Paul E. Patton, the support of Kentucky's state and federal legislators, the leadership of the Council on Postsecondary Education, the generosity of the university's alumni and friends and the hard work of faculty, staff and students. Thanks to their commitment, the University of Louisville is successfully meeting the challenge to become a preeminent metropolitan research university.

FIVE KEY QUESTIONS

In its "Vision for 2020," the Kentucky Council on Postsecondary Education asks the state's public colleges and universities five questions key to the future of the commonwealth:

- ◆ Are more Kentuckians ready for postsecondary education?
- ◆ Are more students enrolling?
- ◆ Are more students advancing through the system?
- ◆ Are we preparing Kentuckians for life and work?
- ◆ Are Kentucky's communities and economy benefiting?

As Kentucky's metropolitan research university, the University of Louisville embraces the opportunity to respond to these important questions.

TAKING ACTION

Are more Kentuckians ready for postsecondary education?

Kentucky's interest in increasing the number of residents who earn a college degree is understandable: A college education means greater economic independence and an improved quality of life for each graduate. And more college graduates mean more skilled professionals to keep the state's economy moving in the right direction.

But the road toward a college diploma doesn't begin when a student enrolls for her freshman year. It begins even before elementary school, when children start to develop their learning styles, and continues throughout elementary, middle and high school as they gain new skills and consider their futures. For some, it can begin later in life as they reassess their capabilities and make the decision to begin or return to college.

The University of Louisville supports an array of initiatives to encourage students to consider college. Academic programs across campus reach out to students of all ages to unveil the opportunities available through careers in business, education, health care, engineering, law, the arts, the sciences and more. Several programs invite underrepresented students to campus to give them a taste of college life.

U of L researchers promote learning through their studies of child development, social support services, learning styles and disabilities, teaching techniques and other factors that contribute to educational success at all ages. And, of course, U of L prepares teachers, counselors and other educators who share their knowledge throughout the state.



HIGH SCHOOL STUDENT BUILDS FUTURE THROUGH U OF L PROGRAM

COREY SANDERS dreams big as he helps his Black Achievers group build a remote-controlled model airplane.

Sanders, an aspiring mechanical engineer, sees this experience as a precursor to real-world projects. "It gives me a chance to build something that works and gives me inspiration to do something like it" as an engineer, he says.

The Louisville Male High School senior says he became interested in mechanical engineering after participating in U of L's INSPIRE program. INSPIRE (Increasing Student Preparedness and Interest in the Requisites for Engineering) is a summer opportunity that introduces the engineering profession to minority and female high school students.

Prior to attending INSPIRE, Sanders thought he wanted to be an architect. He discovered, however, that he "would rather build it than draw it."

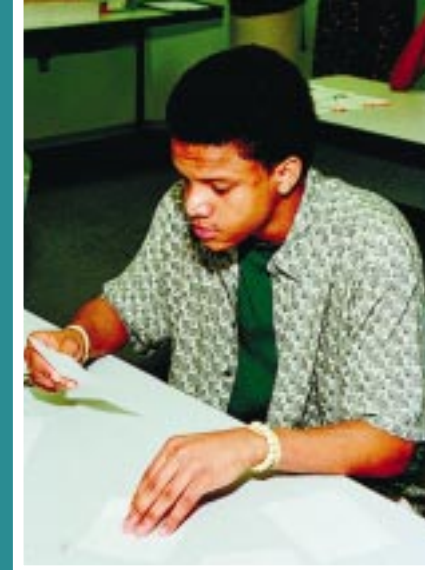
INSPIRE mixes classroom instruction by Speed Scientific School faculty with field trips to area businesses. The Louisville Water Co., General Electric Co.'s Appliance Park and North American Stainless in Carroll County are among the firms visited by INSPIRE students.

"We got to go to sites where people work and see everyday things they deal with in their jobs," Sanders says.

In the engineering profession, minorities and women traditionally are underrepresented. About 8 percent of U of L's engineering students are African-American and about 18 percent are women, according to INSPIRE coordinator Brenda Hart, a Speed School professor. She said both figures are approximately the same as the national average.

About 25 students participate in the four-week program each year. To be admitted, students must show above-average math and science skills, write essays on why they want to participate, and be recommended by their math and science teachers and guidance counselors.

Sanders says it's a program he readily would recommend to his friends. "It keeps you thinking," he says. "You get to do things you wouldn't normally get to do."





MEETING THE CHALLENGE

- ◆ U of L mathematics and education faculty work with middle and high school math teachers to ensure a seamless transition for college-bound math students.
- ◆ U of L's Center for Research on Early Childhood Issues and Initiatives serves as a national resource for information on early childhood issues.
- ◆ The Health Professions Partnership Initiative, a cooperative effort between U of L and the Jefferson County Public Schools, introduces minority high school students to careers in nursing.
- ◆ The reconstructed Gheens Science Hall and Rauch Planetarium is a statewide resource for elementary, middle and high school math and science teachers and their students.
- ◆ The College of Arts and Sciences, through its Future Scholars Program, invites minority high school students to campus to take summer enrichment courses and work with faculty members who encourage them to pursue higher education.
- ◆ Primary, middle and high school teachers learn to integrate mathematics, writing and technology into the classroom through an annual summer institute offered by the College of Education and Human Development.
- ◆ U of L's Theatre Arts Repertory Company performs culturally diverse classic, folk and modern plays at elementary, middle and high schools.
- ◆ High school students learn to analyze legal issues and prepare cases during a summer institute sponsored by the Brandeis School of Law, the Louisville Bar Association and the Louisville Bar Foundation.
- ◆ U of L psychology professors have formed research partnerships with the Jefferson County Public Schools Head Start Program to identify early signs of attention deficits and with the Jump-start Program to study how young children learn math.
- ◆ Social workers in schools are better prepared to respond to the complex social problems faced by students and families thanks to a new certification program developed collaboratively by U of L, the Jefferson County Public Schools, the University of Kentucky and Spalding University.
- ◆ African-American high school juniors learn about careers in business when they visit campus each summer through Project Build, a program offered by the College of Business and Public Administration in concert with the Lincoln Foundation.
- ◆ U of L faculty and their counterparts at other Kentucky universities are tracking the effectiveness of efforts to reduce illiteracy and improve reading instruction for children in the state's rural and urban areas.
- ◆ U of L hosts the Kentucky Geography Bee and the Louisville Regional Science Fair each year.



FUTURE TEACHER HOPES TO HAVE 'A PROFOUND IMPACT' ON STUDENTS' LIVES

RACHEL GRANT believes that teaching is an ideal career for high-achieving students.

"It bothers me to think that many smart and motivated students choose to go into other fields," the 20-year-old U of L junior and Trustees Scholar explains.

Grant comes from a family of teachers—there are about 15 on her father's side alone, including all of his brothers and sisters. Still, she never thought she would want to teach until she began working with the children's ministry at her church.

"I found that I really liked it," she says.

"A child's outlook on the world might seem naïve and innocent, but he can really throw some wisdom into a complex situation. Things an adult might think are difficult can be so simple when seen from a child's perspective."

Her decision was clinched when she watched how her little brother and cousins responded to their teachers.

"I wasn't sure they were getting the quality of education and guidance they deserve," she explains.

A Trustees Scholarship is financing both Grant's undergraduate and graduate degrees. The scholarship program, which was established to reward Kentucky's academically gifted high school seniors and entering college freshmen, attracted this dedicated student to U of L. She is working on a bachelor's degree in English and plans to follow that up by earning a master of arts in teaching.

Grant's goal is to teach elementary school children. After spending a semester observing at Roosevelt-Perry Elementary in downtown Louisville, she is particularly interested in working with inner-city children.

Her professors have shown Grant how to motivate students through innovative and spirited teaching. As a case in point, she tells of a class taught by music education professor Robert Amchin, who demonstrated how to go beyond the pure mechanics of music and incorporate math and other subjects into the classroom, too.

These same professors also have kept Grant enthused about her career choice, an attitude that she hopes to pass on to her own students someday. Through example they have reinforced her belief that teaching is one of life's most important and rewarding careers.

"Teaching should be very hard to get into, just like becoming a doctor," Grant notes. "You will have a profound impact on a child's life. That's why you need really good, well-educated people in the classroom."

TAKING ACTION

Are more students enrolling?

Some of the best education on a college campus occurs when students learn from each other. This is especially true when students from different backgrounds, ethnic groups and cultures—students who may never have met if not at a university—gain insight into their similarities and differences.

The University of Louisville enrolls an increasingly diverse and academically talented student body; while most students come from Kentucky, many arrive from other states and countries. Still others study at off-campus sites around the world.

As part of its mission to raise its profile as a national metropolitan research university, U of L is working with the concurrence of the state's Council on Postsecondary Education to change the makeup of its student body in an approach that might be termed "better, not bigger."

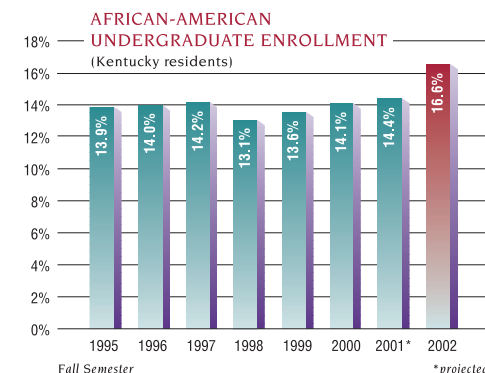
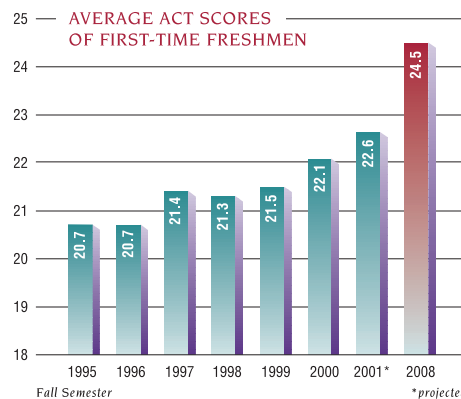
The university's goal is to slightly decrease its undergraduate enrollment while attracting increasingly better prepared new freshmen. At the same time, the university is expanding its enrollment of doctoral and professional students to ensure increasing numbers of highly qualified graduates in fields important to the state. By 2008, U of L anticipates that the student body will include 14,300 undergraduate students, 4,720 graduate students and 1,280 professional students.

As the Challenge for Excellence plans, the average ACT score of each freshman class is growing, as is the number of African-American students who choose U of L.

U of L is committed to ensuring that no qualified student who wants to attend the university is turned away due to lack of funds. Students who are not qualified initially can get additional preparation through the Pathways to

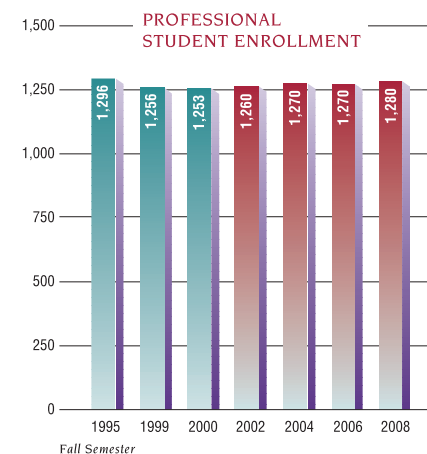
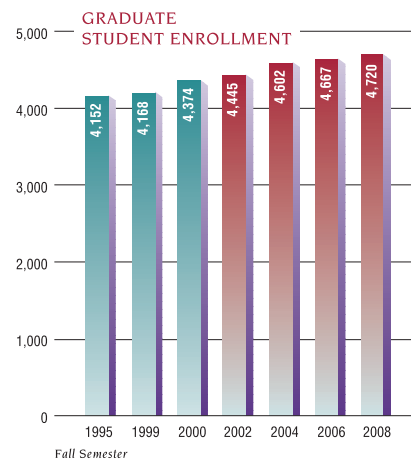
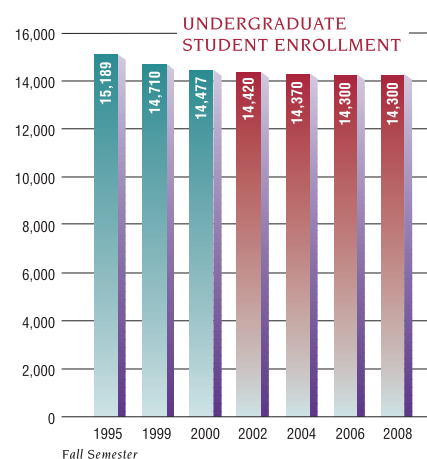
Success program. They are guaranteed admission to U of L once they meet agreed-upon requirements through Jefferson Community College. Meanwhile, they have access to U of L support services, recreational facilities and housing so they can become members of the university community even before they officially enroll.

Metropolitan College, an innovative program developed in response to a shortage of workers at United Parcel Service's Louisville hub, provides both employment and a free college education. Sponsored by UPS, U of L, Jefferson Community College and Jefferson Technical College, it has drawn national attention as a cooperative effort tying together economic development and higher education. More importantly, it has made higher education available to many who would not have considered it otherwise.



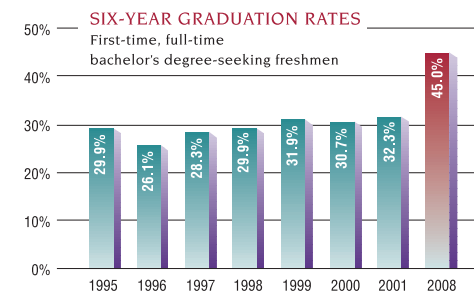
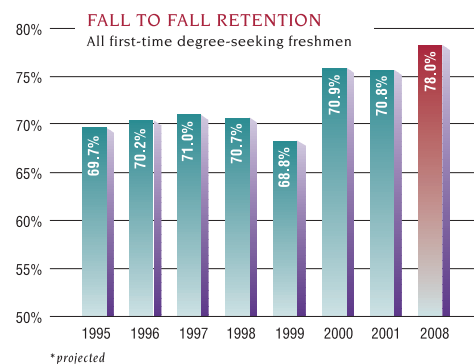


- ◆ In 2001-2002, U of L is providing \$17.7 million in scholarships and financial aid for new and returning students; this reflects a 30 percent increase in aid over the previous year.
- ◆ U of L is the only university in Kentucky to achieve all of its equal opportunity goals, which focus on the enrollment, retention and recruitment of Kentucky African-American undergraduates as well as on the employment of African-American faculty and staff.
- ◆ The university offers a number of academic programs for students interested in leadership, African-American issues, women's studies and many other areas.
- ◆ U of L is attracting better prepared students each year. The average ACT score of first-time freshmen has increased from 20.7 to 22.7 since 1995, and the number of students with scores higher than 27 has increased from 300 to 350 in just two years.
- ◆ U of L's Vision for Diversity, approved by trustees, commits the university to "building an exemplary educational community that offers a nurturing and challenging intellectual climate, a respect for the spectrum of human diversity, and a genuine understanding of the many differences...that enrich a vibrant metropolitan research university."
- ◆ High achieving students hoping to become physicians or attorneys can get advance preparation while they're still undergraduates through educational programs sponsored by the schools of medicine and law.



MEETING THE CHALLENGE

- ◆ U of L's retention rate for first-time African-American freshmen reached a record 78.2 percent in 2000.
- ◆ Students in the honors program tackle pressing societal concerns, pursue in-depth research and mentor other high-achieving U of L students.
- ◆ U of L's May 2001 commencement speaker was Vedra Abdomerovic, a native of Bosnia who was chosen as the outstanding graduate in the College of Arts and Sciences. The honors student is now enrolled in U of L's medical school.
- ◆ Bettie Johnson Hall, a state-of-the-art residence facility, opened in 2000 to increase on-campus living opportunities for students—a factor that contributes to the decision to stay in school. The university will break ground for additional student housing next year.
- ◆ U of L students have the opportunity to study around the globe; an international service learning program allows them to help people in other countries evaluate health care needs, build skills and learn about other cultures.
- ◆ The U of L Libraries hold nearly 2 million volumes and hundreds of special collections; U of L is a candidate for membership in the prestigious Association of Research Libraries.
- ◆ The university has invested more than \$12 million in its technology infrastructure to ensure that students and faculty have access to state-of-the-art technology for study and research.
- ◆ U of L is reinvesting more than \$21 million of internal funds into high priority programs and projects, including student initiatives and improved salaries to help attract and retain outstanding faculty and staff.



TAKING ACTION

Are more students advancing through the system?

Successful students are challenged by their courses and connected to the university through their faculty and peers. They have ready access to academic and support services as well as top-notch facilities and equipment.

U of L is committed to providing a campus environment meeting all of these needs so that students who choose the university also opt to stay here. Since the start of the Challenge for Excellence, the university has invested in technology, library holdings and facilities, recreational facilities, new and upgraded residence halls, and classroom and laboratory renovation.

The new Resources for Academic Achievement (REACH) Center brings together academic advising, tutoring, career counseling and other student services. An honors program provides opportunities for high-achieving students,



and academic and social organizations help students develop connections across campus.

Most notable is the university's emphasis on rigorous, relevant academic programs at every level. After carefully evaluating all of its programs, U of L eliminated or suspended those with low enrollment, combined others, and added new programs based on the university's strengths and the needs of its students and the state.

When university officials felt that they couldn't continue to offer quality allied health programs without a significant investment at a time when many of the programs were duplicated elsewhere, U of L collaborated with local schools to transfer the programs to make sure community needs would still be met. In fact, "collaboration" is a common theme on campus as U of L engages in joint programs and research with the University of Kentucky, Western Kentucky University, Jefferson Community College and other schools—all in the spirit of House Bill 1, which calls for "an efficient, responsive and coordinated system of autonomous institutions."

The Challenge will bring continued progress in raising retention and graduation rates for all U of L students and increasing the number of doctoral graduates. The university's renewed focus on the environment for its students already has made a difference.



WELL-ROUNDED GOLDWATER SCHOLAR ON FAST TRACK TO CAREER IN SCIENCE

As a precocious high school sophomore, ROSEANNE CHENG had an intellectual curiosity that reached beyond the offerings of her high school science labs.

Cheng decided to expand her horizons through a mentoring program U of L offers academically gifted high school students. That choice placed her on a fast-track journey into the world of serious scientific inquiry.

U of L professors quickly spotted her exceptional talent, and soon the duPont Manual High School student was helping them conduct advanced physics research. Today, she is a U of L physics major in the College of Arts and Sciences and the recipient of a prestigious national honor from the Barry M. Goldwater Scholarship and Excellence in Education Foundation.

Cheng, a junior enrolled in the university's honors program, is one of only 302 college sophomores and juniors nationwide to be named 2001 Goldwater Scholars last spring. She is receiving a full-year scholarship that covers the cost of tuition, fees, books and room and board. The Goldwater Scholars program seeks to foster and encourage outstanding students to pursue careers in math, science and engineering.

At U of L, Cheng has helped physicist David Brown conduct data simulations for an international research project based at the Stanford Linear Accelerator Center. She also assisted electrical engineer Robert Cohn in a geometric optics study and helped physics faculty design and build equipment for high-energy astrophysics. In addition, she has been involved in a study of quark production.

Cheng plans to pursue her research interests at the graduate level and earn a Ph.D. in physics. "My ambitious career goal is to be a good theoretical physicist for the field, but more importantly, for myself," she said on her scholarship application.

She will bring to graduate studies an extraordinary amount of hands-on research experience, says U of L physicist Shi-Yu Wu. Her research background already "would be the envy of any student with a B.S. in physics and definitely surpasses that of her peers," Wu adds.

Cheng's inquisitive nature is not limited to physics. "She is interested in language and literature, culture, politics and more," Brown says. "These never distract her from her main interests in science and math, but they make her a well-rounded and interesting human being."

BUDDING ENTREPRENEUR GETS REAL-WORLD LOOK AT BUSINESS

To master the complexities of today's turbulent business world, students need to learn much more than sound business and management practices. They also must know how to think like entrepreneurs, manage technology, develop innovative business strategies and create a versatile human resource program to attract and retain quality employees.

U of L's College of Business and Public Administration incorporates all of these facets into a curriculum that has earned it national recognition—and the admiration of its students, too.

MARTY ECKART is a case in point. The 30-year-old structural engineer spent three years in Seattle designing bridges and piers before he returned to Louisville to work in his family's electrical supply company. He enrolled in the college's integrative master of business administration (IMBA) program to learn what he needed to know to help take his family's 40-year-old firm into its third generation of ownership.

"But once in the program I realized I had an entrepreneurial drive," he says. "I left Eckart Supply after two years because I wanted to start something myself."

He just wasn't quite sure what it would be.

"I also wanted to get some high-finance experience under my belt and understand how the market works," Eckart adds.

The IMBA program helped him sort it all out.

The program uses innovative approaches, from cross-disciplinary teaching and group problem-solving to corporate partnerships, to teach students how to think critically and creatively and to give them a real-world perspective of business.

Halfway through the program, Eckart says, he already is well-versed in what it takes to make it in the business world and, even more importantly, knows exactly how he fits into the scheme of things.

"The professors teach you to look at yourself and your core skills along with the marketplace and home in on the opportunities out there," Eckart says. "Then they show you how to develop a business plan and put together a team to make your ideas happen."



As part of that process, finance professor Dianna Preece helped Eckart gain an internship at Ventas, a real estate investment trust in Louisville. His work there as a financial analyst, where he deals daily with debt-structuring strategies, has given him an intimate look at both the real estate and corporate worlds.

At the same time, guest lecturers in the IMBA classrooms put Eckart and his classmates into direct contact with some of Louisville's leading business personalities—and have opened the doors to a whole network of potential investors.

Eckart says, "The business college and my internship have put me in touch with the right people."

His IMBA experiences also have helped define the direction he wants to take with his own enterprise, he adds.

"I plan to tie my knowledge of structural engineering and the family business together by going into real estate development. I'm working on that idea right now, and soon I'll see if it's really viable."

The IMBA program has left Eckart with one more asset that will prove invaluable as he pursues his business dream: self-confidence.

"You get a lot of real-world experience that teaches you the smart way to start a business, rather than just fumbling around," he explains.

"It shows that you really can put together a strong and viable business."

TAKING ACTION

Are we preparing Kentuckians for life and work?

A university education should prepare students for real life. College is more than simply career training; it's an avenue to help students become critical and ethical thinkers who will contribute to their communities and continue to learn throughout their lives.

U of L's location in Kentucky's most populous region provides students with ample opportunities to learn at businesses, industries, schools, health and legal clinics and governmental, social service and arts agencies. Students at all levels, including undergraduates, can get involved in meaningful research working alongside senior faculty. These hands-on experiences allow them to apply what they learn in the classroom—and expand their skills so

they are better prepared for life after college.

Of course, quality academic programs lay the foundation for student success.

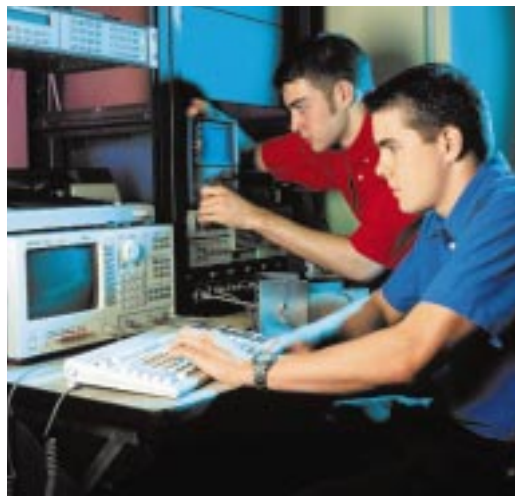
The academic areas targeted for investment by U of L's Challenge for Excellence relate directly to the needs of Kentucky, from urban studies and bioengineering to teacher education and the fine and liberal arts. Environmental health, logistics and distribution, industrial engineering, public policy, global studies, the sciences, entrepreneurship, early childhood development, labor and management, nursing, dentistry and computer sciences are among the many options open to students.





How does the university ensure that it is meeting the needs of students and employers? It asks.

U of L has initiated a comprehensive evaluation program that surveys entering, undergraduate and graduate students as well as alumni and employers to assess its effectiveness. The answers will help the university further improve its offerings and services.



- ◆ Students in U of L's joint doctoral program in social work, offered with the University of Kentucky, study such timely issues as Kentucky's welfare reform, mentally ill mothers, nursing home abuse, domestic violence and more.
- ◆ The Brandeis School of Law was among the first law schools in the country to include mandatory public service in its curriculum. Each year Brandeis students donate more than 4,500 hours of law-related work to local, state and national organizations.
- ◆ U of L's dental students have a pass rate of 100 percent on licensing exams; they contribute more than 1,500 hours of volunteer service to the public each year.
- ◆ U of L business students gain practical experience and build their resumes working in regional firms; the firms, in turn, gain the opportunity to identify future employees.
- ◆ Music students work with award-winning faculty composers and artists and perform at events around the world. The School of Music houses the Crawmeyer Collection, one of the world's largest and best collections of new music.
- ◆ Speed Scientific School's mandatory cooperative education program is one of just five engineering programs in the country that require real-world experience. Students work at such industrial powerhouses as General Electric, Ford, Exxon, DuPont, IBM, UPS, Rohm & Haas and Eli Lilly and earn income while working on their degrees.
- ◆ Future leaders planning careers in a variety of fields benefit from courses, seminars and opportunities to meet and learn from national and international leaders through the McConnell Center for Political Leadership.
- ◆ U of L dentistry, nursing, social work and medical students gain valuable experience by providing free health screenings and referrals in Kentucky communities faced with a shortage of health care providers.
- ◆ Future teachers studying in the College of Education and Human Development get early and frequent exposure to the classroom to help prepare them for the challenges of a teaching career.
- ◆ A cooperative education program in the College of Arts and Sciences gives students community work experiences that improve their prospects for employment and entry into advanced degree programs.

- ◆ The Information Technology Resource Center acts as an incubator and resource for technology-based businesses, and the Center for Research on Entrepreneurship and Enterprise Development helps fledgling companies grow and thrive.
- ◆ Speed Scientific School works with a consortium of more than 70 businesses and industries to cut the time it takes to bring a product to market through the use of sophisticated rapid prototyping equipment.
- ◆ U of L researchers are studying ways to repair spinal cord injuries, new diagnostic techniques, disease prevention, new drugs for cancer and Alzheimer's and much more.
- ◆ More than 250 social work students support Kentucky communities through their work with human service agencies and contribute more than \$1 million worth of voluntary service each year.
- ◆ Family-owned businesses benefit from workshops and counseling provided through the Family Business Center, a joint program of the College of Business and Public Administration and the Jewish Community Center.
- ◆ "Our Highest Potential" is a U of L-supported community initiative that links the university's academic and research strengths with the interests of African-Americans.
- ◆ The Kentucky Pollution Prevention Center helps businesses recycle wastes, comply with pollution regulations and develop innovative techniques to improve the environment.
- ◆ Louisville's health care capacity is growing rapidly due to the development of a biomedical park by U of L, the city and Jewish, Norton and University hospitals.
- ◆ Minerva Ventures is a private, university-affiliated corporation created to turn research and other intellectual projects into economic development opportunities.
- ◆ The Urban Design Studio, a joint initiative of U of L's urban and public affairs program and the University of Kentucky's architecture program, is creating development ideas for downtown Louisville.
- ◆ More than 57,000 of the university's 100,000 alumni live and work in Kentucky.
- ◆ Engineering faculty and students at the Speed School are working with the U.S. Army and Ford Motor Co. to develop a more fuel-efficient, durable, corrosion-resistant and low-cost truck for commercial and military use.
- ◆ The Logistics and Distribution Institute explores how materials move through the supply chain to the marketplace to help businesses deliver products quickly and cost-effectively.
- ◆ The James Graham Brown Cancer Center has attracted more than \$26 million in funding for cancer research and treatment.

TAKING ACTION

Are Kentucky's communities and economy benefiting?

Community impact can be measured in dollars as well as in quality of life. The University of Louisville contributes to its community and region both ways.

As U of L's research capacity has grown with a significant boost from Kentucky's Research Challenge Trust Fund, the university has attracted new funding from donors, foundations and federal agencies. In 2000-2001, university researchers received nearly \$33 million in federal funding for research and development in the sciences and engineering and more than \$47 million in funding overall. Every dollar can be translated into a benefit for the state.

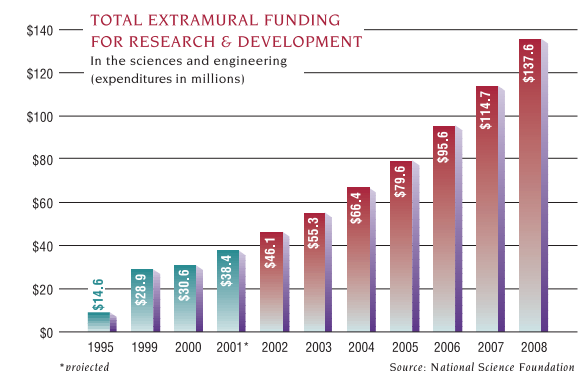
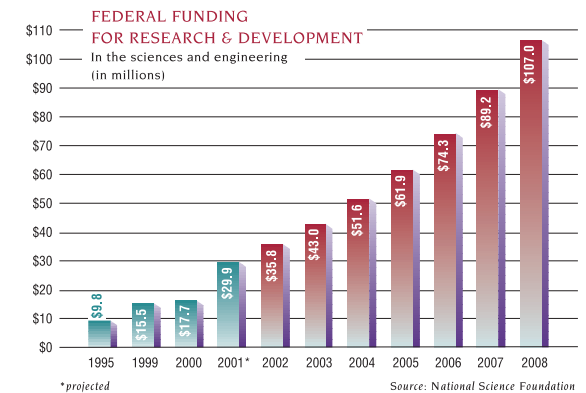
A \$1 million federal research award to the university's School of Medicine, for example, means 15.5 new university jobs at an average annual salary of \$53,550, according to economics professor

Paul Coomes. These new employees translate into \$2.22 million in increased revenue, \$1.42 million in increased payroll, and 23 new local jobs for area businesses and organizations. State government, in turn, receives an additional \$100,000 in new income and sales tax revenue, and local governments receive \$28,000 in new occupational tax revenues.

Beyond the numbers, Coomes predicts that the university's research focus will lead to increases in patents, royalties and business development as top researchers and students translate their work into concepts and products that benefit the city and state.

U of L contributes to the quality of life in Kentucky in many other ways. It enriches lives through its

theater, music, arts and humanities programs; leads to improved health through its dentistry, medicine and nursing programs; promotes economic development through engineering and business programs; and addresses community and state issues through social work and the sciences. In fact, many of its schools and departments work collaboratively in all of these areas, enhancing academic life for students and the quality of life for the community and commonwealth.





ECONOMIC IMPACT OF FEDERAL RESEARCH AWARDS

Each **\$1 million** in federal funding to medical research means more than **\$4.5 million** to support the state and local economies.

\$2,200,000	in increased local revenue
830,000	in new university payroll
1,420,000	in new local payroll
100,000	in tax revenue for state government
28,000	in tax revenue for local government
<hr/>	
\$4,578,000	

U of L attracted nearly **\$33 million** in federal funding for research and development in the sciences and engineering last year, translating into approximately **\$150 million** in economic benefits to Kentucky.

Source: Paul Coomes, U of L Department of Economics

MEDICAL ACHIEVEMENTS MARK LOUISVILLE AS THRIVING HEALTH CARE CENTER

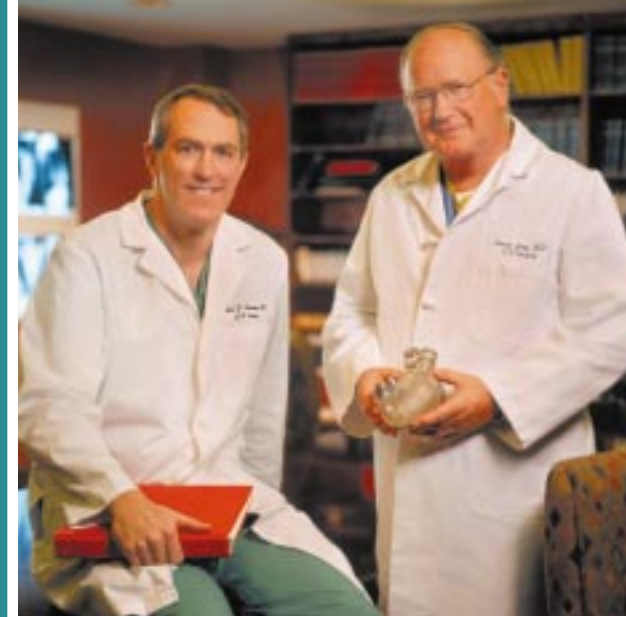
Imagine not being able to walk across the street or to pick up your grandchild. Imagine living every minute with the knowledge that your life will end in a matter of days.

That was the reality facing two Western Kentuckians because of failing hearts—until they met DRS. LAMAN GRAY (far right) and ROBERT DOWLING.

Working in conjunction with a surgical team from Jewish Hospital and artificial heart developer ABIOMED Inc., the doctors placed an AbioCor artificial heart in each patient during separate procedures on July 2 and Sept. 13, 2001. The first totally internal artificial heart implants in the world made medical history and drew international attention to Louisville and Kentucky.

While the implants may be the most dramatic in a series of recent medical innovations by U of L-associated doctors and researchers, they are part of a long history of achievement dating back to 1837, when the Louisville Medical Institute first opened with 100 students. Through the years the entire community has benefited from the prestigious talents the school has attracted—people such as Samuel Gross, one of the greatest surgeons of the 1800s and a founder of the American Medical Association, and Joseph McCormack, whose work eradicating deadly diseases in the late 19th century saved thousands of lives and earned him recognition as “the father of public health.”

That legacy of innovation and caring continues today as some of the world’s top medical professionals settle at U of L’s health sciences campus in downtown Louisville, where they in turn attract other top researchers and scholars along with millions of research dollars to the community. Working with some of the area’s major health care concerns, the university is a key player in establishing this area’s reputation



as a medical mecca. Each year, the Louisville medical center collectively serves more than a half-million patients who come from around the globe to benefit from leading-edge research, diagnosis and treatment, especially in the areas of cardiac care, organ transplantation, pediatrics, spinal cord injuries, hand injuries, trauma, geriatrics and cancer.

The center has an important economic impact on the region, too, employing 12,000 people with a half-billion dollar payroll. To capitalize on this exciting potential, U of L has joined the city and several hospital partners to form the Louisville Medical Center Development Corp. This strategic organization devoted to promoting and coordinating the area’s medical efforts already has created an incubator to help start-up companies and has made great strides toward building a state-of-the-art biomedical research park.

With the help of its many partners, the university is capitalizing on its successes and beginning to see its investments in the health care industry take root and blossom. Even better, it is creating new learning opportunities for students and supporting not only the well-being of Kentucky residents, but that of people everywhere.



THE CHALLENGE FOR EXCELLENCE



UNIVERSITY of LOUISVILLE[®]
dare to be great

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COVER PHOTO: Rock climber photo by
Chris Cole/Getty Images/The Image Bank

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