

## CHAPTER 2

# ACADEMIC UNITS

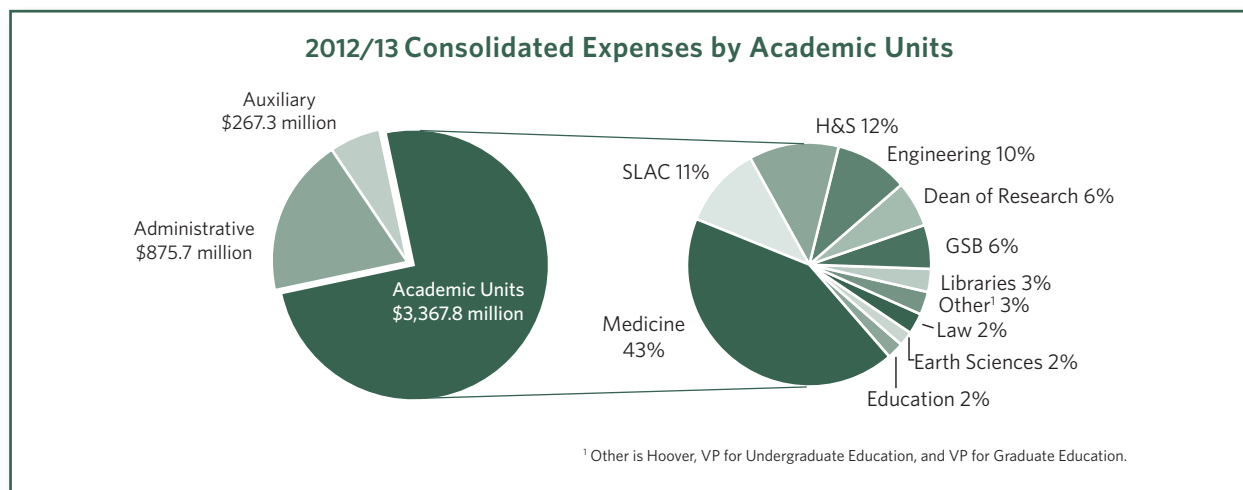
### OVERVIEW OF ACADEMIC UNITS

This chapter summarizes programmatic and financial activity for each academic unit. The revenue expectation in 2012/13 for these academic units comprises over 75% of the university total revenue. Overall, the academic units project an operating surplus of \$68.6 million. After transfers to facilities and endowment, the unit budgets overall will be virtually balanced with a \$17.9 million surplus.

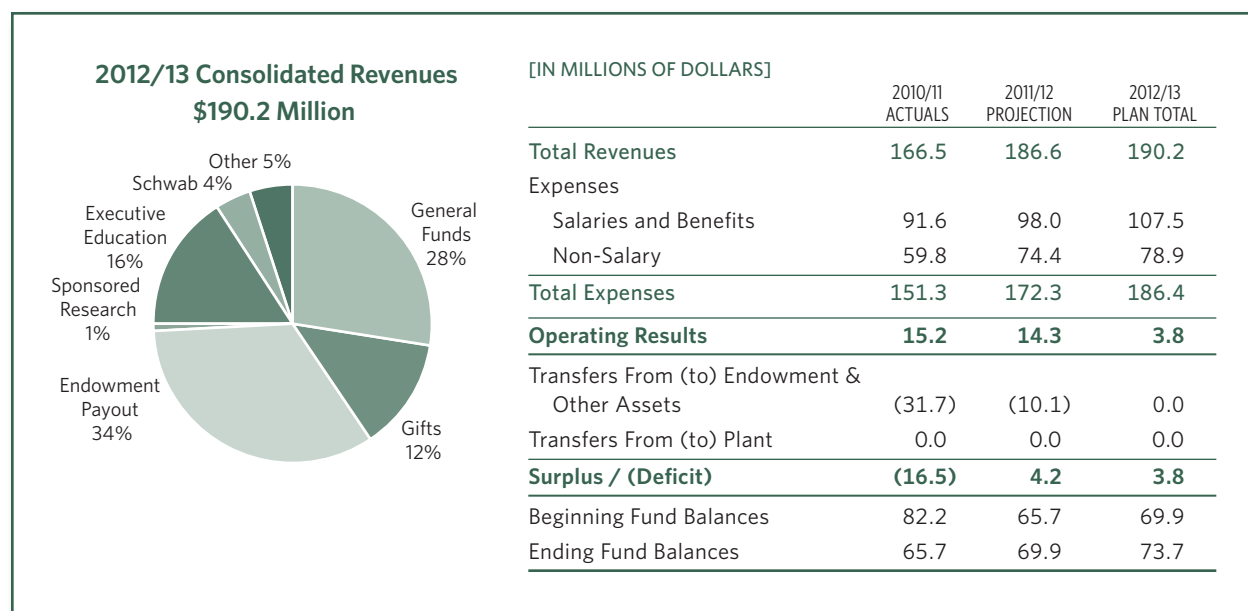
### CONSOLIDATED BUDGET FOR OPERATIONS BY UNIT, 2012/13: ACADEMIC UNITS

[IN MILLIONS OF DOLLARS]

	TOTAL REVENUES AND TRANSFERS	TOTAL EXPENSES	RESULT OF CURRENT OPERATIONS	TRANSFERS (TO)/FROM ASSETS	CHANGE IN EXPENDABLE FUND BALANCE
<b>Academic Units:</b>					
Graduate School of Business	190.2	186.4	3.8		3.8
School of Earth Sciences	58.5	55.1	3.4	(3.5)	(0.1)
School of Education	53.6	54.2	(0.5)	(0.4)	(0.9)
School of Engineering	352.9	344.5	8.4	(3.6)	4.7
School of Humanities and Sciences	430.3	413.7	16.7	(23.6)	(7.0)
School of Law	72.9	69.0	3.9	(3.8)	0.1
School of Medicine	1,497.9	1,459.6	38.3	(17.1)	21.2
Vice Provost Dean of Research	190.0	195.9	(5.9)	4.8	(1.1)
Vice Provost for Undergraduate Education	45.0	43.5	1.5	(1.5)	
Vice Provost for Graduate Education	7.0	7.0			
Hoover Institution	47.5	45.3	2.2	(2.8)	(0.5)
Stanford University Libraries	105.9	109.5	(3.6)	1.0	(2.6)
SLAC	384.5	384.0	0.4		0.4
<b>Total Academic Units</b>	<b>3,436.4</b>	<b>3,367.8</b>	<b>68.6</b>	<b>(50.6)</b>	<b>17.9</b>



## GRADUATE SCHOOL OF BUSINESS



### Programmatic Directions

The Graduate School of Business (GSB) continues the momentum established over the last few years. It has completed the Knight Management Center, its new home for innovation, impact, and inclusiveness. The vision for the center reflects a commitment to creating space that enables collaboration between faculty and students, between the GSB and the rest of Stanford, and with the global business community. The buildings support today's GSB community and provide space flexible enough to enable growth and change over the next century and beyond. Certified by the U.S. Green Building Council as LEED Platinum®, its highest rating for environmental sustainability, the center is responsible in its use of energy, water, and materials while providing a wonderful environment for people. The Knight Management Center underscores and augments what is distinct about the GSB: its transformative education, preeminent scholarship, unrivaled community, and distinctive culture. By creating a home that facilitates intellectual discovery, ambitious dreams, and innovation, the school further inspires faculty, students, and alumni to change lives, change organizations, and change the world.

The GSB will continue to build upon its global impact and presence with the establishment of the Stanford Institute

for Innovation in Developing Economies (known informally as SEED). This institute was established with a \$150 million gift from Dorothy and Robert King, MBA '60. This gift is among the largest ever to Stanford University. The institute's aim is to stimulate, develop, and disseminate research and innovations that enable entrepreneurs, managers, and leaders to alleviate poverty in developing economies. Its work is based on the belief that a critical route for economic growth is the creation of new entrepreneurial ventures and the scaling of existing enterprises. The work of SEED will span research, education, and applied on-the-ground work to support entrepreneurs and help enterprises scale.

Non-degree programs in entrepreneurship and innovation are another avenue for expanding global presence and impact. The Program in Innovation and Entrepreneurship (PRIE) was the first such program at the GSB. Launched in 2010/11, PRIE is a four-month academic program for individuals formulating, developing, and commercializing ideas. It leverages design thinking and local entrepreneur and venture capital communities to conceive, develop, and accelerate the launch of new products. The program uniquely combines current Stanford masters, PhD, MD, and postdoc students with Silicon Valley innovators, scientists, and engineers. This is the only part-time program currently

offered at the GSB, but it is anticipated that additional part-time programs will be launched within the next few years.

Global study trips for faculty also expand the school's global presence without building facilities abroad. The purpose of these trips is for faculty to broaden and deepen their knowledge and to learn more about the culture, history, and business climate of the country visited. Each trip includes twelve to fifteen faculty members and a few senior staff. The destinations vary from year to year based on faculty interest. During 2011/12, trips to Brazil and Indonesia have been planned. Initial plans for 2012/13 include trips to Russia, the Middle East, and China. Feedback from the faculty has shown these trips to be excellent development efforts that strengthen the faculty both individually and as a whole.

Leadership at the GSB previously determined that 110 tenure-line faculty members are needed to support the teaching and research efforts of the school. After several years of aggressive recruiting in a difficult environment, the school met its goal of growing the faculty to this size for 2011/12, allowing it to better support academic requirements of teaching and research. Program growth and research initiatives, however, have led to the need for additional faculty. The school intends to add ten more tenure-line faculty members and has authorized searches in all disciplines during 2011/12. Three of these searches are related to SEED. The school also intends to grow the PhD program to match the complement of faculty so that the ratio is 1:1.

## Consolidated Budget Overview

The 2012/13 GSB consolidated budget for operations shows total revenues of \$190.2 million and expenses of \$186.4 million, yielding a budget surplus of \$3.8 million.

Compared to the current year-end forecast, GSB revenues for 2012/13 are projected to grow by about \$3.6 million, with tuition revenue for degreed programs increasing 4.0%.

Tuition for first-year MBAs will increase 3.8%, which is similar to the increases in prior years. Sloan tuition will remain flat; however, planned growth in class size will contribute to overall tuition growth. The school forecasts executive education revenues to be flat due to programmatic changes intended to position the program for future growth.

Endowment income will increase about 10% over the current-year projection, driven by increased payout from the university, reinvestment of unrestricted reserves in the endowment, and, most significantly, new gifts, particularly the SEED gift. During 2010/11, the endowment provided 32% of overall funding for the school, particularly for teaching, research, and fellowships. In 2012/13 the school expects expendable gifts to be \$3 million lower than the current year-end forecast due to the end of the Stanford Challenge.

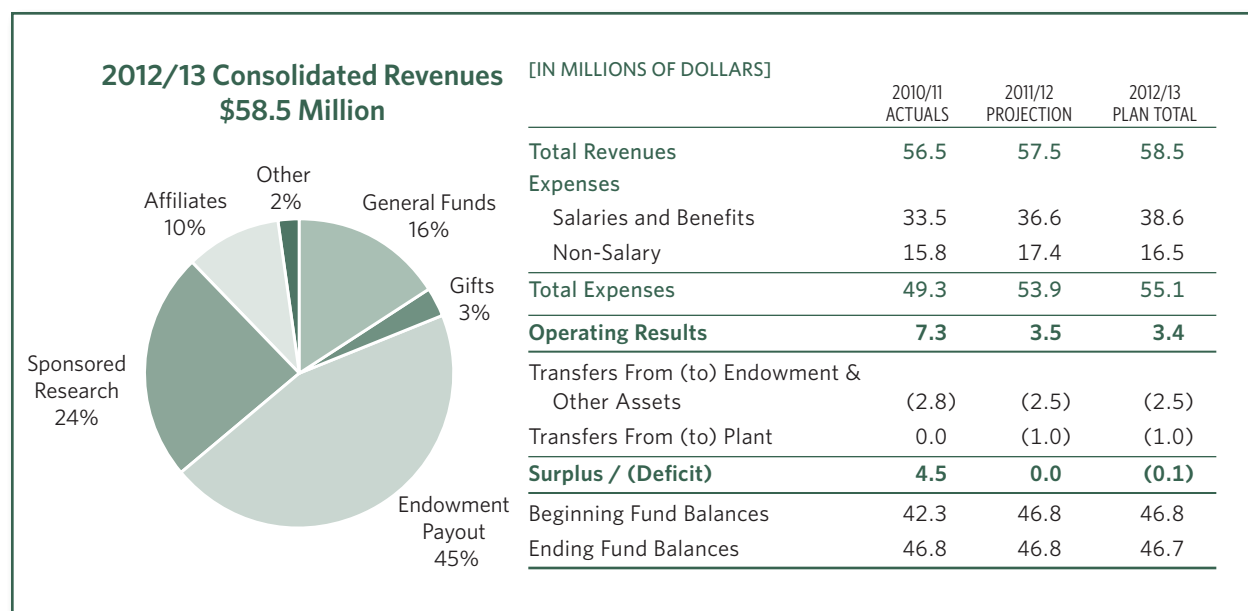
GSB projects that its expenses will increase about 8% from the 2011/12 year-end forecast as it launches the SEED initiative and adds faculty. The school also intends to increase financial aid support to match tuition increases, as it has in the past. In addition to the increased operating expense at the Knight Management Center, the school continues to fund relocation costs for the central university staff formerly located on Serra Street at a cost of about \$2.0 million per year.

The GSB expects to continue to have reserves available for contingency purposes. The largest portion of the reserves is expendable gifts, which are spent over multiple years. Over the past two years, the GSB has held the total reserve balance relatively flat by investing unrestricted reserves accumulated due to surpluses into endowment. Of the projected \$73.7 million in reserves, \$10 million are unrestricted.

## Capital Plan

The GSB has begun a planning process to expand the Schwab Housing facility by 150 new beds.

## SCHOOL OF EARTH SCIENCES



### Programmatic Directions

The School of Earth Sciences (SES) has grown significantly in recent years, despite financial pressures created by the economic downturn. Dramatic increases in undergraduate and graduate enrollment, new faculty recruitment, new fields of study, and, it is hoped, a new building frame the school's plans for the upcoming year and beyond.

With the ever-growing environmental challenges facing the world, SES has seen applications for its graduate programs increase 64% since 2006/07. Enrollment is up 49% (including joint and coterminial master's students) over that period, creating a vibrant, committed, and diverse graduate community. Similar trends are seen in the undergraduate programs. Earth Systems now has close to 200 majors, many of whom go on to pursue a master's degree. It is an exciting time to be a school of earth, energy, and environmental sciences, and SES is committed to educating the leaders of tomorrow to help solve the world's most pressing problems of providing energy, water, and a safe and sustainable planet.

To expand its well-known strengths in the geosciences and engineering, SES is building a program in geobiology, an emerging discipline addressing fundamental questions at

the interface of the biological and the physical Earth sciences. With incremental resources from the university, the school hopes to welcome two new faculty in this area in 2012/13 and a third in 2013/14.

Advanced computational capabilities have become critical to all areas of SES research. Given the enormous complexity of the earth system and the growth in knowledge and observations of this system, high-performance computing (HPC) is seen as a key to leadership in these fields. In 2006 SES established the Center for Computational Earth and Environmental Sciences (CEES), which provides advanced HPC. CEES has grown into an intellectual hub for interdisciplinary research and education in computational geosciences. In response to this growth, CEES will be adding an executive director to manage the complex and sophisticated HPC hub. Additionally, in response to faculty and student demand, SES is launching a new master's degree in computational Earth, energy, and environmental science in partnership with Stanford's Institute for Computational and Mathematical Engineering (ICME). This new degree, CompGeo, will be funded with school and ICME funds as well as fellowship support from external sources. The inaugural class will enter in fall 2012.

Efforts to improve the school's diversity will continue through activities in the Office of Multicultural Affairs (OMA) as well as focused faculty recruitment efforts. While progress in faculty recruitment is slow, it is gaining momentum, and the school hopes to see success in the coming year. Through efforts such as a diversity incentive fund, SES has already succeeded in increasing the number of underrepresented minority (URM) students in its graduate population. The number of diversity applicants tripled from 22 in 2011 to 60 in 2012, and the number of incoming URM students in fall 2012 will be more than double that in fall 2011. While the absolute number remains small (the increase is from four to nine), the trend is very promising.

Finally, with the end of the Stanford Challenge and the school's central position in the Initiative on Environment and Sustainability, SES is examining how to position itself for the future. As a school dedicated to understanding and solving many environmental problems, SES must communicate effectively, clearly articulating and reintroducing its mission, scope, and impact in the world. During 2012/13, the school will take a close look at its brand representation and communication strategies to position itself well for the future.

## Consolidated Budget Overview

The 2012/13 consolidated budget shows total revenues and transfers of \$58.5 million and expenses of \$55.1 million, with operating results of \$3.4 million. After Transfers to Endowment & Other Assets of \$2.5 million as well as Transfers to Plant of \$1 million, there is a projected deficit of \$135,000. The deficit will be funded from expendable reserves.

Restricted revenues in 2012/13 are projected to increase 2.3%, or \$1.1 million, from estimated 2011/12 levels. Endowment income is expected to increase 5.2%, or \$1.2 million, of which \$500,000 is to come from new gifts and pledge payments. Sponsored research revenue is projected to decrease very modestly. All other types of restricted revenue are expected to remain flat.

In 2012/13 total expenses are expected to grow 2.2%, or \$1.2 million. Compensation expenses are projected to increase 5.5%, or \$2.0 million, because of the salary program

and a modest planned increase in the number of staff and faculty. Anticipated faculty hires will be in geobiology, and CEES will add an executive director. Non-compensation expenses are projected to decrease 4.7%, or \$808,000. This is due to substantially lower levels of capital equipment and subcontract expenditures. In 2011/12, a \$700,000 expected equipment upgrade in CEES will cause a spike in spending, as will a large subcontract in federal grants and contracts.

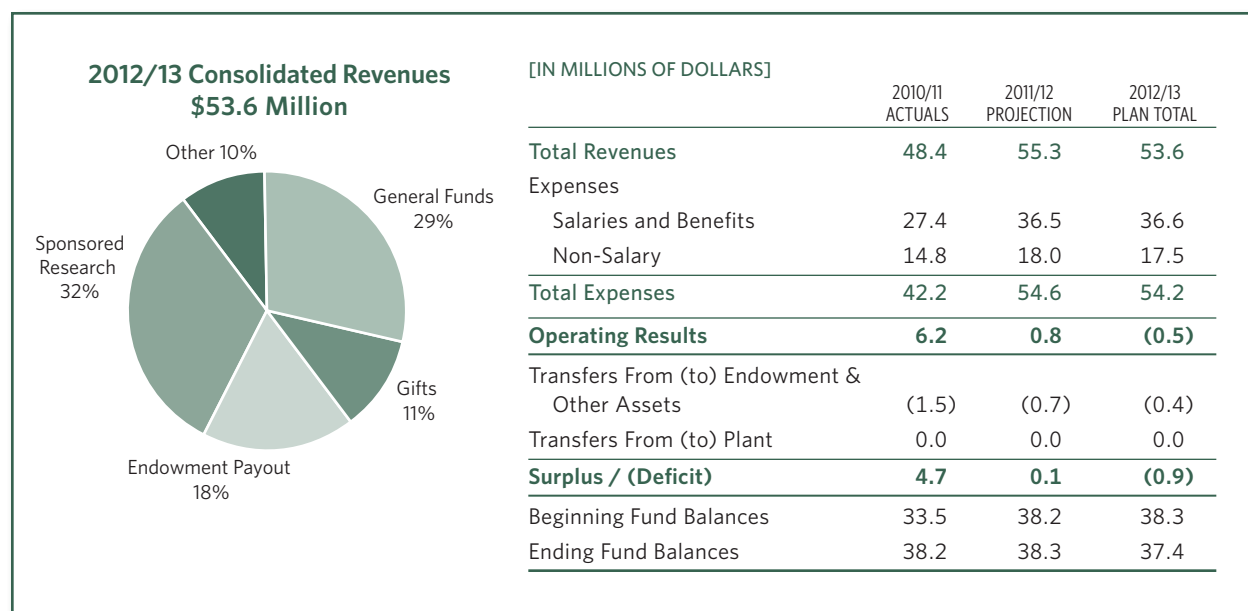
The expected \$135,000 deficit will naturally decrease the accumulated fund balance in 2012/13. While designated fund balances will increase as start-up funding for anticipated new faculty hires is received from the university, the school will draw on its healthy cumulative endowment balance to support program growth in areas such as OMA, CEES, and communications.

## Capital Plan

The Earth Sciences capital plan for 2012/13 includes, most importantly, master planning for a cohesive SES campus, including a new building to replace Mitchell Earth Sciences. Mitchell has reached the end of its useful life as a science facility, and its infrastructure cannot support the research needs of a 21st-century school devoted to Earth, energy, and environmental sciences. In spring 2012, SES launched a project to develop a plan that maps out its physical organization across multiple buildings and articulates the general components of a new facility.

Other projects slated for 2012/13 include several laboratory renovations in Green Earth Sciences to accommodate recent faculty hires, along with consolidation of labs scattered throughout the building to improve the efficiency of both equipment and technical staffing. SES also hopes to finish a series of renovations of Geology Corner begun in 2007 to improve efficiency and meet university space guidelines. Continued growth in faculty requires the creation of several more offices. These construction projects are estimated to cost \$2.4 million. The school will request support from the university and is prepared to contribute significant resources of its own to execute these projects.

## SCHOOL OF EDUCATION



### Programmatic Directions

The School of Education (SUSE) is embarking upon its first comprehensive strategic planning effort in nearly two decades. The school is reviewing its mission statement, last revised in the early 1990s. The current mission emphasizes academic leadership in cross-disciplinary research on global problems in education and provision of exemplary professional training for teachers, researchers, and educational leaders. The new vision will not abandon these emphases but likely will increase the focus on collaborative research with educational practitioners that has useful generalizable findings for institutional reform at the K-12 and postsecondary levels. Some of the most exciting recent school initiatives have been in precisely this area.

While the school has a long tradition of outstanding basic educational research, it recognizes that to have meaningful impact in the classroom, it must continually strive to disseminate research and translate discoveries into practice and policy. The following examples highlight new efforts of SUSE faculty to positively impact teaching and learning at the local and global levels.

Perhaps nowhere is the school's impact greater than within the San Francisco Unified School District. The school re-

cently hired a director to improve coordination between its roughly two dozen professional development and research projects and the real needs of San Francisco schools. Highlights among these projects are efforts to understand interracial classroom interactions, enhance the efficacy of midcareer principals, develop more effective curricula in areas such as math and literacy, and evaluate teacher performance. Already, lessons learned about effective practices and policies are being shared with districts throughout the country. The collaboration plays a central role in SUSE's efforts to contribute to improvements in U.S. public education by developing a powerful model for how universities and districts can work together.

To further broaden its impact, the school is launching an education colloquium series that will feature the work of a wide array of scholars, school leaders, and policy makers. SUSE hopes that by convening key influencers, decision makers, and thought leaders, it will catalyze meaningful and lasting education reform.

One example of how the school is expanding its sphere of influence beyond the local and national levels is the recently established Inquiry into Stanford Teacher Education Program (iSTEP) Institute. Sponsored by STEP, this week-

long program shares Stanford's approach to successful teacher preparation by convening teams of educators from universities and K-12 schools around the globe. iStep participants discuss and analyze STEP's principles and practices; engage with STEP students, cooperating teachers, local K-12 administrators, and university faculty; and then apply elements of STEP's approach to enhance programs in their home countries.

Another example of SUSE faculty collaboration to improve public education internationally is the recent launch of the Lemann Center for Educational Entrepreneurship and Innovation in Brazil. This center seeks to develop new approaches to improve learning in Brazilian public schools, as well as to create new educational opportunities inside and outside the classroom, particularly for low-income students. In addition to training educational researchers and practitioners, the center will work with Brazilian policy makers, technology innovators, and entrepreneurs to improve access and quality in the Brazilian educational system.

Over the past decade the school has been able to expand into developing fields and establish joint positions with other academic areas of the university. Incremental faculty chairs and faculty center directors have fueled faculty growth from 40-45 a decade ago to 56 in 2011/12. The doctoral student cohort, however, has been flat at about 30 per year. Thanks to additional general funds support and several new fellowship funds, the school has been able to increase that cohort to 35 for 2012/13.

SUSE is fortunate to have a highly diverse student population and continues to be dedicated to increasing diversity among its cohorts. The school is exploring new ways to reach out to local colleges and communities to build relationships and pipelines for students who might consider education as a field for graduate study. SUSE is collaborating with H&S to expand the existing Summer Research College to invite undergraduate students from other institutions to campus to work with faculty and graduate students in the field of education. The hope is that this will serve as a pipeline program for diverse students who might consider SUSE's MA and PhD programs.

The school's physical space significantly constrains its ability to teach, conduct research, and convene thought leaders.

The dispersal of SUSE faculty, staff, and students across five buildings greatly impedes collaborative interdisciplinary work. The comprehensive strategic planning process will involve rigorous conceptual work to define school core values, priorities, and direction, which in turn will inform how its physical space can complement its academic and programmatic goals.

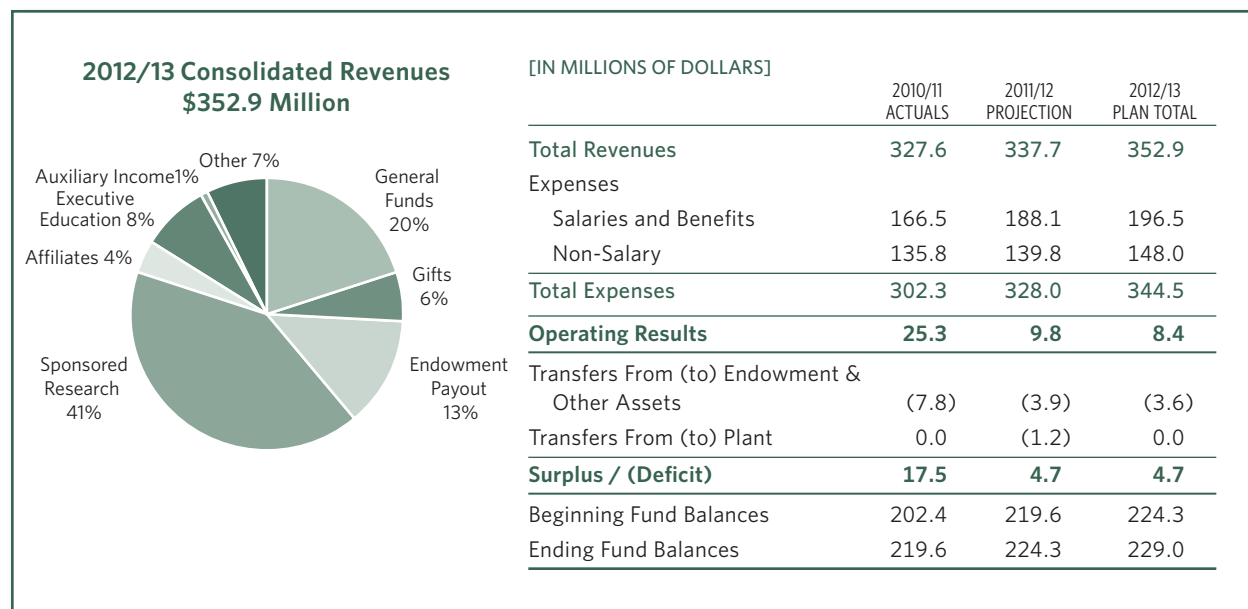
## Consolidated Budget Overview

The School of Education projects revenues and operating transfers of \$53.6 million and expenses of \$54.2 million for 2012/13, resulting in an operating deficit of \$0.5 million. After \$400,000 in transfers to assets, the school expects to post a \$900,000 deficit, which will be funded from expendable reserves. School fund balances have grown significantly in recent years, and this projected deficit reflects an anticipated spend-down of some of these reserves. For example, the John Gardner Center intends to use endowment fund balances to support operations, and the school plans to use fellowship reserves to help fund the larger doctoral cohort in 2012/13. The school is also using reserves to fund several renovation projects to improve the functionality of common areas in two of its buildings.

Education is funding new fixed-term positions in Web development, new media development, and learning technology. It also recently established a Career Resources Office whose mission will be to engage alumni and students in a mutually beneficial, lifelong connection to each other and the school. A transfer of \$400,000 from designated reserves makes these pilot programs possible. If the pilots prove successful, the school will seek funding to continue staffing those positions.

Effective September 1, 2011, the Human Sciences and Technologies Advanced Research Institute (H-STAR) moved to SUSE from the Dean of Research. H-STAR, which is primarily funded by federal research awards, is projecting a significant decrease in revenue next year due to the completion of a very large project. As a result, the school's overall sponsored research budget is expected to decline by \$2 million in 2012/13. This reverses a recent trend: school sponsored research activity (excluding H-STAR) increased 27% from 2009/10 to projected year-end 2011/12.

## SCHOOL OF ENGINEERING



### Programmatic Directions

The current state of the School of Engineering (SoE) is one of growth — most notably in undergraduate enrollment, faculty hiring, online course experimentation, research, and construction. While growth is positive and demonstrates that Engineering is prospering, it presents some infrastructural challenges, and SoE is focused on resolving these pressures.

Undergraduate enrollment in SoE increased over the two past academic years, from its historical average of 20% of Stanford undergraduates to an average of 25%. Major changes to SoE's undergraduate programs and increased career opportunities for engineers are principal causes for the heightened levels. SoE expects further enrollment increases in 2014, when Bioengineering is able to fully accommodate an undergraduate major in its new facility in the Science and Engineering Quad (SEQ). The need for additional TAs and teaching faculty is SoE's key infrastructure challenge related to accommodating undergraduate growth.

SoE anticipates hiring three to five new faculty each year for the foreseeable future, given the fundraising accomplishments that have replenished its frozen billet fund. The school's strategy for allocating new billets focuses on supporting the best intellectual ideas that surface from depart-

ments; funding initiatives in energy, the environment, human health, nanoscience, and information technology; and growing SoE's smallest departments to a critical mass. The need for space is SoE's key infrastructure challenge related to hiring new faculty. To that end, the school is encouraging the use of shared facilities and constructing more open and modular space.

SoE is radically reinventing online learning for both degree and non-degree student courses. In 2011/12, several faculty in Computer Science launched a collection of free, experimental online courses. These have been immensely popular, with 356,000 students from 190 countries expressing interest in one or more courses and approximately 43,000 completing one. Students are clearly learning differently today, and SoE is leading the discovery of new teaching methods. Some of the key challenges facing this pioneering effort include branding, scaling, ownership, and delivery media. The Stanford Center for Professional Development (SCPD) is also rebounding, projecting growth over budget of \$5 million, or 25%, in 2011/12 designated income.

Research expenditures in 2012/13 (federal and non-federal) are expected to grow by \$6.5 million, or 4.7% over budget. SoE's research portfolio continues to be diverse (116 entities), suggesting that the school is not overly dependent



on a single funding agency. Faculty continue to have a high proposal-to-award ratio (58%) and this year were particularly successful in securing funds for several large center grants. Over the past two years, SoE has completely revamped the model for supporting researchers. Enabled by general funds support, Engineering Research Administration (ERA) now has professional staff members whom faculty rate highly for providing a valuable service. Staffing levels in ERA require ongoing monitoring, as ERA must keep pace with the demands of SoE's growing research productivity.

SoE is in the midst of constructing BioE/ChemE, an SEQ2 building dedicated to Bioengineering and Chemical Engineering. The structure is designed to foster interdisciplinary research and teaching by enabling the Schools of Medicine and Engineering to share labs and other space. Similar to SEQ2's other structures, BioE/ChemE features many open, light-filled common spaces that invite chance informal meetings and opportunities to collaborate and innovate. Although SoE remains optimistic that additional donors will come forth in support of BioE/ChemE, it will not pursue too many strategic initiatives using reserves until gifts for BioE/ChemE have been secured.

## Consolidated Budget Overview

For 2012/13, the School anticipates \$352.9 million in consolidated revenues and \$344.5 million in associated expenses, resulting in a surplus of \$4.7 million after \$3.6 million in transfers to assets. Transfers to assets include mandatory and voluntary reinvestment of income to endowment principal of \$3.3 million. These figures represent increases over 2011/12 year-end projections in both revenue (4.5%) and expenses (5.1%).

The biggest increases over year-end projections are in sponsored research expenditures (\$5.9 million or 4.2%) and expendable gift income (\$2.9 million or 13.7%). Since 2000, SoE sponsored research expenditures (federal and non-federal) have steadily grown at a compound annual growth rate of 6%, as mentioned in the Programmatic Directions section. Expendable gifts are varied in their purpose and include support for graduate student aid and research.

Faculty and divisions or laboratories within departments control approximately 48% of designated fund balances

and approximately 72% of expendable gift fund balances. A substantial percentage of expendable and designated funds are earmarked for research. Endowment income funds have purposes mainly focused on faculty and student support.

Separate from figures reported in the university's financial system are reserves in SoE's venture capital investment fund, established 20 years ago. In September 2011, this fund's market value was \$70.3 million, down from its peak of \$111 million in September 2007. The drop was due to market downturns in 2009 and 2010 and the use of funds by SoE for capital projects and endowed chair and graduate fellowship matching.

## Capital Plan

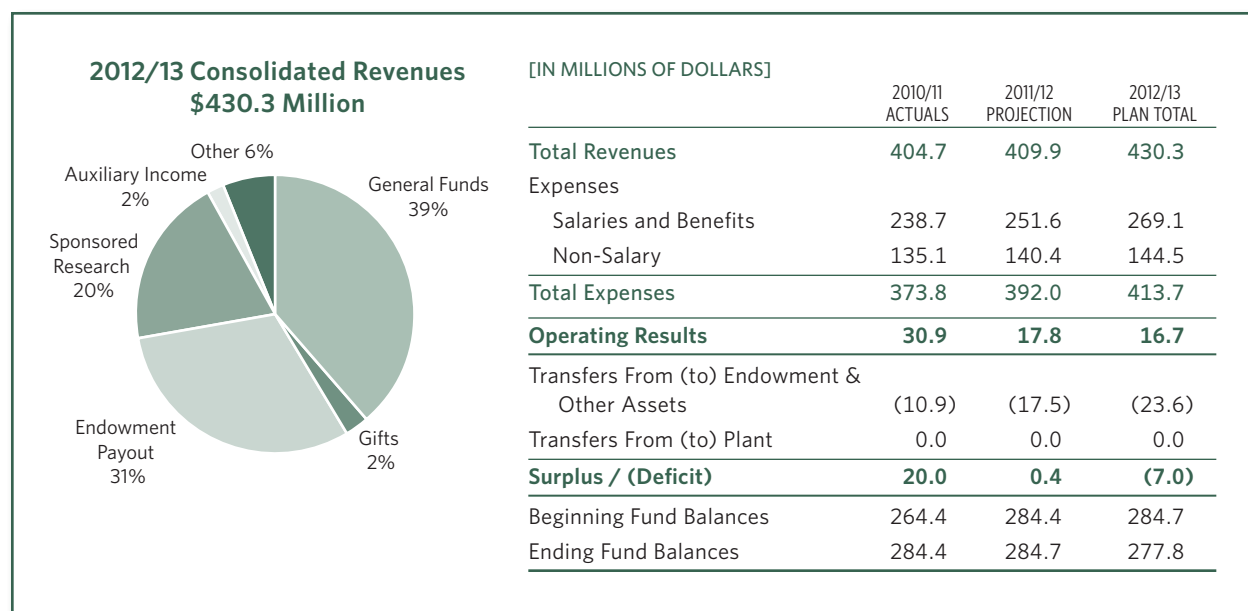
BioE/ChemE in SEQ2 will be ready for occupancy in the summer of 2014. Total costs for BioE/ChemE are \$211 million, with SoE responsible for up to \$49 million. Until gifts can be raised, SoE is bridge financing that \$49 million with debt in order to take advantage of low interest rates.

BioE/ChemE will provide a home for two currently dispersed and space-impacted departments (Chemical Engineering and Bioengineering); facilitate the school's efforts to attract top faculty through the availability of modern teaching and research facilities; foster SoE's strategic focus on interdisciplinary work; open up space in the Clark Center so that new programs can be developed there; and enable the school to vacate old buildings (Keck and Stauffer) so that other facilities can be constructed in accordance with the university's Master Plan.

The school is in the early stages of remodeling Buildings 520/524 in the Panama Mall. The goal is to return these historic buildings to their original open-space architecture and to create a stimulating and collaborative environment. Also in Panama Mall, SoE is renovating existing space to construct a million-dollar wind tunnel for a new faculty member to study the aerodynamics of bird flight.

SoE has made a concerted effort over the past 20 years to provide 21st-century facilities for all faculty and students. With the construction of the fourth and final building in SEQ2 and the remodeling of Buildings 520/524, SoE will have housed all nine departments in modern facilities.

## SCHOOL OF HUMANITIES AND SCIENCES



### Programmatic Directions

The School of Humanities and Sciences (H&S) has emerged from the past few years of economic turmoil in a strong financial and competitive position. The school's aggressive response to the financial downturn has resulted in consolidated surpluses in each of the past two years. For the first time in memory, the Dean's Office has a robust unrestricted reserve (\$74.8 million as of August 2011), which is now being deployed to take advantage of key opportunities.

Stanford's ability to quickly work through the economic crisis allowed H&S to field a large number of faculty searches, which resulted in an unusually large number of hires. The school was also successful in a number of very expensive senior-level searches that had been ongoing for several years. H&S's faculty now totals 529 — the largest it has ever been. This extraordinary success has created a substantial spike in recruitment costs, and pending commitments (totaling \$20 million) will be funded largely through school reserves across the next five years.

H&S faculty retention activity is also increasing. Offers to our faculty have become more frequent as competing universities regain their financial footing, and we anticipate that this trend will continue and ultimately reach levels

typical of the period before the economic crisis. H&S is taking several preemptive steps to retain faculty. The 2012/13 faculty salary pool will include \$3 million of incremental provostial funds for market-based adjustments in top-five ranked departments. The school's goal is to bring salaries for top faculty to levels consistent with those at top-ranked competitors. Achieving this goal will be a multiyear effort, but this year's increase will be a substantial move forward. The Dean's Office has also increased funding for endowed chair holders, adding \$500,000 of annual incremental support for research. The school has also committed over \$1 million to fund high-performance research computing while a new centralized facility is under development.

The federal grant funding environment continues to be a major concern for H&S. Constrained resources will potentially affect funding for new research grants as well as long-standing training grants to support graduate students. Federal caps on tuition continue to create shortfalls as tuition levels increase. The school has dealt with these issues through a combination of Vice Provost for Graduate Education (VPGE), Dean's Office, department, and faculty-controlled funds, but the overall shortfall is growing to a size that will require a more centralized response. The provost has provided \$885,000 to fund shortfalls related to training

grants, and the school will continue to assemble funding packages for shortfalls on other grants.

Increasing graduate student support continues to be a priority for H&S. Departments within H&S hold a substantial percentage of graduate support endowments, but their distribution is uneven. This circumstance, coupled with uneven access to external funding, has created graduate support surpluses in some departments, while others have had difficulty funding viable student cohorts. The Dean's Office is collecting detailed data to study this problem and has started to address it by reallocating graduate funding resources to departments with high student-to-faculty ratios and low or nonexistent grad aid reserves. Additional adjustments will be considered as detailed data are analyzed.

### **Consolidated Budget Overview**

The H&S 2012/13 consolidated budget projects total revenues of \$430.3 million and expenses of \$413.7 million, for a net operating surplus of \$16.7 million. After \$23.6 million of transfers to plant and capitalization of endowment payout, the school projects a \$7.0 million net use of reserves. It is important to note that H&S projects small consolidated surpluses from ongoing inflows/outflows. The net use of reserves during 2012/13 and 2013/14 carefully matches one-time accumulated reserves for one-time uses.

Construction of the McMurtry Building is the largest component of the School's use of reserves. In 2011/12, the school will use \$9 million for this project. During 2012/13, \$18 million will support this new building (comprised of \$6 million of defined funding, plus another \$12 million of temporary bridge funding, until donor gift payments are received). The overall project cost (over several fiscal years) is expected to be \$85 million. The exceptional number of faculty recruitments has also steeply increased transfers to new faculty research accounts. Transfers increased by \$8.4 million (56%) in 2011/12 from prior years' levels and are projected to remain at the new levels during 2012/13. These higher costs will also be funded by school reserves.

New activities have also affected the budget. At the beginning of 2011/12, the Public Policy program moved from the Dean of Research to H&S. This program has piloted a new Masters of Public Policy degree, and the provost allocated \$470,000 of new base funding to support the program starting in 2012/13. Construction continues on the Bing Concert Hall, with performances commencing in January 2013. A detailed financial model is still under development, and H&S 2012/13 consolidated projections include preliminary projections for the new hall.

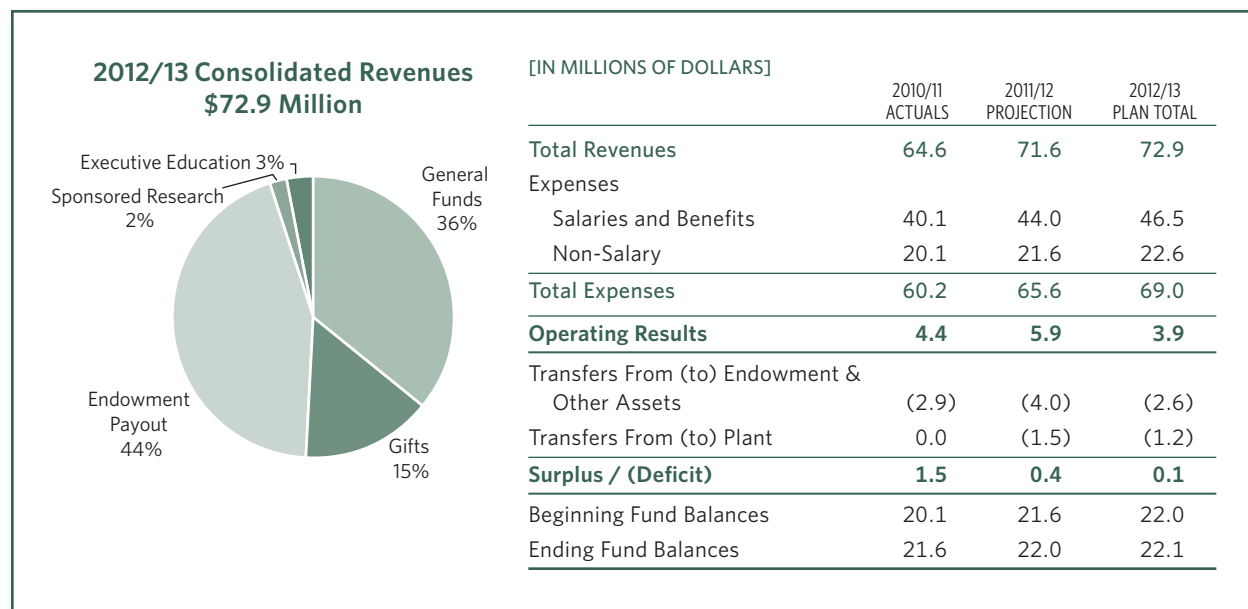
As a result of incremental funding and accelerated strategic initiatives, expenses will increase, particularly for faculty salaries, lab setup, and capital equipment. Funding of capital projects and of higher levels of recruitment and retention is projected to reduce Dean's Office unrestricted reserves significantly during 2011/12 and 2012/13. Consistent with trends in 2011/12, department and program-controlled fund balances are projected to grow only marginally during 2012/13. Capitalization of restricted endowment balances will continue in 2012/13 but is projected to decrease by \$2.2 million from 2011/12 levels, as most accumulated payout has already been reinvested in the past two to three years across the school.

### **Capital Plan**

The 844-seat Bing Concert Hall will be completed in summer 2012, with its inaugural season and first public performance scheduled for January 2013. Programming and design of the McMurtry Building, to be located adjacent to the Cantor Arts Center, is well under way. H&S hopes to move forward with plans for a new Biology Research Building and Teaching Labs and Learning Center, and has initiated a study to define the scope of work required to realize these goals.

H&S continues to undertake a range of laboratory and other building renovations in support of faculty research, teaching, program growth, and ongoing needs.

## SCHOOL OF LAW



### Programmatic Directions

After weathering the lingering impact of the economic downturn, Stanford Law School (SLS) is well positioned to capitalize on the new academic initiatives launched over the past five years. Fortunately, the law school community of faculty, staff, students, and donors persevered through difficult times to implement these initiatives successfully. For example, SLS was able to accomplish virtually everything it set out to do in the recently completed Stanford Challenge. Although obstacles remain, SLS is fiscally stable, with the exception of graduate financial aid, and is moving quickly in its continued quest to reinvigorate legal education at Stanford and across the nation.

Faculty recruitment and hiring has been a primary initiative in recent years, and the results have been better than anticipated. The effects of the new hires are noteworthy. They have boosted the law faculty's sense of confidence and success and have substantially influenced the intellectual life of the school. Moreover, the recruitment of prominent legal scholars from other schools was big news in the legal press and delivered a resounding message about the increasing strength of the SLS faculty.

There is perennial concern regarding SLS salary parity with other law schools, especially its chief competitors, Yale and Harvard. Not surprisingly, a recent faculty salary analysis comparing peer law schools validated these worries. As a result, the 2012/13 faculty salary pool will include incremental provostial funds to help address this high priority. It is imperative that SLS provide a strong salary program to remain competitive.

Meeting financial aid demand is expected to remain a foremost budgetary pressure for the next three years. Prior to the economic downturn, SLS was able to fund all financial aid expenses with endowment payout. However, the 25% reduction in endowment payout resulted in the loss of nearly \$2 million of financial aid income. Additionally, in the past several years — without any change in school policies for awarding aid — the number of students with need great enough to qualify them for a scholarship rose from 50% to 60%, while the average award increased 20%. Financial aid fund balances will be wiped out, so for the first time, unrestricted funds will be used to cover shortfalls. SLS is extremely fortunate to have received incremental base and one-time general funds to partially offset the funding gap.

To close it permanently, SLS has undertaken an ambitious campaign to raise \$20 million in new financial aid endowment, which will eventually produce an annual payout in excess of \$1 million. It is also monitoring financial aid policies and will adjust them if and when needed.

In recent years, the Mills Legal Clinics have grown in breadth, effectiveness, and reputation. Since 2003/04, clinic faculty have increased from two to seven, while the clinic operating budget has increased fourfold to almost \$5 million. In 2011/12, approximately 80% of law students will spend a quarter in one of the ten clinics. Along with financial aid, the clinics were a priority focus for SLS in the Stanford Challenge. The campaign efforts enabled SLS to relaunch both of the clinics that were temporarily in abeyance due to budgetary constraints, one in international human rights and the other in intellectual property and innovation.

### Consolidated Budget Overview

Planned 2012/13 consolidated revenues and transfers will grow 2%, to \$72.9 million, from \$71.6 million in 2011/12, due primarily to increases in expendable gifts and endowment income. However, general funds will decrease \$500,000 year over year because SLS received a \$2 million one-time allocation to address graduate financial aid in 2011/12. Consolidated expenses will grow 5.2%, to \$69 million, from \$65.6 million in 2011/12. Principal contributing factors include the ramping up of the Steyer-Taylor Center for Energy Policy and Finance, financial aid obligations that continue to increase (albeit more slowly than in previous fiscal years), and expenses for faculty retention and recruitment.

The 2012/13 consolidated surplus is \$3.9 million, down \$2 million from the surplus in 2011/12. After \$3.8 million in transfers to assets (of which \$2 million goes to the student loan program to fund the Loan Repayment Assistance Program), the 2012/13 consolidated budget reflects a small net surplus of \$64,000.

The school's consolidated fund balances will continue to hover around \$22 million. Slightly less than half of this amount, \$10.8 million, is currently invested in housing loans to faculty. Another \$9.7 million is highly/moderately restricted or committed to capital projects and housing

loans for newly recruited faculty. This leaves a perilously low unrestricted fund balance of \$1.5 million.

Lastly, 2011/12 was the final year of a three-year phase-in of larger JD and graduate student classes, as well as the second year of a two-year law school tuition increase of \$2,000 (\$1,000 per year) above the standard university graduate tuition increase. Over three years, these two revenue enhancement initiatives generated \$2.5 million in additional net general funds for the law school, which are now incorporated into the annual base allocation.

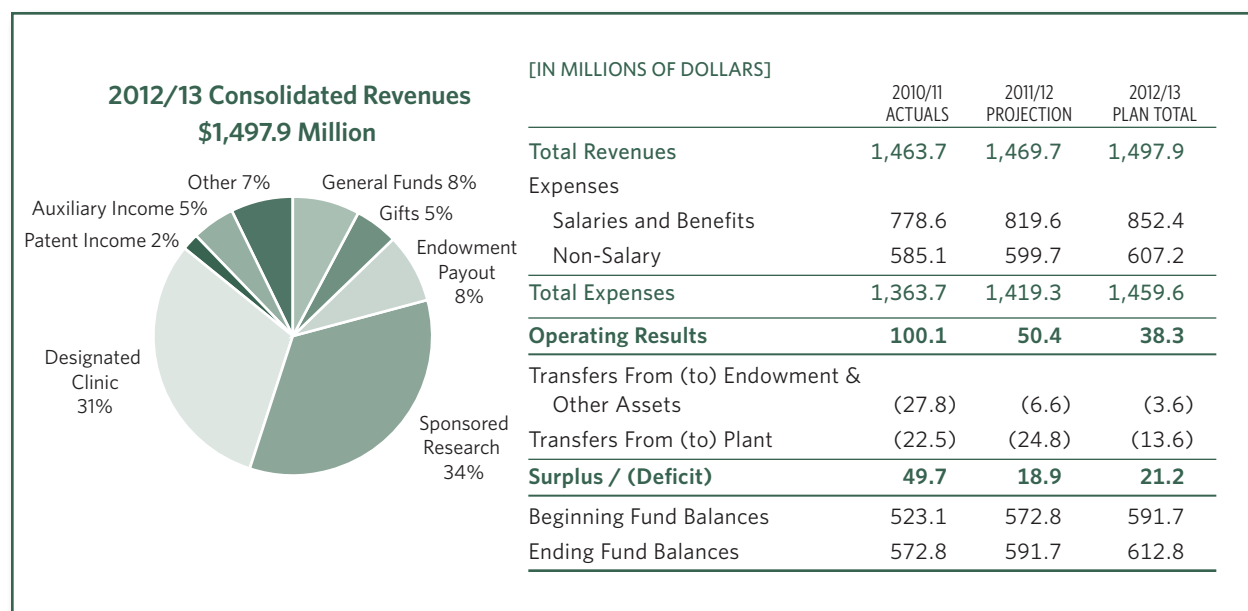
### Capital Plan

After almost a decade of planning, fundraising, and construction, two capital project additions to the law school campus, the Munger Graduate Residences (completed in 2009) and the William H. Neukom Building, are finally complete. The total project cost for the Neukom Building was approximately \$65.1 million (including a \$4.6 million contribution to the GSB for the Kresge replacement), \$3.4 million less than the budgeted \$68.5 million. Almost 350 law students reside in the Munger Residences, and faculty and staff began moving into the Neukom Building this past summer.

Focus has now shifted to the final piece of the law school campus master plan, the renovation and modernization of the Crown Quadrangle. In addition to offering improved space for administrative departments and the law library and new space for student groups, Crown will house an innovative Institute for Law and Public Policy. The architects, in tandem with the law school project team, are presently evaluating university space guidelines, projecting headcount for programmatic needs, outlining alternative project options, and creating an efficient construction phasing plan.

Preliminary plans indicate that the current second-floor library staff offices and third-floor library collection can be moved to the Crown basement for \$3 million. A complete renovation of the third floor is estimated to cost \$14 million; renovating first- and second-floor offices to make them more efficient and bring them into line with university space policy guidelines will cost another \$3 million. The total Crown renovation thus will cost \$20 million. The law school plans to begin this renovation in the fall of 2012.

## SCHOOL OF MEDICINE



### Programmatic Directions

Many factors can dramatically affect the success of academic medical centers. Some are amenable to modulation or alteration, while others are not. One recent crucial event was the 2008 economic downturn, which affected the U.S. and global economies, with consequences for federal and state funding for biomedical research. Equally important is the political struggle over healthcare reform. Whatever the outcome, it will result in reduced revenues to hospitals, physicians, and academic medical centers. These rapidly unfolding changes underscore the continuing need to plan creatively. Stanford University Medical Center (SUMC) must sustain and enhance the resources supporting students, faculty, programs, and initiatives. The School of Medicine (SoM) must be prepared to change and adapt, but the changes must stay true to its fundamental underlying principles, and its directional compass must optimize success over time.

The school's strategic plan, *Translating Discoveries*, formulated in 2002, has been the basis of many of its initiatives over the past decade. Among the most notable of these are the university-wide interdisciplinary Bio-X programs and the joint SoM and School of Engineering Department of Bioengineering. In tandem, the school has evolved its strategic plan to develop five interdisciplinary Stanford Institutes of Medicine and three strategic centers to foster

collaboration, interaction, and innovation in education, research, and patient care. The Stanford Institutes of Medicine are the Cancer Institute, the Institute for Stem Cell Biology and Regenerative Medicine, the Cardiovascular Institute, the Institute for Neuro-Innovation and Translational Neurosciences, and the Institute for Immunity, Transplantation and Infection. Faculty in the institutes come from basic and clinical science departments in the school and the university. The institutes thus create new communities of faculty and trainees to promote innovation, discovery, and new models for education and training. The three strategic centers are the Center for Clinical Informatics, the Center for Biomedical Imaging, and the Center for Genomics and Personalized Medicine.

While excellence in basic science remains the foundation of the school, considerable effort and investment have also gone into enhancing programs in clinical and translational science. The Stanford Center for Clinical and Translational Education and Research, under the banner of Spectrum, includes a broad range of programs to support and educate students and faculty in clinical research. It also aligns with innovative programs such as BioDesign and SPARK, which is designed to identify partnerships between academia and enterprise to allow discoveries to move from Stanford's laboratories to applications for human health. These programs foster clinical and translational innovation, discovery,

and development for new drugs, biologics, and devices, and are extending the school's collaboration locally and globally.

The spirit of interdisciplinary interaction is strong at the SoM. Medical (MD) students may now pursue joint degree programs in every school at Stanford. Research, including a scholarly concentration, is a centerpiece of the MD curriculum introduced in 2003.

Patient care has received as much attention as research and education. Major changes will unfold through health-care reform, including the Affordable Care Act of 2010 or its replacement. The school has been collaborating with Stanford Hospital and Clinics (SHC) and Lucile Packard Children's Hospital (LPCH) to plan strategically and to transform SUMC into the national model for leading-edge innovation, coordinated complex care, and outstanding primary and secondary care. Integrated planning is under way to achieve these goals in cardiovascular health, cancer, neuroscience, and transplantation, as well as primary care and new models of healthcare delivery. Both hospitals have undertaken major initiatives to improve patient experience, enhance quality performance, increase efficiency, and reduce expenses. Both continue to make sizeable investments in information technology, electronic medical records, and construction of new hospital facilities — the largest and most comprehensive facilities project in the history of SUMC and the university.

## Consolidated Budget Overview

The school projects total revenues and transfers of \$1,497.9 million in 2012/13 and expenses of \$1,459.6 million, yielding a surplus from operations of \$38.3 million and a net change in current funds of \$21.2 million.

### Revenue

Revenues and transfers are projected to increase from \$1,469.7 million in 2011/12 to \$1,497.9 million in 2012/13. Key drivers include the following:

- New awards from the California Institute for Regenerative Medicine drive increases in non-federal sponsored research.
- Clinical programs expansion contributes to the 5.0% growth in professional service agreement and service payment revenues.
- Expendable funds pool payout is projected to be \$23.7 million in 2012/13, compared to \$22.1 million in 2011/12.

Gift revenue is projected to decline 8.6% in 2012/13 because the school received a sizeable gift in 2011/12 for the Asian Liver Center (ALC).

- Endowment income is projected to grow 3.6%, reflecting a modest influx of new gifts.

### Expense

Expenses are projected to increase 2.8%, or \$40.3 million, from 2011/12 to 2012/13. Major components of the increase are:

- The projected net recruitment of 35 faculty, 20 in the university tenure line and 15 in the medical center line.
- A \$26.3 million increase in annual compensation for faculty and staff, primarily due to the salary program, incremental faculty, and clinical program growth.
- A \$13.9 million increase in benefits and payroll special expenses for academic and staff employees.
- Increases in operation, maintenance, and utilities expenses, primarily driven by double-digit rate increases for chilled water and steam, a full year of operation of the Jill and John Freidenrich Center for Translational Research (FCTR), and additional leased properties.
- Increases in federal and non-federal research non-compensation expenses, primarily in internal costs, subcontracts, and materials and supplies.

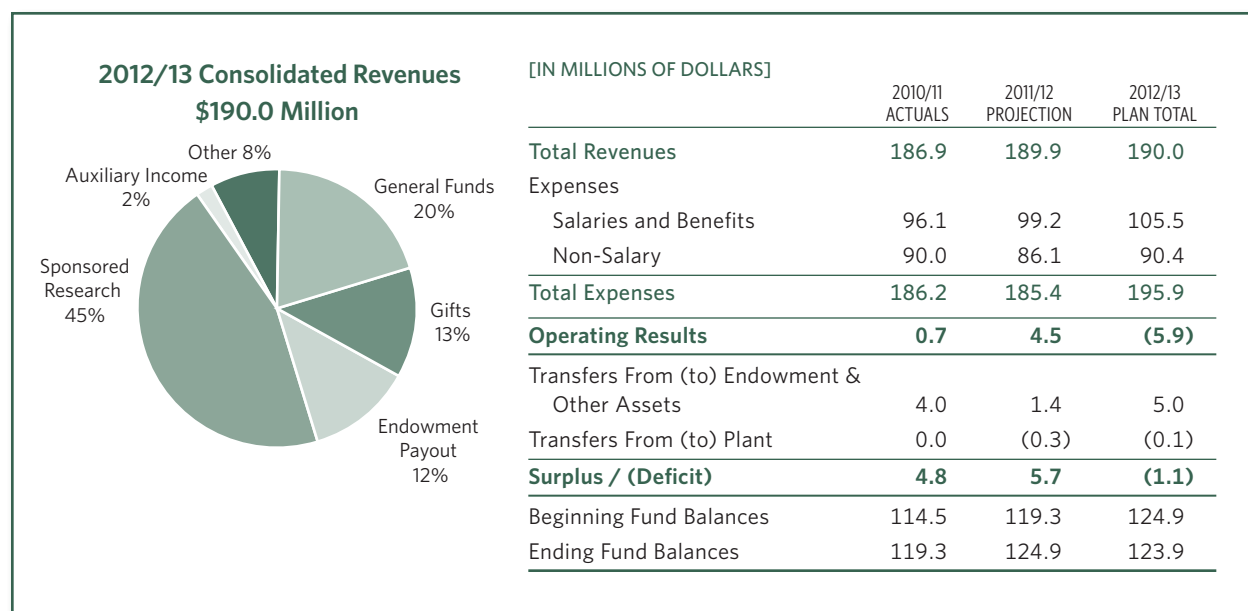
### Transfers to Plant, Endowment, and Other Assets

The projected transfers to plant of \$13.6 million comprise \$6.2 million for tenant improvements for off-campus leased properties at Porter Drive, \$2.1 million for the ALC, \$1.3 million for seismic and research animal facilities rehabilitation projects, and \$4.0 million for strategic and routine capital projects. Transfers to other assets include departments' projected \$7.0 million transfer to FFE.

### Capital Plan

In close proximity to the hospitals and the Stanford Cancer Institute, FCTR will provide work space for clinical researchers, biostatisticians, and research nurses who support the institute and the Stanford Center for Clinical and Translational Science. The project began construction in 2010/11. It is estimated to cost \$21.3 million and is on schedule to open in summer 2012. Adjacent to FCTR, construction on the 32,000-gross-square-foot ALC is planned to begin in early 2013. It is estimated to cost \$26.5 million and to open in spring 2014.

## VICE PROVOST AND DEAN OF RESEARCH



The Office of the Vice Provost and Dean of Research (DoR) is responsible for research policies and facilitating faculty research and scholarship across all of the schools and departments. It has oversight for sixteen independent laboratories, institutes, and centers and manages the compliance and administrative offices that support research, including Environmental Health & Safety and the Offices of Technology Licensing/Industry Contracts, Research Compliance, Science Outreach, and the new Office of International Affairs (OIA). The DoR also oversees major shared facilities that support a broad range of research and scholarly activities, including the new Stanford Nanosciences Center, the Stanford Nanocharacterization Lab, the Stanford Mass Spectroscopy facility, and the Center for Cognitive and Neurobiological Imaging.

### Programmatic Directions

The DoR organization has experienced a substantial increase in scope over the past few years. The Office of International Affairs was launched in 2011 with presidential support and a supporting gift. The new office serves as a centralized resource to encourage and support international research programs and activities. The office helps to

coordinate new international projects, such as the Stanford Center at Peking University, and facilitates the development of new collaborations on behalf of faculty, departments, and schools. The OIA works with other university offices and committees to address legal and liability issues related to Stanford's international activities and coordinates the university's international incident response planning. In 2012/13, the office will establish a seed-grant program to promote new faculty led research at locations throughout the world.

A new DoR Office for External Affairs has been created for development and fundraising that will support interdisciplinary research initiatives following completion of the Stanford Challenge campaign. The Office of Sponsored Research is now the joint responsibility of the DoR and the Vice President for Business Affairs; oversight of the Stanford Electronic Research Administration (SeRA) project is also shared and DoR directs the Research Administration Training and Development Group.

DoR is pursuing several important initiatives related to research compliance and administration that will be a priority in 2012/13. DoR is overseeing the revision of Stanford's



conflict of commitment and conflict of interest (COC/COI) policy and implementing required COI training. In parallel, DoR, in conjunction with the schools and Administrative Systems, is building an enhanced system for faculty reporting of Outside Professional Activities (OPACS). The redesigned OPACS will meet new federal regulations for university review and management of conflicts of interest and reduce faculty burden by eliminating the need to provide the same information in multiple systems, e.g., sponsored research proposals, human subjects protocols, or gifts. DoR is also leading an initiative to create an integrated website that will facilitate access to a broad range of information and tools in support of faculty research and scholarship. DoR is also working to explore the extension of the Community Academic Profile (CAP) system as a resource for professional information and links for faculty, students, and staff, including networking capacity.

The Center for Visualization and Textual Analysis is a faculty-led initiative for innovation in humanities research that will function as a new shared resource, with support through the Stanford Humanities Center. Three major collaborative research programs, including Mapping the Republic of Letters, The Literary Lab, and The Spatial History Project will be a nucleus for paradigm shifting work in the humanities. The initiative will leverage these programs, in order to broaden opportunities for faculty and students to use computer-based approaches on team-based work. The Center will take advantage of the skilled technical staff of the core programs and academic technology specialists provided through the Stanford libraries.

One of DoR's initiatives is to provide seed funding for proof-of-concept experiments that can enable faculty to compete for extramural grants. This is particularly beneficial to new and junior faculty. In 2012/13 seed funding will be distributed to support energy and environmental sciences, international initiatives and SLAC affiliated institutes. For example, the Center for Interface Science and Catalysis (SUNCAT) joint between SLAC and Stanford will offer funds to develop new catalysts that are essential for artificial photosynthesis, chemical fuels, and energy storage. Resources will also be provided to encourage new researchers to use the Stanford Nano Shared Facilities and the Center for Cognitive and Neurobiological Imaging.

## Consolidated Budget Overview

DoR projects revenue to be \$190 million and \$5 million in transfers in from endowment and other assets. Expenses are projected to be \$196 million in 2012/13, resulting in the planned use of \$1 million from fund balances that have grown in recent years. For example, the Freeman Spogli Institute for International Studies is investing endowment funds for a multidisciplinary seed grant program that supports campus-wide, early stage research projects in the area of global underdevelopment and poverty alleviation.

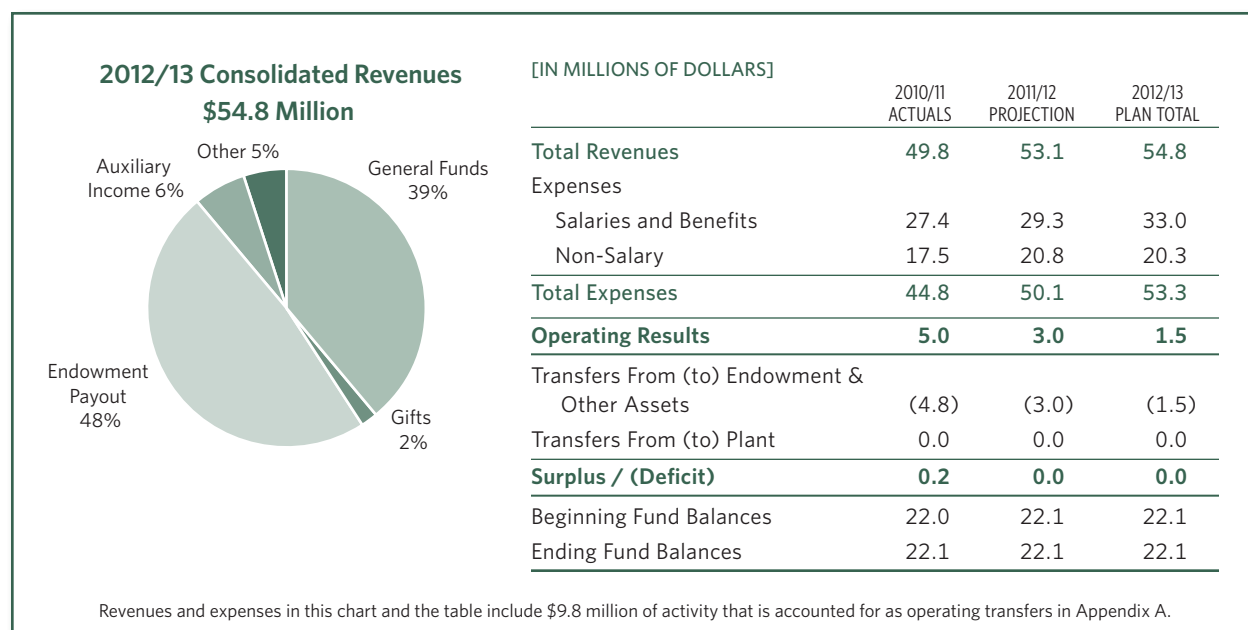
The DoR consolidated budget decreased in 2011/12 when the Human Sciences and Technologies Advanced Research Institute moved from DoR to the School of Education. Off-setting this decrease was the addition of new DoR programs, such as the Office of International Affairs, the Research Administration Training and Development Group, the Center for Visualization and Textual Analysis and the Wallenberg Network Initiative. These new programs will continue to ramp up in 2012/13. Faculty research programs in the independent laboratories, institutes, and centers continue to receive extramural funding. A new solar research program will contribute substantially to the Geballe Laboratory for Advanced Materials' program growth. The shared facilities, added to DoR in recent years, also project program growth. These facilities are developed to offer access to costly scientific instruments and education to the research community.

The DoR budget includes multi-year, multidisciplinary research awards distributed to Stanford faculty by independent labs such as Bio-X, Precourt Institute, and the Woods Institute.

## Capital Plan

Data centers at the university and SLAC National Accelerator Laboratory are operating at the upper limits of capacity and must expand to handle the growth of research computing needs. To meet this growing demand, Stanford has planned the Stanford Research Computing Facility, which will be a modular, scalable, energy efficient and high-density scientific research computing facility located at SLAC. The project is budgeted at \$41.2 million. The research computing facility has received approval from the Board of Trustees and construction will begin in summer 2012.

## VICE PROVOST FOR UNDERGRADUATE EDUCATION



### Programmatic Directions

The Office of the Vice Provost for Undergraduate Education (VPUE) plays a key role for undergraduates through direct curricular and service offerings and broad advocacy across campus. The Study of Undergraduate Education at Stanford (SUES) highlights the breadth of VPUE's responsibilities. It touches on most VPUE programs and profoundly affects some of them. VPUE takes the SUES recommendations as an endorsement of several of its programs, including Introductory Seminars, Sophomore College, and the Bing Overseas Study Program (BOSP). In addition, VPUE accepts the challenge put forward by SUES to implement exciting new initiatives and to continue evolving in our service to Stanford undergraduates.

Many VPUE decisions over the last two years align well with the SUES recommendations. The expansion of Sophomore College and the reintroduction of the Bing Overseas Seminars were both funded last year and saw high student demand. In addition, VPUE and the Center for Teaching and Learning (CTL) piloted Faculty College and Faculty Boot Camp, both of which offered faculty dedicated time and resources to develop new courses or curricular ideas.

In 2012/13, Stanford Introductory Studies (SIS) will deliver the new one-quarter Thinking Matters requirement. The new courses, with faculty from across the university, have

been identified and will be ready for the class of 2016. In addition, a hybrid offering that combines the first-year writing requirement and the Thinking Matters requirement will be an option for freshmen in fall 2012.

One goal of the SUES committee was to "unpack" the freshman year, thereby increasing flexibility and choice for first-year students. Stanford has long thought of the freshman year as a time for transition, exploration, and discovery, and the class of 2016 will have more opportunity for these pursuits. However, a broader palette of choices will place a greater burden on the advising system. The established pre-major advising system has two components: full-time professional academic directors (ADs) based in the freshman residences and a pre-major advisor for each student. Since its creation, the AD program has been quite successful. Students rely significantly on the knowledge and proximity of the ADs and have reported much higher satisfaction with the advising system since their inception. The presence of the ADs has also permitted the pre-major advisors to focus on assisting students with the challenges of selecting a major rather than on the nuts and bolts of undergraduate requirements. In 2012/13, VPUE will add two ADs, for a total of 10, reducing the caseload of each AD below 400 students.

The SUES report postulates that overseas study advances virtually all of the essential aims of a Stanford education

and recommends increasing the number of students who study with BOSP each year. To accomplish this aim, BOSP will have to provide new and different opportunities. For 2012/13, the number of Overseas Seminars will increase from five to eight. In addition, the center in Kyoto, which is particularly attractive for students in technical fields, will offer a second seminar in the winter term to meet student demand. Finally, the center in Santiago will begin offering a quarter-length program in summer 2014 that will replace the current winter-quarter offering. This change will better align with the academic calendar in the Southern Hemisphere and will provide an option for students who feel they cannot be away from campus during the regular academic year.

### Consolidated Budget Overview

VPUE projects revenues and transfers of \$54.8 million and expenses of \$53.3 million in 2012/13. It will reinvest the resulting operating surplus of \$1.5 million in endowment principal to balance the consolidated budget and fund future programming. The revenue increases are driven largely by greater endowment payout as well as increasing student revenue from the additional BOSP seminars and the second quarter in Kyoto. The expense increases are due to the program expansions described previously and on program development costs stemming from changes recommended by SUES.

Currency exchange rates remain a source of uncertainty in expenses, even for programs that remain largely unchanged. Most of the overseas centers' activities are carried out in local currency that is subject to varying exchange rates. BOSP expenses for 2012/13 are not fixed yet because VPUE has not purchased futures contracts to set the exchange rates, but BOSP's dedicated currency reserve is adequate to address these variances. Although this uncertainty is part of VPUE's annual budget process, there are processes in place to actively manage the risk.

### Capital Plan

The center in Berlin is the only BOSP center owned by Stanford. The rest are leased. The building is undergoing \$1.2 million in renovations, including roof, electrical, and plumbing work, during the summer of 2012. VPUE is in the study phase of a project to move the Hume Writing Center and the speaking center into a consolidated location, but the plan is not developed enough to estimate the expenses of the move and any renovations required in the new location.

## SUES and Its Budget Implications

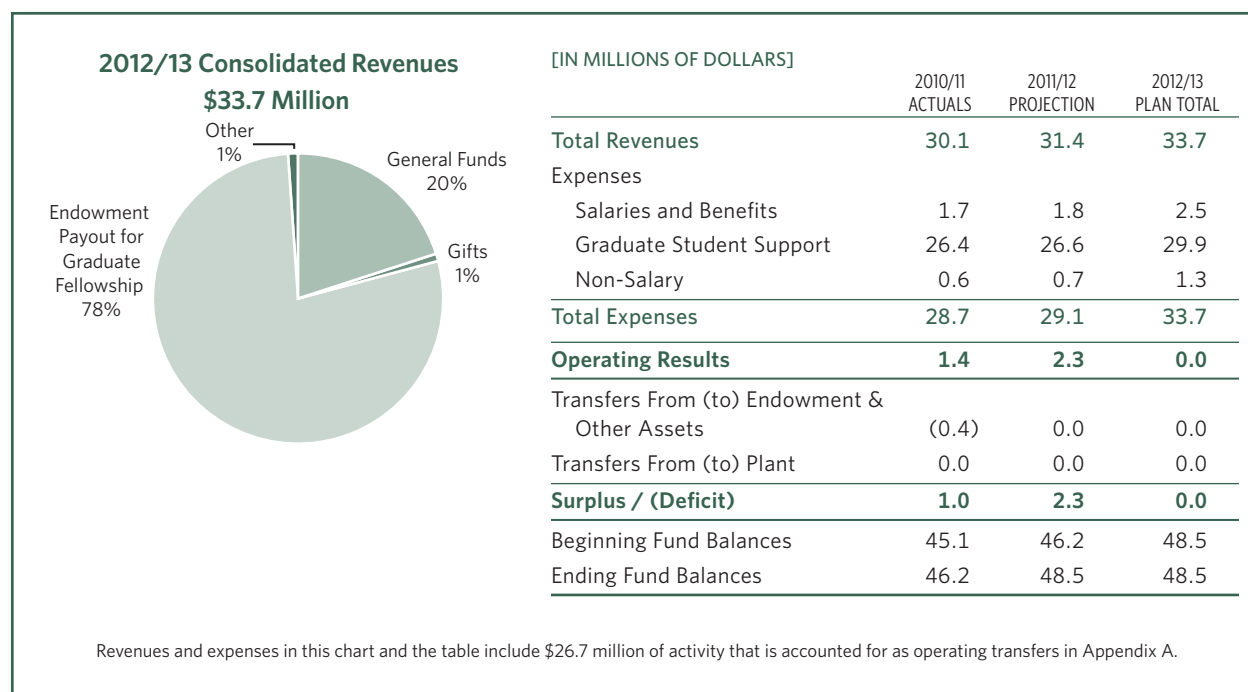
The Study of Undergraduate Education at Stanford (SUES) proposes an expansive set of recommendations intended to re-shape undergraduate education at Stanford. The report specifically addresses the current general education requirements, but additionally addresses the needs of today's Stanford student by imagining possibilities beyond traditional classroom learning. Given the far-reaching recommendations, some of the programs SUES envisions will not come to fruition for a few years, some will morph during implementation, and some will not be adopted at all. This makes budget implications difficult to predict at this point.

Beginning in fall 2012, the new one-quarter Thinking Matters course will replace the existing three-quarter Introduction to the Humanities (IHUM) requirement. Despite the high initial start-up costs associated with developing and launching over 30 new Thinking Matters courses, VPUE will field the Thinking Matters program with repurposed resources from the IHUM program. As the writing program remains unchanged, at least in the first year, there are no immediate budget implications associated with writing.

The budget impact of the adoption of SUES recommendations at the department level is an unanswered question. From the expansion of introductory seminars to a new model for breadth requirements, departments will need to determine how to integrate the major with general education and what resources will be needed to develop new courses. Furthermore, calls for expanded capstone experiences, integrated writing courses, innovative course formats, and much more will require departments to re-examine the deployment of both faculty time and financial resources in support of undergraduate teaching, while still meeting the challenges of graduate education and research. An assessment of these changes and potential funding needs is ongoing.

Looking beyond 2012/13, resource requirements for many of the SUES recommendations will become clearer as program development moves the recommendations from concept to reality. As an example, SUES recommends the development of additional residentially based freshman learning communities based on the current Structured Liberal Education program. Accordingly, a pilot Integrated Learning Environment (ILE), centered on the arts, is under development in the Faculty College with the plan of offering it in fall 2013. Access to performance, instructional, and creative space in or near the residences is a critical goal for the arts ILE, but new spaces may not be realistic in the first year. Near-term expenses will consist of instructor compensation and other programming expenses, while future expenses may include construction or renovation of dorms to integrate these creative spaces.

## VICE PROVOST FOR GRADUATE EDUCATION



### Programmatic Directions

The Vice Provost for Graduate Education (VPGE) continues to play a crucial leadership role, working collaboratively across the university's seven schools, to enhance the quality of graduate education for 8,800 students pursuing degrees in 90 degree programs and departments. VPGE's top priority is to address three programmatic areas cited by the Commission on Graduate Education as the most critical university priorities: advancing diversity, facilitating cross-school learning (i.e., interdisciplinarity and leadership development), and fostering innovation to strengthen the quality of graduate programs. A persistent need for direct graduate student funding has also become a major focus.

Programmatically, VPGE has been able to maintain — and, in some areas, even gain — momentum, reaching even more graduate students by developing low-cost pilot programs. VPGE-sponsored initiatives reach approximately 2,500 graduate students annually, and its seven fellowship programs will disburse over \$29 million in direct funding to 597 students.

### Diversity

Supplementing school activities, VPGE develops university-wide programs for recruiting, enhancing the educational experience of current students, and cultivating interest in academic careers to diversify the academic pipeline.

The largest general funds expenditure in this priority area goes to the direct funding of graduate students: tuition and stipend for Diversifying Academia, Recruiting Excellence (DARE) fellows and graduate fellows in the Center for Comparative Studies in Race and Ethnicity, and bridge funds to support students in science and engineering. The remaining funds go to programming that enhances the quality of educational experiences for current students and promotes their academic success.

### Interdisciplinarity and Leadership Development

VPGE develops interdisciplinary opportunities that encourage graduate students' intellectual exploration beyond their disciplines to better prepare them for their work lives after graduation. These programs enable students to engage in cross-disciplinary dialogues and build intellectual communi-

ties across schools as well as professional networks beyond their academic specializations.

The Stanford Graduate Summer Institute (SGSI), in its sixth year, provides the opportunity for graduate students to attend weeklong courses at no cost to them. Topics have been wide ranging, including global warming, management of teams, emotional intelligence, design, and music and human behavior. Also in its sixth year is the Summer Institute for Entrepreneurship (SIE), a four-week course offered by the GSB to more than 60 graduate students in non-business fields.

VPGE has developed a framework for graduate professional development within which students can identify skills and competencies they need to develop, as well as locate the particular university resources that will help them do so. This framework encompasses communications, interpersonal skills, and personal and career development. Several VPGE-sponsored programs fall within the first two areas, and there is high demand for more offerings.

### **Strengthening Core Quality in Graduate Programs**

VPGE provides resources to faculty and students in graduate degree programs for innovation and improvement in educational practices. The SCORE (Strengthening the Core) Innovation Fund helps departments respond to changes within their disciplines and in the emerging educational needs of their graduate students. SPICE (Student Projects for Intellectual Community Enhancement) is an innovation fund enabling students to undertake projects to expand and sustain the intellectual community of their department or field of study.

VPGE continues to identify critical unmet needs in areas important to graduate student success. Workshops, seminars, and tutoring are offered in areas such as teaching, presenting, and writing. A high priority this past year has been to launch pilot initiatives to strengthen student-faculty advising relationships. These advising resources have been widely disseminated to students as well as to faculty. Dissertation Bootcamp has also become popular among advanced doctoral students, and there is evidence that it accelerates their degree completion.

### **Prioritizing Graduate Student Funding**

Most graduate student support is in the form of doctoral fellowships (full tuition and stipend), paid from one of seven

VPGE-administered fellowship programs, with the largest being the Stanford Graduate Fellowships (SGF) Program in Science and Engineering.

Through 2012/13, VPGE will allocate central support (including endowed funds restricted to student aid) to help close tuition gaps in National Science Foundation fellowships. The goal is twofold: to alleviate pressure on schools, departments, and faculty; and to identify income from endowed funds that can replace general funds.

### **Consolidated Budget Overview**

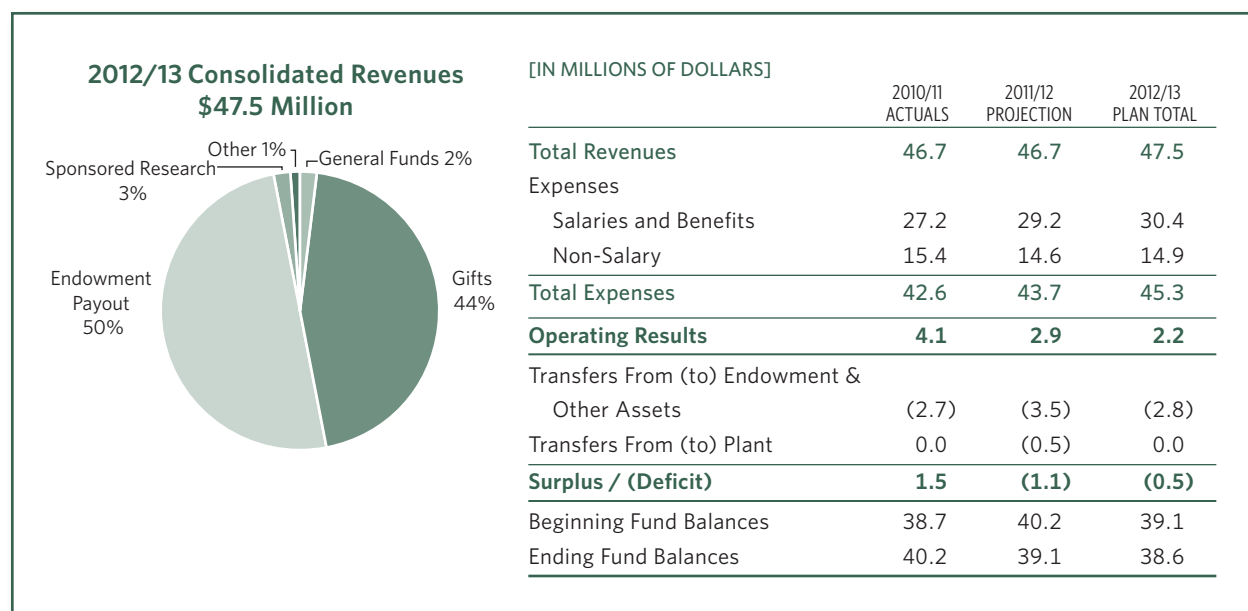
VPGE projects revenues of \$33.7 million and expenses of \$33.7 million, maintaining the healthy fund balance of \$48 million projected for the end of 2011/12.

Of the \$48 million fund balance, \$29 million is endowment income that is restricted to graduate student funding. The number of fellows has been and will continue to be increased with the intent to draw down the endowment fund balance to \$15 million by 2014/15. That balance was decreased from \$33 million to \$29 million in 2010/11. The goal is to fund a steady-state number of fellowships through the yearly payout and maintain a reserve to cover unanticipated fluctuations. The fellowships are mostly three-year awards, and funding commitments can be adjusted only when new awards are made, causing a lag in the decrease of the fund balance. The remainder of the fund balance is less restricted and will be used to expand pilot programs in priority areas and to maintain a reserve for responding to emerging needs.

Data comparing 2011/12 year-end projection to 2012/13 plan show that VPGE's graduate student funding increased from \$26.6 million to \$29.9 million, non-compensation expenses increased from \$0.7 million to 1.3 million, and compensation expenses increased from \$1.8 million to \$2.5 million. The non-compensation increase is due to expanded programming along with associated expenses and is expected to widen in future years. Graduate student funding will increase as well. Compensation expenses are expected to increase with new hires and expanded program offerings.

The 2012/13 consolidated expense budget for VPGE comprises 4% programmatic non-compensation expenses, 7% compensation and benefits, and 89% direct graduate student support.

# HOOVER INSTITUTION



## Programmatic Directions

The Hoover Institution is a prominent contributor to the public policy dialogue and a preeminent collector of materials supporting scholarly research on political, economic, and social change. To continue in those roles in the coming years, the institution plans to expand and develop its core fellowship; refine its collection philosophy and its relationship to technology in the library and archives; and look for new opportunities to affect public policy through outreach to a broad audience.

The institution is well positioned for fiscal year 2012/13, building on the programmatic and budget accomplishments of the past few years. Hoover has developed a research methodology using scholarly teams (working groups and task forces) that synthesizes current thinking, offers new perspectives, and conveys the results to a broad constituency. Eight of the ten originally planned teams are currently operational. Their research and output has contributed to the public dialogue on issues of the day, including the Arab Spring and economic recovery from the Great Recession. The institution's library and archives have added to their role as a key repository for critical materials by transitioning their holdings to digital formats. Hoover's communications and outreach efforts have developed a portfolio of products both in print and on the Web that are reaching an

ever-expanding audience of policy makers, the media, and the informed public. The institution has attained these accomplishments while maintaining a stable budget.

Hoover achieved budget stability during the downturn via budget reductions that disproportionately affected its research function. Given the revenue projections for the coming years, recruiting senior scholarly talent will be a priority. The aim is to add one to two new senior fellows each year, supplemented with term and visiting appointments to facilitate collaboration on projects and topics aligned with the priorities of the existing resident fellowship, as reflected in the working groups and task forces.

New fellows will be expected to engage collaboratively, following the model of the working groups and task forces, which has boosted institutional productivity and created effective focuses for research. Planned projects will focus on legal immigration policy, income and wealth distribution, and military history as it relates to contemporary conflicts. In addition, the institution will look for opportunities to engage youth. To this end, it anticipates expanded participation in Sophomore College.

Hoover's library and archives continue to evaluate their contribution to the research and educational mission of the institution and the university and their role as an archive

for important historical material. The coming year will see a concerted effort to make the library and archives a more integrated resource for the university as a whole. New collections will be drawn from areas aligned to the fellows' research and that of scholars at the university.

Most of the existing collections consist of specialized printed materials. Looking forward, Hoover expects that many collections of interest will be born digital, necessitating further evaluation of the collecting scope and philosophy. Preservation norms are shifting towards digital formats as well. Significant efforts will be made to add to the information resources and technological capacities of the library and archives.

As existing collections are digitized, Hoover hopes additional access leads to new areas of research. In that light, the library and archives are launching an initiative to digitize, catalogue, and make available to the public via the Web the collected works of Milton Friedman, including unpublished material held by Hoover.

Finally, a strategic communications plan will increase the use of new media platforms to make the work of Hoover fellows available to a broad audience as well as to policy makers. Efforts to disseminate material through a variety of channels will continue to expand in 2012/13. Hoover is revamping its blog *Advancing a Free Society*, which features daily brief commentary, to make it more responsive to fellows' needs; the changes will include the addition of regular audio podcasts. The institution also seeks to engage with policy makers from both parties by inviting individual leaders for roundtable policy discussions and convening groups of leaders through its Leadership Forum for organized colloquia to discuss particular policy problems. Because the pilot program for this effort proved remarkably successful, there are plans to make it permanent.

## Consolidated Budget Overview

For 2012/13, the Hoover Institution projects total revenues of \$47.5 million and total expenses of \$45.3 million. A planned \$2.8 million transfer to the capital facilities fund will reduce fund balances by \$530,000 to \$38.6 million.

Revenues are projected to increase a modest \$800,000, or 2%, from 2011/12 to 2012/13. Endowment income is expected to grow 3.8%, including the payout on new endowment gifts and transfers. Ongoing expendable giving is

expected to grow 4%. However, the baseline for this forecast (the 2011/12 year-end projection) has been reduced by nearly \$1 million to account for the terminal-year receipt of a multiyear pledge supporting a special research project. This gift is the final pledge payment expected from Hoover's participation in the Stanford Challenge.

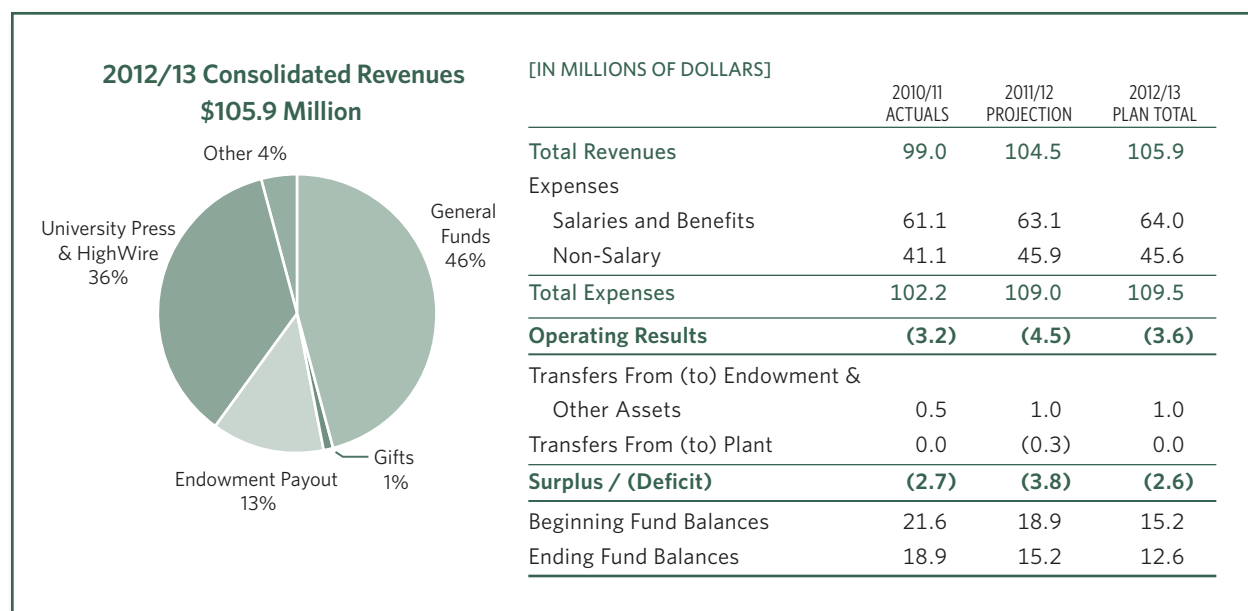
Expenses are expected to increase slightly more than revenues, growing by \$1.5 million, or 3.5%. Real growth is expected almost exclusively in the research area. Two new full-time-equivalent senior fellow appointments are anticipated next year, with additional appointments expected in future fiscal years. Given this growth, new staff hires are also expected to provide research and administrative support. Hoover plans to draw on reserves in the short term to support new fellow appointments, but only if it anticipates that long-term funding will be available for this support. Growth in the library and archives and communications and outreach, highlighted above, will be accomplished by reallocating existing resources.

The institution plans to transfer \$2.8 million to the facilities reserve account, bringing the balance of this unrestricted endowment account to approximately \$17.5 million by the end of 2012/13. Net of this transfer, Hoover expects a modest drawdown of current funds. The planned draw on reserves for fellow appointments is expected to be minor, less than 0.5% of the total budget. The institution's ongoing budget is expected to return to balance in the very near term. The remainder of the current funds decline is from the drawdown of restricted funds raised for specific projects of limited duration.

## Capital Plan

The institution plans to renovate the archives reading room in 2012/13, using \$500,000 from the capital facilities fund. Plans for a new Hoover facility on the site of the Cummings Art Building continue to develop. The current project plan estimates groundbreaking during 2014/15. The new building will provide 50,000 square feet of much-needed conference and office space, which will accommodate additional scholars, staff, and events, at an estimated project cost of \$45.6 million. Fundraising is currently under way for this project. Hoover will also be expanding its IT infrastructure in the next few months by updating servers and storage to accommodate increased data capacity needs, particularly in the library and archives.

## STANFORD UNIVERSITY LIBRARIES AND ACADEMIC INFORMATION RESOURCES



### Programmatic Directions

Stanford University Libraries and Academic Information Resources (SULAIR) will focus on three principal tasks in 2012/13: rebuilding and enhancing collections for research through the library materials budget (LMB); enhancing subject specialist staff to support disciplines affected by budget cuts over the last several years; and planning, preparing for, and implementing several significant capital projects.

#### Library Materials Budget

The LMB was reduced in 2009/10 and 2010/11 in response to the economic downturn. Coupled with sharp annual increases in the prices of electronic books and journals in the sciences, this reduction had a significant negative impact on library collections in both physical and digital formats. Those price increases have not abated. As a result, SULAIR was forced to reduce access to certain databases in the humanities and social sciences. In recognition of this loss of purchasing power, SULAIR received a general funds increase of close to 7% for 2012/13. While this is a big step in the right direction, more will be needed to bring SULAIR's collections back to their previous stature. (Please see page 13 for further information.)

### Support for Stanford Researchers

To make the Japanese Studies collection more accessible to the booming Japanese Studies program at Stanford, SULAIR will recruit a Japanese Studies librarian and a Japanese Studies technical processing librarian, both with true fluency in Japanese as well as serious disciplinary engagement.

SULAIR will add an academic technology specialist (ATS) for the Department of History in collaboration with the School of Humanities and Sciences. SULAIR hosts a handful of ATSs, who are versed in the academic disciplines they support, but whose role is to provide technology support for advanced research and teaching. They spend 80% of their time working with faculty colleagues and 20% working with one another and subject curators. In this collaborative environment, they identify and resolve common problems and leverage the expertise of the digital humanities team, which spans Academic Computing Services, the Social Sciences Data and Software Group, and Humanities Information Services. Together these technologists and the subject curators provide an important resource to the faculty, who are increasingly developing digitally involved research projects and publications.

SULAIR will add a technology specialist to assist faculty in the use of CourseWork as a vital adjunct for syllabi, course



requirements, assignments, tests, and assessment along with administrative functions such as registration, section assignments, and grade reporting. Some 1,200 courses per quarter use CourseWork, a course management system based on open-source software codeveloped by Stanford.

SULAIR will fund a curatorial position for the Archive of Recorded Sound (ARS), a unit of Stanford's Music Library and one of the nation's five great sound archives. The addition of curatorial expertise will aid faculty and students in accessing the most relevant of the hundreds of thousands of recordings and materials that the ARS houses. In particular, the curator will facilitate access to the ARS's rapidly growing collections in American jazz.

### Consolidated Budget

SULAIR's consolidated revenue and transfers are expected to total \$105.9 million. Consolidated expenses are projected to total \$109.5 million, resulting in a planned operating deficit of \$3.6 million. Revenue and transfers consist of \$49.2 million in general funds, \$33 million in auxiliary revenue, and \$23.8 million in restricted funds. Compensation expenses are budgeted at \$64 million, operating expenses at \$22 million, and library materials acquisitions at \$23.5 million. The planned deficit of \$2.6 million has the following components.

SULAIR will allocate \$1.3 million of its endowed fund balances to library materials selectors to help offset the 25% decrease in endowment payout over 2009/10 and 2010/11. It will allocate another \$700,000 to efforts related to upcoming facilities projects and construction moves. SU Press will continue to fund operating expenses with draws from the Press Research Fund and expects to use \$1 million from this fund in 2012/13. HighWire will use \$200,000 of its reserves and the Lots Of Copies Keep Stuff Safe program (LOCKSS) will use \$300,000 of its reserves to balance operations in 2012/13.

SULAIR's operating budget is projected to grow 5% from the 2011/12 level, but budgeted decreases in auxiliary and sponsored research spending are projected to reduce overall growth to 1%.

Fund balances at the end of 2012/13 are expected to be \$12.6 million, including \$400,000 in designated funds, \$2.2 million in LOCKSS auxiliary reserves, and \$2.1 million in auxiliary operations (\$1.0 million for HighWire and \$1.1 million for LOCKSS). SULAIR projects balances of \$2.1 million in

expendable funds and \$5.8 million in endowed funds, both of which are heavily restricted by donor purpose.

### Capital Plan

Over the next several years, SULAIR will be heavily involved in three major facilities projects, in planning for two future projects, and in a number of necessary facilities improvements. The first two projects are heavily connected and will require additional staff in Technical and Access Services to manage the logistics. All of these projects will result in facilities that promote and support teaching, learning, and research and provide access to the collections, both physical and digital, upon which all of Stanford's programs depend.

The first major facilities project will double the storage capacity of Stanford Auxiliary Library Three (SAL3) by adding three new storage modules. Construction commenced in January 2012, and completion is scheduled for February 2013. The expanded facility will also house a digitization lab. SULAIR is leasing storage space to accommodate materials during construction.

The second project is the 2013/14 relocation of services, staff, and collections from Meyer Library to renovated space in the former Graduate School of Business South Building. The East Asia Library and much of its collection, Academic Computing and its services, the Digital Language Lab, the 24-hour reading room, and most of SULAIR's Technical Services staff will be moving into modernized spaces. Meyer Library currently houses more than 600,000 books and journals; however, many of them will not be relocated to the new facility. SULAIR is embarking on a significant shift in collections, moving holdings to both on-campus and off-campus storage facilities, and developing new methodologies for determining what materials to store on campus.

The third project is the construction of a new Art Library as part of the new McMurtry Building, which will house the Department of Art and Art History. The new facility will employ compact shelving to maximize the on-campus holdings of this significant collection. Nevertheless, it will house less of the collection than the existing facility. SULAIR expects to implement Radio-frequency identification (RFID) tags in this new facility as one of several improved user services.

SULAIR is involved in separate sets of discussions regarding the future of the math library, as well as smaller projects within SULAIR spaces, including the development of the Rumsey map room in the Bing Wing of Green Library.

# SLAC NATIONAL ACCELERATOR LABORATORY

## Programmatic Directions

SLAC is a multiprogram national laboratory operated through a management and operating contract by Stanford University for the Department of Energy (DOE), Office of Science. The DOE recently announced it will extend the current contract another five years, through September 30, 2017. In 2010, the DOE renewed the land lease at SLAC for 33 years, through September 30, 2043. This lease extension guarantees the full usage of the Office of Science's Linac Coherent Light Source (LCLS) facility.

SLAC hosts DOE scientific user facilities that provide world-class, state-of-the-art electron accelerators and related experimental facilities used each year by 3,000 scientists from all over the world to conduct research in photon science, astrophysics, particle physics, and accelerator science. The major programs SLAC currently undertakes to achieve its vision are described below.

## Scientific User Facilities

SLAC operates two major DOE Basic Energy Sciences user facilities: Stanford Synchrotron Radiation Lightsource (SSRL) and LCLS.

SSRL provides X-ray beams and advanced instrumentation for research in many areas of science, engineering, and technology. Applications range from energy storage and environmental remediation to drug discovery and magnetism in thin films. In 2012, about 1,500 unique scientific users are scheduled to perform research using SSRL's X-ray beam lines. The synchrotron runs at 350 milliamperes of current, and the plan is to ramp up to its top design current of 500 milliamperes. The increased current will make SSRL's X-ray beam lines even brighter, providing clearer experimental results and reducing the time needed for data collection, thus allowing examination of more samples in a given time.

The American Recovery and Reinvestment Act (ARRA) funded a new SSRL instrument for advanced spectroscopy that was commissioned in 2011. This instrument has unique capabilities for the study of catalysis, materials science, and biology.

LCLS is the world's first hard X-ray free electron laser. It began experimental operations in late 2009, and five of its

six instruments specifically designed for LCLS science are now in operation. The last instrument will go into operation in May 2012. LCLS has already attracted more than 500 unique users who take advantage of its ultra-bright X-ray beams. The LCLS science program, which complements that of SSRL, is opening new frontiers of discovery in areas including atomic physics, imaging of non-periodic nanoscale materials, nanocrystallography, ultra-fast structural and electro dynamics, and matter under extreme conditions. LCLS will probe the structure and dynamics of matter at nanometer-to-atomic dimensions and on femtosecond time scales, fast enough to resolve the motions of atoms and the forming and breaking of chemical bonds.

Based on the success of LCLS, the DOE approved planning for phase two (LCLS-II) in April 2010. SLAC received initial funding for the project in 2012. This expansion of LCLS, which will significantly enhance its scientific capability and capacity, is expected to be complete in 2018. LCLS and LCLS-II will maintain SLAC's position as a world leader in the emerging field of ultra-fast X-ray science, an area expected to see significant growth and impact in 2012 and beyond.

## Photon Science Program

The photon science program at SLAC will grow in the new areas of chemical and materials science, as well as taking advantage of SSRL and LCLS capabilities. In addition to the Photon Ultrafast Laser Science and Engineering Center (PULSE) and the Stanford Institute for Materials and Energy Science (SIMES), SLAC coordinates with Stanford's Department of Chemical Engineering on SUNCAT, the Center for Sustainable Energy through Catalysis. SUNCAT focuses on creating better catalysts for use in alternative energy industries. SLAC anticipates a significant expansion of SUNCAT, and DOE is currently reviewing the SUNCAT-II proposal.

## High-Energy Physics Program

SLAC's multifaceted program in particle physics and astrophysics operates experiments in space and on the ground to explore frontier questions about the nature and origin of the universe.

In 2012, SLAC began operation of a new ARRA-funded facility called FACET, the Facility for Advanced accelerator Experimental Tests, with user-assisted commissioning. FACET uses two-thirds of the iconic SLAC linear accelerator to study plasma wakefield acceleration, one of the most promising approaches to advancing accelerator technology. It has the potential to accelerate subatomic particles 1,000 times faster over a given distance than existing accelerators, thus shrinking the size and cost of accelerators for scientific research, medicine, and industry.

SLAC is also a leading contributor to research and development for the International Linear Collider's accelerator and detector, a possible future facility for colliding electrons and positrons at tera-electronvolt (TeV) energies and elucidating properties of physics at the high-energy frontier. SLAC performs this research and development in close collaboration with other laboratories and universities as a partner in major international scientific ventures.

The Kavli Institute for Particle Astrophysics and Cosmology is involved with the Fermi Gamma-ray Space Telescope, research and development efforts for the next-generation dark-energy experiment, the ground-based Large Synoptic Survey Telescope (LSST), and the Super Cryogenic Dark Matter Search (CDMS) experiment. SLAC hosts the Instrument Science Operations Center for Fermi's main instrument, the Large Area Telescope, which was managed and assembled at the laboratory. The LSST is designed to determine the properties of dark energy with much higher precision, allowing us to better understand the "dark" universe and its dominant components. SLAC will be the lead laboratory for construction of the DOE-funded, 3.2 Gpixel camera for the project, while the National Science Foundation will support the telescope and data management systems. Super CDMS will be the next-generation underground experiment seeking to directly observe relic dark matter from the Big Bang.

## Consolidated Budget Overview

The DOE's Office of Science is the major source of funding for SLAC. About 97% of SLAC's annual funding comes from its offices of Basic Energy Sciences and High Energy Physics.

In federal fiscal year 2011/12, SLAC has received funding of \$323 million; costs for the university fiscal year are expected to be \$362 million, including costs from carry-in funding. All of SLAC's projects — LCLS-II, the Large Synoptic Survey Telescope, the Research Support Building, and the Science and User Support Building — are funded to move forward on schedule. As SLAC continues to transition to a multiprogram laboratory, it continues to see a shift in DOE funding from High Energy Physics to Basic Energy Sciences programs.

The federal fiscal year 2012/2013 budget proposal is flat, but the fiscal year 2012 budget remains strong. The \$402 million proposed for SLAC includes funding for LCLS-II and for another new building to support users. On the other hand, given the upcoming fall elections and the large U.S. budget deficits, SLAC management continues to make contingency plans for absorbing potential budget reductions. Costs for university fiscal year 2012/13 are currently forecast at \$382 million.

## Capital Plan

As part of the Office of Science's goal of modernizing the infrastructure of its labs, SLAC received funding for the construction of two new buildings and the remodeling of two existing buildings. In 2009, SLAC began the Research Support Building project, which involves the design of a new 64,000 square foot modern office building and the renovation of 68,000 square feet of existing space in two major buildings. Approximately 35 trailers and substandard buildings will be demolished. The project is estimated to cost \$97 million and will be completed in 2014.

In addition, the Office of Science has approved a \$65 million, 65,000 square foot Science and User Support Building. This project received initial funding in early 2012 and is expected to be completed in 2015.

By mid-2012, the SIMES/Building 40 renovation project will be completed. This project includes renovation of 14,750 gross square feet of existing space in the first-floor, second-floor, and third-floor wings of the Central Laboratory Building (Building 40) to address laboratory and office space program needs.

