To the University Community:

The following plan is the result of a year-long effort to articulate the aspirations of the School of Arts and Sciences. The planning process was a highly consultative one that involved conversations with SAS faculty, students, staff, alumni, and overseers prior to the crafting of the document; a draft of the plan benefited from feedback from these groups as well. Given the plan’s emphasis on the central academic role of SAS within Penn, we also sought the input of University administrators and the deans of Penn’s other schools. We look forward to using this plan as a blueprint for achieving the School’s ambitious goals in the years ahead.

—Rebecca W. Bushnell, Dean, School of Arts and Sciences

A Strategic Plan for the School of Arts and Sciences

Preamble

From its very beginnings, the University of Pennsylvania School of Arts and Sciences has been defined by invention as well as academic excellence. Penn’s forerunner, the College of Philadelphia, was home to the modern arts and sciences curriculum, one that was firmly based in classical traditions but also pioneering in its outward-looking worldview. Students not only studied Latin and logic but also undertook scientific inquiry, instruction in modern languages, and the study of contemporary politics and economics. This distinctive tradition—one based on innovation and engagement with the world around us as well as the highest standards of scholarship—extends to the present, where SAS is recognized as one of the world’s great schools of arts and sciences. The School is a place where faculty and students pursue all forms of knowledge and truths that matter. We strive to go beyond the limits of what is known and to make a difference in the world.

The School of Arts and Sciences has gained a reputation for excellence unprecedented in its history. This reputation is grounded in the superb quality of its faculty and students, who are intellectually ambitious, inventive, and versatile. We recruit professors who are at the forefront of their disciplines yet can move nimbly across disciplinary boundaries to address emerging questions and ideas. They are known for their willingness to innovate in teaching and research and to work together to better the School, and they are engaged in local and global communities. The College of Arts and Sciences attracts exceptional students of ever-increasing quality from around the world. These students thrive in a university where they have access to a staggering range of courses and majors and have the opportunity to do work in Penn’s other schools, conduct their own research, and participate in the community and cultural life of the city of Philadelphia and the world at large. Our doctoral programs also attract an international student body that wants to study at an institution where they can work closely with distinguished faculty as they learn to teach and to become the world’s next generation of scholars. Our continuing education programs build on the strengths of the 11 other schools at Penn, and its faculty and students benefit immeasurably from collaboration with those schools.

The School of Arts and Sciences is now in a position to build on its current momentum to shape a future that will bring it to new heights of distinctive eminence among its peers around the world. We are committed to taking responsibility for shaping the future of research and education at the University of Pennsylvania and in promoting the integration of knowledge. We want to create the strongest possible sense of intellectual community among our faculty and students, and to extend those bonds across the University as a whole.

We undertake these goals from a position of strength that was secured under the previous plan for SAS, first published in 1999. At the heart of that plan was a commitment to building faculty and student bodies of the first rank, without which academic excellence is simply not possible. If the School is to achieve further distinction, it must redouble that commitment, through the strategies described in the first part of this plan. The 1999 plan targeted six departments for special investment and succeeded in significantly bolstering the core of our research and educational programs. We will continue to sustain those disciplines that are foundational for any school of arts and sciences and that have endured over time as the building blocks of knowledge. We must also ensure that our core educational programs provide the finest instruction in the arts and sciences.

At the same time, we recognize that many of the most critical questions humanity faces are not easily answered using only one discipline’s method or perspective. In the arts and sciences, we grapple with fundamental questions—questions that require the attention and cooperation of many minds that see the world differently.

One of the principal means by which we can stimulate such activity will be to invest in multidisciplinary initiatives that reach across the School and University. This investment will at the same time enhance individual disciplines that are critical to sustaining the School’s future.
The second part of this plan will detail how in shaping the future of SAS we will organize multidisciplinary initiatives in five areas that will build on existing strengths in critical departments, integrate research and teaching, and forge connections with other schools at Penn. In order to become fully engaged in the world and to pursue those truths that matter, we must find ways to take advantage of all that Penn has to offer. The School’s recent advances are even more impressive in view of the resources available to accomplish them. SAS is under-endowed compared to its peers, yet we have proven our ability to use our resources strategically and efficiently, to invest as much as possible in areas that will have the greatest impact on academic quality for the greatest number of people and programs, and to be aggressive in our pursuit of new resources from a variety of sources. Using these same approaches, this new plan will guide our financial decisions and our fund-raising efforts. In order to achieve the ambitions set forth in this plan, we will require not only financial resources but also our collective commitment and expertise. Ultimately, our success will be based on the abilities, ingenuity, and resourcefulness of all individuals employed in SAS, whether they be faculty or staff.

In 2002 a distinguished external review team agreed that SAS is “a far better school today than it was a decade ago.” Many of the recommendations of this plan—a plan that has benefited from input by faculty, students, staff, and alumni—echo those of the reviewers, reaffirming the path we have chosen to move the School forward. As we will discuss in the final section of this document, we are committed to the ongoing assessment of the School’s progress. We are confident that achieving the goals of this plan will allow the School of Arts and Sciences to secure an even more prominent place in the academy and enhance our ability to use the knowledge that we create for the greater good.

I. Laying a Foundation for Eminence in the Arts and Sciences

A. Faculty

To achieve everything we want to accomplish in research and education, we must begin with a faculty of unquestioned distinction and of a sufficient size to achieve our ambitious goals. We expect that all of the School’s faculty should be deeply versed in their disciplines yet able to move across fields to develop new areas of knowledge and new ways of thinking. They must be dedicated to teaching and mentoring both undergraduate and graduate students. In order to attract the best scholars and teachers to Penn, the School must provide a working environment that is competitive with that of our peers.

1. Composition of the Faculty

a. Faculty Size

Among elite institutions, SAS is almost certainly the most efficient school of its kind. With fewer resources and a smaller standing faculty than most of our competitors in virtually all humanistic and scientific disciplines, we educate more undergraduates, operate successful graduate programs, and conduct research at the highest levels of rigor and significance. While the size of the faculty has increased significantly in recent years, we still have too few standing faculty to accomplish our ambitious aims in teaching and research. It is clear that most of our faculty are stretched to their limits by the demands made on them to serve the multiple needs of the School. We also recognize that critical mass plays an important role in shaping departmental standing within the respective disciplines. For the School to prosper, we will need to increase the size of the standing faculty by just over 10 percent over the next five years, with an emphasis on areas of strategic importance to the School.

b. Performance Standards

To maintain and increase the size of a first-rank faculty in a competitive environment, we must hold our professors to the highest standards of excellence in research and in teaching. Evaluating that performance at the time of appointment and promotion requires personnel procedures that are not only rigorous, but also timely, efficient, and responsive. Such procedures must also balance the scrutiny of departments, the disciplines spanned by the faculty members’ research, the larger community of SAS faculty, and the faculty-led administration. The School is committed to engaging the faculty in a review of all of its personnel procedures, from the departmental level to the Dean’s office. This review will include a reassessment of our methods for evaluating teaching.

c. Diversity

While the School of Arts and Sciences has derived great strength from the increased representation of women and underrepresented minorities on the standing faculty in recent years, we must continue to be aggressive in our efforts to improve faculty diversity. In addition to the proactive pursuit of appropriate candidates as part of our regular searches, we will continue to seek promising “targets of opportunity” at all faculty ranks at all times for women in fields where they are underrepresented and for minorities. We also seek candidates who can serve in leadership positions in the School. In order to ensure that these faculty thrive at Penn, we must be attentive to their needs in matters of professional development and retention; accordingly, we will consult with faculty groups to institute policies that will create a climate that fosters the careers of women and minority faculty. We will also designate existing internal funds and seek new monies specifically for the purpose of supporting faculty diversity.

2. Working Environment: Recruiting and Retaining the Best

To recruit and retain an eminent faculty, the School must be able to compete with our peers in providing the working environment and support that top scholars need to succeed in research and teaching. SAS excels in creating a faculty with long-term loyalty to the School and the University, and through honors like the Christopher H. Browne Distinguished Professorships, we are able to recognize our most celebrated scholars and teachers. We must be sure that our best faculty receive a salary that reflects their national standing and will be proactive in adjusting the salaries of most eminent faculty to ensure that they stay at Penn. But compensation is only one element of the support that faculty require. We recognize that the cultures of teaching and research vary across disciplines and departments, and that we need to be flexible both in setting expectations and in giving the faculty the support they need to live up to the School’s high expectations of them.

a. Research and Teaching Infrastructure

In all fields, cutting-edge research by outstanding faculty requires time, funds, and facilities. We must attend to the vital role played by the supporting infrastructure that makes research possible. The nature of this infrastructure varies enormously with the discipline. Our competitors are making major investments in infrastructure in many dimensions; for Penn to remain among the top rank of universities, we must do no less.

Our faculty must have appropriate space in which to carry out their research and teaching. The School will continue the momentum it has achieved in completing a large number of construction and renewal projects with a new long-range facilities plan that will feature:

- construction of Phase II of the Life Sciences Building
- construction of facilities for the Department of Music
- renovation of the McNeil Building
- resolution of the space needs of the Department of Political Science
- resolution of the space needs for nanoscience research
- improvement of science teaching laboratories
- location of on-campus space for the College of General Studies

We will need to identify additional office space to accommodate the planned growth in the faculty. We must also think about ways to collaborate with other Penn schools to address our collective facilities needs, whether through joint construction projects or the sharing or renting of existing space.

The administration of research activities, particularly in the context of complex sponsored projects, requires skilled staff support. SAS will hire additional staff in science departments to allow faculty to focus on their research. To support faculty efforts to seek external research funds across
of the natural sciences, social sciences, and humanities, the School will add personnel who can help to work with potential sponsors, assist in writing grant proposals, and aid in the management of funds. We will continue to partner with the University Library to ensure that faculty have access to the best possible information resources. We must also continue to enhance related services such as academic computing and assure that technology resources are developed in close coordination with major instructional and research initiatives.

b. Faculty Research Time

As we look to the future, it is important that we understand that our success is founded on an unusually high degree of faculty research productivity, which in many disciplines requires periodic time off from teaching. Many of our peer universities have more generous sabbatical leave policies—some of them offering leave twice as frequently as Penn, which entitles standing faculty members to one semester of leave after every 12 semesters of teaching. Currently, by ad hoc arrangements SAS faculty can gain time off from teaching for administrative service or they may apply for external funding (which the School often supplements). This situation makes planning difficult, creates inequities, and leaves us unable to retain faculty who receive offers that guarantee more sabbatical leave. The School of Arts and Sciences needs to develop its own system to supplement the University’s sabbatical plan that will promote scholarly activity, make it easier to recruit senior faculty, make time off from teaching predictable, and place us in a better position to retain, and thus to retain, our most productive colleagues.

c. Research Funds

Active faculty need financial resources to pursue their research interests and to remain competitive in recruitment and retention, significant research funding packages have become essential. In the sciences, faculty are given start-up research funds upon their arrival; such funds are necessary to purchase large equipment and to support personnel and research expenses between sponsored funding cycles. At a time when there is uncertainty about the federal government’s commitment to basic research, these School-based funds play a vital role in ensuring the long-term sustainability of our research effort. Moreover, outside of the sciences there are many disciplines that do not have access to federal or other sponsored funds or need funding for research expenses that are not allowable on federal grants.

In our previous strategic plan, the School initiated a systematic approach to providing all incoming and newly-promoted faculty with research funds. As a result, over time the percentage of faculty who possess research funds has increased dramatically. SAS must continue to generate additional resources to allow this percentage to grow even further. These efforts will include the creation of new endowed chairs, which also carry an annual research fund. We must also ensure that these funds are better correlated with timely need. We will explore new approaches to providing research funds by taking into account the needs of other researchers in the same field and pooling funds to maximize our resources. In addition, we will be open to proposals from departments that would apply unspent balances (with faculty consent) to departmental research needs; for example, some funds could be pooled to enable the recruitment of more faculty within a particular field or discipline.

B. Students

Outstanding students from the United States and around the world come to the School of Arts and Sciences at many points in their lives to study with faculty who have achieved preeminence in their fields. The School is committed to providing its students with the finest possible education in the arts and sciences. It will do so by strengthening those aspects of education that are distinctive to Penn. An education in SAS is defined by flexibility and creativity as well as rigorous standards of academic performance. We will work to further open access to SAS for the very best students, regardless of their background or ability to afford a Penn education. While the School is already home to roughly half of Penn’s student body, we also play an important role in educating all of the University’s undergraduates and many of its graduate and professional students. This relationship is mutually beneficial, as our own students enjoy access to a wide range of innovative interschool educational opportunities that are unique to Penn.

1. Undergraduate Education

A primary mission of the SAS faculty is to provide undergraduate students with an education in the arts and sciences that is second to none. At Penn, the College of Arts and Sciences is surrounded by schools that provide postgraduate professional training and by undergraduate schools that emphasize training for specific vocations. In this environment, the College reaffirms its belief in and commitment to a thorough education in the arts and sciences. We expect our graduates to be broadly-educated people who have acquired the knowledge, skills, and inclination that will enable them to embark on a lifetime of learning; to assume positions of leadership in their chosen careers; to be independent, creative thinkers who communicate their ideas effectively through speaking and writing; to be able to adapt to rapidly changing circumstances; and to become thoughtful, engaged citizens of their community, nation, and world. At the same time, SAS is also committed to providing all other undergraduates at Penn with the intellectual foundation they need to underpin and enhance their professional education.

a. The College

• Implement the new general education requirement

Informed by the assessment of the multi-year Pilot Curriculum experiment and by extensive discussions among faculty and students, the faculty of the School of Arts and Sciences has enacted a new version of the general education requirement of the College, to be implemented for the Class of 2010. The new curriculum places more emphasis on interdisciplinary learning and thought, on enhanced understanding of the life and physical sciences, on a creative arts gateway to culture and aesthetics, and on the understanding and comparison of cultures around the world. The College will provide the appropriate financial support to encourage faculty to develop new general education courses that are substantial and self-standing, particularly courses that emphasize interdisciplinary approaches to problems and issues. In addition, the College will diligently monitor the effects of the new system of requirements, both to ensure that they are achieving the desired goals in terms of students’ course selection, and to detect unintended or unexpected consequences.

• Enhance undergraduate research opportunities

At a time when the frontiers of knowledge are expanding and new technologies are changing the way knowledge is transmitted, the single greatest challenge facing modern research universities is how to incorporate these extraordinary developments into the education they offer their undergraduates. By creating an innovative learning environment that stimulates exploration, raises the intellectual expectations of students, and fosters an enhanced intellectual interaction, the College seeks to transform its students from passive recipients of knowledge into active participants in the educational process.

The College will continue to encourage departments and programs to expand opportunities for undergraduate students to engage in research projects or other capstone experiences, especially given the projected increase in the number of faculty. To make this more feasible for departments, the College will increase support for undergraduate researchers; expand support for internships that can lead to research experiences, including those at Philadelphia-area cultural institutions; continue to promote academically-based community service as a means of combining research with civic engagement; and encourage the use of the David B. Weilge Information Commons as an access point to library materials and to the imaginative use of digital media and technology. To recognize and publicize the research achievements of its students, the College will also develop the College Undergraduate Research Electronic Journal to which departments and programs will submit their students’ outstanding work.

• Mentoring and advising

Academic mentoring and advising is a multi-dimensional enterprise and a critical factor in a student’s experience in the College. It begins during the admissions process, and its second phase begins in the summer before a student’s freshman year. This “pre-major” advising continues until a student selects a major and begins to rely more on the major department
or program for advice on course selection, timing, fulfilling requirements, and possible career options.

The College admits a diverse group of students who have a wide range of talents and goals. The College will continue to work closely with the Office of Undergraduate Admissions to direct students to programs and resources that match their interests and needs. To help students navigate the new curriculum and to craft a coherent course of study, we will enhance our current system with several new electronic tools, including the “Academic Blog,” a narrative online academic planning document and journal. The College will adapt and strengthen training for faculty and peer advisors and develop programming to assist students in the major selection process. The planned increase in the size of the faculty will help distribute the requisite workload more manageably, and we will also engage dedicated emeriti faculty in advising. To recognize the role that advising plays in a student’s success in the College, we will institute an award to recognize those advisors who are exceptionally dedicated and effective.

The College will also assist departments and programs in providing more effective advising in the major, especially by building student-to-student peer advising. We will increase coordination with Career Services, the College Alumni Society, and other groups of alumni to match students with potential mentors and make them more aware of the various options available to them so that they can prepare adequately for post-graduate study or the workplace.

b. Educating All Penn Undergraduates

- **Curriculum**
  - *Writing and speaking:* We will support the expansion of the Critical Writing Program’s writing seminars so that all College students can fulfill the requirement by the first semester of their sophomore year. We will also support the development of secondary writing experiences beyond the writing seminars for students who want or need them. The Creative Writing Program will take advantage of the new Artist-in-Residence program and opportunities at Kelly Writers House to provide more options for students who wish to engage in creative writing to further their own interests or fulfill the College’s newly reconfigured general education requirements. The Communication Within the Curriculum program (CWiC) will expand both geographically into the Weigle Information Commons and programmatically to support more students and faculty as they seek to use group-based, technology-enhanced presentations as part of classwork.
  - *Science education:* In addition to ensuring and enhancing the high quality of core science courses that serve College and professional students, we will give special attention to the development of general education science courses for non-science majors. We will support the expansion of the Critical Writing Program’s writing seminars so that all College students can fulfill the requirement by the first semester of their sophomore year. We will also support the development of secondary writing experiences beyond the writing seminars for students who want or need them. The Creative Writing Program will take advantage of the new Artist-in-Residence program and opportunities at Kelly Writers House to provide more options for students who wish to engage in creative writing to further their own interests or fulfill the College’s newly reconfigured general education requirements. The Communication Within the Curriculum program (CWiC) will expand both geographically into the Weigle Information Commons and programmatically to support more students and faculty as they seek to use group-based, technology-enhanced presentations as part of classwork.

- **International perspectives:** The emphasis in the new College curriculum, as well as the importance for all Penn undergraduates, on cultures outside the United States will require renewed attention to the relationship between the study of international languages and cultures, in particular for those students who arrive at Penn with advanced standing in a second language. The College will place special emphasis on languages and cultures of the Near East and of South and East Asia. The College will also work with the Office of International Programs and the College of General Studies to ensure the consistent academic quality and management of study abroad experiences for College students.

- *Freshman seminars:* This successful program will continue to expand, with particular emphasis on seminars taught by faculty from Penn’s professional schools.

- **Tools for Learning and Teaching**
  - The new David B. Weigle Information Commons, a technologically-enhanced study and resource area in the Van Pelt-Dietrich Library Center, is a joint project of the School of Arts and Sciences and the University Library that aims to provide students with the skills they need to derive the maximum possible benefit from their Penn education. By encouraging students to improve their learning, communication, research, and technological skills and by providing the resources they need to do so in a single location, the Commons will enhance students’ learning experiences at Penn and impart skills that will serve them throughout their lives. While the Commons will primarily serve undergraduates, its resources will also be available to graduate students and faculty.

  Through the efforts of the Center for Teaching and Learning, CWiC, and the Center for Programs in Contemporary Writing, the College will focus attention on and provide opportunities for students and instructors to enhance their classroom experiences through effective presentations, collaborative learning, and use of writing.

  The College will continue to encourage and support faculty ventures into innovative teaching—particularly the use of telecommunication, other electronic and multimedia teaching tools, team and other interdisciplinary teaching, and innovative pedagogies including problem-based and case-study approaches.

2. **Graduate Education**

Graduate programs in the School of Arts and Sciences are of two types. The great majority of our graduate students study for Ph.D. degrees or related master’s degrees in programs offered by small, research-based graduate groups. SAS has nearly three dozen graduate groups in diverse fields. In recent years, the School has broadened its involvement in post-graduate education by developing master’s degree programs for students aiming to enter, or already established in, professions for which the intellectual resources of SAS can be mobilized to enhance students’ careers and ability to meet societal needs.

a. **Ph.D. Programs**

Vigorous, top-quality Ph.D. programs are essential to Penn’s position as a world-class research university. Faculty who are at the forefront of research benefit immensely from the opportunity to collaborate with and train the next generation of leaders in scholarship. As part of their preparation to become educators and mentors themselves, our Ph.D. students also contribute in important ways to undergraduate education as instructors, teaching assistants, and laboratory supervisors.

In recent years, Penn has improved its ability to attract the best candidates for Ph.D. study by increasing stipends, providing health insurance, offering multi-year fellowship packages, and limiting service requirements. As at a number of peer universities, the increasing cost of financial aid per student necessitated reductions in Ph.D. enrollments in many of our programs. To some extent, those cutbacks reinforced Penn’s healthy emphasis on quality over quantity in Ph.D. admissions and education. In our relatively small, highly selective programs, faculty mentors give close individual attention to Ph.D. candidates as they progress from students and apprentices to peers and colleagues who often become world leaders in their own right. At the same time, we recognize that increasing the size of the faculty will put pressure on our graduate student enrollments, and we will seek creative solutions to address the need to sustain a strong intellectual community of graduate students and faculty.

As Penn’s doctoral programs increasingly move into the top echelon of Ph.D. programs nationally and internationally, competition to attract the most brilliant students escalates. Besides relying on the efforts of both donors and faculty to fund an expanded number of basic fellowship packages, the School can benefit from relatively modest gifts that enhance Penn’s competitive position by supporting summer stipends, travel awards for overseas research, and final-year funds to support the last stages of dissertation-writing. Such resources also enhance the efficiency of SAS graduate programs by enabling students to move more rapidly to the completion of their degrees and the commencement of careers as leaders in scholarship, education, and research.
As we seek to expand the financial base for graduate education, we will not rely only on the generosity of donors, but will also encourage the initiative of faculty and students. Through the recently developed Fellowship Bank, graduate programs in the humanities and social sciences now have incentives to obtain external funding for students similar to those from which the natural sciences already benefit. Thus, groups are enabled to expand the size of their doctoral programs when their students, programs, and faculty are of such quality as to win recognition and resources from funding agencies beyond the University.

SAS will continue and improve our efforts to ensure that the substantial investments we make in Ph.D. education are justified by results, both at the individual and programmatic levels. In allocating scarce funds for fellowships among graduate groups, we will be guided by the ability of their faculties to attract the very best students, to see them through to timely and successful completion of their degrees, and to place them in positions that make full use of their training and talent as scholars, teachers, and researchers. Specifically, we will build on the School’s innovative development of performance measures, begun in 2003, by institutionalizing the annual tracking of key outcomes, including degree completion rates, average time to degree, and multiple measures of success in placement. To assess the longer-term success of our graduates, data will be gathered annually on the careers of the cohort that graduated five years previously. All of these indicators will be reported back to the graduate groups and will be an important factor in the allocation of fellowships and other resources.

b. Master’s Programs for Professionals

The School’s actions concerning professional master’s programs will be guided by three principles: openness to innovation, academic quality, and fiscal responsibility.

• Innovation: SAS will continue to be receptive to initiatives that enable our faculty to train practitioners who will contribute to solving important public problems and to enhancing the quality of life. Longstanding programs like the Master of Environmental Studies established models for the interdisciplinary nature of these programs, while more recent additions such as degrees in Urban Spatial Analytics and Integrated Science Education have sparked a trend toward novel collaborations with Penn’s professional schools.

• Academic quality: The School will work to ensure the academic quality of professional master’s programs by encouraging qualified members of the standing faculty to become involved in them and by strengthening oversight committees.

• Financial viability: At a minimum, professional master’s programs must be financially self-sustaining. Ideally, they will return a net financial contribution to the School. To avoid costly duplication of services, many of these programs will be encouraged to rely on administrative support from the College of General Studies.

3. Lifelong Learning

The School views education as a permanent condition of adults’ lives and recognizes that the desire for learning is motivated by many factors. Through its College of General Studies (CGS), SAS extends education beyond traditional borders and engages a richly diverse population of intellectually capable students in innovative lifelong learning opportunities that are grounded in the arts and sciences. These programs also provide an important source of additional revenue for the School that we wish to grow.

Global competition, changing economic and political forces, and economic restructuring have resulted in rapid growth in knowledge industries and change in the nature of work. SAS and CGS remain committed to offering programs that develop the abilities required for complex work: critical thought, communication skills, and analytical strengths. In response to the rapidly evolving needs of lifelong learners, CGS will conduct an extensive review of its portfolio of programs with an eye towards overall programmatic coherence, individual program quality and excellence, potential for growth, and fit with Penn’s institutional and SAS’s strategic goals. CGS will enhance its student services, while the School is committed to identifying an on-campus facility to provide a welcoming home to CGS students.

a. Undergraduate Degree Programs

The Bachelor of Arts degree has long been regarded as the centerpiece of the College of General Studies in service of local outreach, enrollment, and revenue. In the past five years, due to external forces that include increased local competition, CGS has seen a decline in the number of students seeking undergraduate degree completion. The School will appoint a group of faculty to undertake an evaluation of the CGS Bachelor of Arts degree and make recommendations about its future to the SAS Committee on Undergraduate Education.

b. Post-baccalaureate and Graduate Study

Although fewer students are seeking undergraduate degrees through CGS, more are seeking post-baccalaureate, graduate degree, and non-degree programs of study. CGS has already developed a variety of programs at these levels, including many of the non-research master’s degrees referred to in the previous section on graduate education, and will conduct a review of these programs’ academic excellence, institutional alignment, and potential for future growth. At the same time, CGS will also explore new programs, with an emphasis on post-baccalaureate and graduate certificates in the arts and sciences. There appears to be especially strong student interest in such programming in life and physical sciences.

c. Identifying New Audiences and New Collaborators

There is already evidence of potential interest from new audiences for whom we anticipate developing programs, such as SAS alumni, parents of Penn students, and intellectually talented high school students. In consultation with the faculty, we will also explore programming opportunities for learners whose needs are not yet fully understood, but who represent a large and growing segment of the population. These include mid-career professionals who need to stay current in their field; career-changers who need to enhance their academic credentials in order to change professions; and individuals who want to play an active role in the community or prepare intellectually and financially for retirement. As the largest provider of continuing education at Penn, CGS is in a unique position to forge partnerships with faculty and programs across SAS and Penn and to collaborate with corporate, government, cultural, and non-profit entities.

4. Recruiting and Retaining the Best Students

Attracting the brightest students to SAS, and ensuring that they have a rewarding intellectual experience and complete their degrees, begins with the outstanding faculty and academic programs described above. But one of the most valuable aspects of a Penn education is the opportunity for students to learn from each other—an opportunity that is greatly enhanced among a student body that not only excels academically but also celebrates its diversity in terms of race, gender, nationality, and socioeconomic status. The School remains deeply committed to improving student diversity, including the representation of minorities. We must also build stronger networks of faculty, alumni, and campus groups to provide mentoring and other support for these students where appropriate at all educational levels.

In order for us to recruit such a diverse collective, it is imperative to ensure that a Penn education is fully accessible to and supportive of the most promising students, regardless of their background or ability to pay tuition. At all educational levels, the School’s resources to support financial aid fall far short of those of our peer institutions, particularly in terms of endowment. This shortfall makes it harder for us to attract the best students to Penn, and therefore a remedy must be one of our very highest priorities.

Fund-raising for endowed scholarships at the undergraduate level will be one of the most critical activities the School undertakes in the coming years. We also recognize the importance of providing access to the “complete Penn”: beyond tuition, we must provide the means for students to take full advantage of the richness of the educational environment, including opportunities to take non- or low-paying internships, to do research, and to study abroad. In the area of graduate education, as discussed earlier, we must identify new resources for summer support, dissertation fellowships, and additional fellowship packages, whether through private giving or sponsored funds.
II. Investing in the Future: Sustaining the Disciplines and Integrating Knowledge

Our commitment to supporting the faculty and enhancing graduate and undergraduate education across the School is founded on the belief that excellence in the fundamental disciplines is the bedrock upon which all other academic activities must be built. All of the initiatives described above are designed to strengthen those disciplines. At the same time, SAS recognizes that many of the most complex questions and ideas facing mankind—whether we are assessing the past, trying to explain phenomena around us at present, or looking to the future—are not easily addressed within the confines of a single discipline. While the School must sustain the disciplines—and the departmental organizations in which they are administered—we do not want them to inhibit the movement of faculty and students across their borders.

We must provide the academic structures that allow SAS as a whole to be alert to new questions and to encourage faculty to come together to study them from the standpoint of many disciplines. To that end, we will promote the formation of grass-roots faculty “working groups” with flexible lifespans for the pursuit of new ideas or approaches (for example, the Working Group in Applied Mathematics). The Penn Humanities Forum will play an important role in stimulating interdisciplinary conversation. The President’s Penn Integrates Knowledge initiative will enable SAS to appoint distinguished multidisciplinary scholars jointly with other schools at the University.

The departmental and school borders that SAS wishes to make more porous are not only intellectual in nature; they are administrative and financial as well. We are determined to overcome the bureaucratic roadblocks that too often serve as disincentives for the integration of knowledge across the School and University. We will develop methods for “thematic” budgeting, analysis, and fund-raising that are based on priority multidisciplinary topics rather than on organizational entities, and incorporate operating and capital expenses. We will find ways to make organizational structures more elastic, allowing more dual-reporting relationships and flexible staffing in support of multidisciplinary efforts. We will explore opportunities to co-locate related programs and change programming functions within buildings. In order to stimulate activity between SAS and other parts of Penn, we are committed to working with other schools and to facilitating buildings. In order to stimulate activity between SAS and other parts of Penn, we are committed to working with other schools and to facilitating buildings. In order to stimulate activity between SAS and other parts of Penn, we are committed to working with other schools and to facilitating buildings.

In this spirit of commitment to an integrated approach to addressing critical social, scientific, and intellectual issues, the School will make targeted investments in the multidisciplinary initiatives described below. They are not the only areas of interest that ask for a multidisciplinary approach, but they are those that will:

- strengthen core departments and programs;
- take advantage of existing research strengths in multiple disciplines in SAS and the other schools at Penn;
- result in both advances in fundamental knowledge and in transformative applications of that knowledge that will benefit either the local community or have a global impact;
- promise to have a significant impact on graduate and undergraduate education.

Through these investments, we hope to build individual departments while engaging a diversity of University partners in a common intellectual cause. To foster that engagement, we will convene interschool faculty and administrative working groups to advise the Dean’s office in building faculty and programs in these areas.

A. Genes to Brains to Behavior

With the development of powerful computational techniques combined with the growing understanding at the molecular level of fundamental life processes, the life sciences stand ready to attack some of the most important and fundamental problems in all of science. The tools and concepts are now in place for us to connect the basic building blocks of biology (genes, proteins, cells) and the complex behavior of organisms and populations, up to and including all aspects of human consciousness.

This idea has been embodied in the plans and aspirations of the SAS life sciences faculty for more than a decade. Faculty in Biology are studying the fundamental genetic basis of high-order systems such as learning and memory, while faculty in Psychology perform state-of-the-art imaging studies on humans performing complex cognitive tasks. Both groups have extensive research collaborations that reach out to other departments in SAS (e.g., Linguistics, Mathematics) as well as to other schools at Penn, including Medicine, Veterinary Medicine, Dental Medicine, and Engineering. This agenda is strongly connected to important cross-school research entities such as the Penn Genomics Institute, the Center for Bioinformatics, the Center for Cognitive Neuroscience, the Institute for Research in Cognitive Science, and the Institute of Neurological Sciences.

To build for the future of this field, the School will need to make targeted hires in the life science departments of Biology and Psychology, as well as in the supporting disciplines of Chemistry, Physics, and Mathematics. Some of these appointments may be made jointly with other schools in view of the centrality of the life sciences to the mission of several of Penn’s health schools.

In education, Penn has been a consistent innovator in this area. Undergraduates in our popular interdisciplinary Biological Basis of Behavior major, as well as in Biology and Psychology, carry out research projects in the laboratories of faculty in SAS and throughout the health schools. Beyond the relevant majors, this area of study plays a central role in general education courses in the sciences. In addition, because issues like the physical basis of consciousness engage a wide range of disciplines, including philosophy, religion, music, and the visual arts, they are well suited to undergraduate programs that combine scientific and humanistic approaches.

The School’s plans for improved laboratory facilities for the life sciences mirror the intellectual commitments outlined above. Construction is nearly complete for the Carolyn Hoff Lynch Laboratories, the first phase of a new life sciences building for investigators in Biology and for the Penn Genomics Institute. The second phase of this building, which should be built as soon as possible to capitalize on the momentum associated with the completion of the Lynch Laboratories, will provide the essential link between research programs in psychology and neurobiology, while creating new educational spaces that will enrich instruction.

B. Nanoscience

Nanoscience refers to the study of phenomena on the nanometer scale, the scale that is important for assembling atoms into molecules that can then be further incorporated into higher-order, more complex structures such as new materials or living cells. Nanoscience brings together the strengths of diverse scientific disciplines—physics, mathematics, chemistry, biology, and earth science—to address an important set of problems. Advances in nanoscience will produce new technology in the biomedical area as well as in fields more usually associated with physical science, such as computing and the miniaturization of electronics. This technology, in addition to enriching our lives, will also, in turn, enable new science; the relationship between science, engineering, and technology is one of mutual support and reinforcement.

Penn is ideally organized for the multi-disciplinary approach to nanoscience through the Laboratory for Research on the Structure of Matter (LRSM), its NSF-funded Materials Research Center, and the newly organized Nano/Bio Interface Center. Each involves significant participation from faculty in SAS, Engineering, and the School of Medicine.

An investment in the future of nanoscience should have an impact at every level of science in the School, in research, education, and facilities. It should also foster further collaboration with the health schools and Engineering. To help meet these exciting scientific opportunities, the School will invest in new faculty in relevant fields of the physical sciences, where disciplinary boundaries are already blurring. This investment will include
startup funds to help establish state-of-the-art research programs that will then be in a position to compete for external funding. In addition, SAS will expect to participate, with Engineering and Medicine, in the renewal of Penn’s laboratory facilities for the physical and materials sciences, including the LRSM building.

An investment in physical science at the level of research should be matched by a commitment to graduate and undergraduate education in the physical sciences. The potential for innovation and application in this exciting new field should help us to attract more undergraduates to the interdisciplinary study of the physical sciences. We will explore the creation of a nanoscience minor, in collaboration with Engineering. Direct participation in research by undergraduates will continue to be important, but we will also concentrate on the initial experience of our undergraduate students with college-level science. This will require significant investments in laboratory facilities, including renovations to the general chemistry research laboratories. An investment to create the highest-quality undergraduate experience in the physical sciences will pay off immeasurably in contributing to the future of the field.

C. Cross-Cultural Contacts

The ever-increasing scale of social, political, and economic interaction among peoples—whether internationally or here in the United States, home to the world’s most diverse mix of diaspora populations—has made contact between and among cultures an urgent area of investigation. The humanities are now well-positioned to help us understand these interactions. In recent years, the humanistic disciplines have put notions of universal aesthetic, religious, and philosophical values to the test by emphasizing the empirical investigation of specific cultures. This investigation of the interconnections of society, politics, and culture also makes possible new points of connection between the humanities and social sciences.

SAS is already in the forefront in many areas of this activity. Across humanities departments, we have significant faculty strength in the study of European contact with the Americas and the East during the early modern and colonial periods and the post-colonial aftermath. We have also achieved distinction in diaspora studies, with many scholars who study the Asian American, Latino, African-American, and Caribbean experiences. Many of our social science faculty grapple with cross-cultural matters as well, and have great potential to interact with the humanities faculty. Our area studies centers bring together faculty from across the School and University to engage in questions of both intra- and inter-regional contact, and at our Solomon Asch Center, faculty are studying ethnopolitical conflict from the perspectives of political science and psychology. The School’s joint degree programs with Wharton—the undergraduate Huntsman Program in International Studies and Business and the graduate Lauder Institute—have been leaders in the integration of management education with cross-cultural and language proficiencies. Our English Language Programs attract students from around the world to study English and learn about American culture.

As we move forward, we will focus more deliberately on the issue of intercultural contact across boundaries of time, geography, language, and religious and cultural traditions, in order to advance our mission of teaching students who are fully prepared to enter a world where such issues present both pitfalls and opportunities, and to train scholars and teachers who will play major roles in determining the course of teaching and research in this important field. We will need to strengthen the faculty in our humanities departments in areas that promote the study of cross-cultural contacts and to provide support for international research. A focus in this area will allow us to make important links between the humanities and the social sciences within SAS, as well as with other schools at Penn that grapple with these issues, including Annenberg, Education, Design, and Wharton. It will also allow us to build our relationship with the University Museum and its extraordinary global cultural resources.

This initiative will support the new College curriculum, which emphasizes both global cultural analysis and the learning of a second language. Investment in this area will allow us to develop new general education courses to enhance our students’ awareness of global issues. We will also undertake a reexamination of language education to explore new approaches to language learning that make it more compelling for students. The School, including the College of General Studies, will work with the Office of International Programs to review our study abroad programs and their role in the curriculum. Locally, the School will collaborate with the arts and culture institutions on campus and in Philadelphia to develop programs that enhance the understanding of cross-cultural contacts both on campus and in the community.

D. Democracy and Constitutionalism

During the past several decades, a worldwide wave of democratization has extended government based on free elections from its original base in Western European and English-speaking countries throughout much of Latin America, Asia, Africa, and the former communist nations. Both at home and abroad, democracy and the political institutions that support it are constantly evolving; that evolution is the subject of ongoing discussion and debate.

In the humanities and the social sciences, the School makes central intellectual contributions to the understanding of constitutional democracy through a number of departments, centers, and programs. In Classical Studies, History, and Philosophy, our faculty study democratic thought and history dating back to ancient times. The study of early American history and constitutional development is a particular strength of History, which benefits from the resources of the McNeil Center for Early American Studies. Democratic politics and constitutional design are primary concerns for Political Science, which has established strong relations with the Law School in the area of constitutional theory and with the Annenberg School on political communication and electoral behavior. In Economics, institutional design and electoral behavior are studied through the Political Economy Workshop of the Penn Institute for Economic Research. The Solomon Asch Center for Study of Ethnopolitical Conflict has devised innovative power-sharing arrangements that make democracy government possible in deeply divided societies. The Center for the Advanced Study of India is the first center at a major American university dedicated to understanding the economic and political development of the world’s largest democracy. Our Fels Institute of Government educates students who will make democracy work through careers in public service.

Faculty appointments that further strengthen our expertise in this area are a priority for SAS, as are research activities that will add significantly to knowledge on this subject by forging additional ties across Penn schools, to Philadelphia-area cultural institutions, and to political institutions in the U.S. and around the world. We must also resolve the facilities needs of the Department of Political Science, which plays a central role in research and teaching in this area.

Preparation for citizenship and leadership in a democratic system is a vital objective of undergraduate education, and we must renew our commitment to the programs that enhance that end. In addition to the Fox Leadership Program, our undergraduate programs such as Political Science, History, Philosophy, Sociology, Communication, Urban Studies, Urban Education, and Philosophy, Politics, and Economics feature this area as an important part of their responsibilities, both in their majors and in their contributions to general education. We will review and possibly expand our programs in Washington, D.C., including the Washington Semester Program, which enables students to take Penn courses in the capital while gaining first-hand experience of politics and government through internships.

E. Social Dimensions of Health

Declines in childbearing and advances in clinical medicine, public health, and material well-being have created populations—in both the United States and abroad—that are older and longer-lived than at any time in human history, in spite of serious epidemiological issues. Advances in life expectancy and access to health care are unequally distributed—socially, economically, and geographically. The costs of healthcare in the U.S. constitute an ever-increasing fraction of the economy—more so than in other developed nations—and the gap in expenditures on medicine and public health between the developed and less developed worlds is extreme. These issues are in which integrated knowledge from the social sciences is crucial. This includes the study of health care policy; the implementation
of health care programs in specific cultural, social, and political contexts; and the demographic causes of demand for health care services and the demographic consequences of changes in mortality, morbidity, medicine, public health, and economic and social development and inequality.

On a campus that is also home to four distinguished health science schools, Penn’s social sciences — within SAS and elsewhere within the University — are well poised to contribute to one of the largest knowledge agendas of the twenty-first century. We are already making advances in such areas as the ethnographic and organizational study of health care practices and systems; integrated field studies of disease epidemiology in specific societies and cultures; statistical models for the effects of investments in human capital on health and productivity; and models of population mortality that synthesize genetic heterogeneity and social demography. These draw on faculty from Anthropology, Economics, History and Sociology of Science, Political Science, and Sociology. They benefit from strong working relations with other schools, from Medicine and Nursing to Wharton, Annenberg, and Social Policy and Practice. Much of the integration revolves around research centers and institutes — for example, through SAS’s Population Studies Center or through our faculty’s involvement with Wharton’s Leonard Davis Institute, Medicine’s Center for Clinical Epidemiology and Biostatistics, and Nursing’s Center for Health Outcomes and Policy Research.

Further investment in this area will capitalize on these strengths and on the connections between social sciences within SAS and many of Penn’s other schools. We will need to make targeted hires for faculty across several departments to support these areas and to provide research support for the core social science disciplines that are making important methodological advances. Renovations of the McNeil Building will be critical for our success in attracting faculty and supporting education in those departments in SAS.

An investment in these areas will also benefit undergraduate programs, especially since faculty with research interests in social science and health teach many courses in these areas, including through the popular interdisciplinary Health and Societies major, which should be strengthened. These areas will also create opportunities for undergraduate research, both here and globally. In addition, an emphasis on health issues and health policy will bolster the School’s programs in environmental studies; our links with programs across campus in public health; and the Center for Community Partnerships and its initiatives in academically-based community service courses that address health problems in the Philadelphia community.

III. Measuring Our Success

An essential part of our strategic planning process must be the creation of a mechanism for determining whether the School achieves the ambitions it has set forth to advance to new heights of academic excellence. The question of whether we accomplish many of the goals outlined in this plan will be easily answered through either simple quantitative means (i.e., tallying the size of the faculty, the percentage of minority faculty and students, or the amount of financial aid awarded) or implementation of an academic program or construction of a building. Indeed, the success or failure of this plan will be due in great measure to our mere ability to institute the initiatives outlined in this document, and we are committed to monitoring our own progress in meeting the challenge of doing so.

But making these goals a reality will not in itself answer a more crucial question: As a result of the implementation of this plan, is the School better than it was before? The measurement of academic quality is of course a highly subjective exercise, but one in which we must attempt to engage with as much objectivity as possible if we want to assess the advancement of the School over the next five years. We will begin by establishing a baseline by which we can compare our future success, and we will develop measurements for benchmarking our progress against our peer institutions as appropriate. SAS is well positioned to take on the difficult task of assessment, having in recent years received national attention for its evaluation of the Pilot Curriculum experiment and its performance measures for graduate programs. We will also measure our success by our ability to achieve the fund-raising goal established for the School as part of the upcoming capital campaign, which will provide a significant portion of the resources required to implement the programs and priorities outlined in this plan.

A. Faculty

Scholarly production, quality, and impact are core indicators of faculty quality. We will track publication rates in top journals and by top publishers, citation ratings where relevant, and sponsored research awards. The reputation of individual faculty among our peers can also be gauged by their leadership in their field (e.g., editorships of prestigious journals or presidencies of major academic associations) and by the accolades bestowed upon them by their peers (the top prizes and fellowships and election to national academies). We will continue to learn from the impressions and advice of external departmental and program review teams. While national rankings such as those compiled by the National Research Council and U.S. News and World Report should be approached with caution, they can be helpful indicators when used as one factor in a broader assessment of departmental quality. Our ability to attract and retain the best scholars must also be taken into consideration; accordingly, we will track our yield rate in hiring top candidates, as well as the rate of retention for faculty who receive outside offers.

B. Students

An evaluation of the quality of undergraduate education must take into account a variety of factors, starting with the quality of the students upon matriculation. At the time of admission, academic indicators and the admission rate tell us about the quality of students we admit, while the application and yield rates inform us about our overall attractiveness to prospective students. We can measure admission to graduate and professional schools, receipt of national and international fellowships and awards, and job placement at various stages of graduates’ careers. Students themselves provide important feedback on the perceived quality of their academic experience and intellectual life inside and outside the classroom; we will continue to refine the mechanisms used in the Pilot Curriculum evaluation to seek student assessment of their academic experience. The rate and scale of alumni participation, both as donors and as volunteers, speaks to the level of satisfaction with their time at Penn.

We must monitor not only the ratio of students to faculty but the quality of student-faculty interactions. We will continue to work with departments and programs to find the best ways to assess the quality of teaching. We will also track the percentage of students who undertake a significant research project. We will continue to profit from external reviews as a means of evaluating both quality and reputation. National rankings of undergraduate programs will be used, like those that assess departments, as an additional gauge of reputation.

In the area of graduate education, SAS will continue to employ and refine the performance indicators that it recently developed to assess factors such as job placement, degree completion, and time to degree. The internal reviews conducted by the University’s Graduate Council and the external appraisals that take place as part of departmental reviews will continue to provide important feedback. Our success in continuing education will be measured by admissions indicators that describe the quality of the students we admit, as well as by overall enrollments. We can also assess job placement and career advancement for graduate of our professional master’s programs.

C. Integrated Knowledge

The School is also committed to evaluating the success of its efforts to promote the integration of knowledge, particularly in the thematic areas. It is in these areas that we seek to have a national and international reputation for distinctive eminence. We will track a variety of academic indicators in these areas similar to those for the faculty as a whole (e.g., publications, grants). We will also establish external advisory boards in each of these areas to provide advice on our effort and feedback on our success.