



STONY BROOK UNIVERSITY
COLLEGE OF ARTS AND SCIENCES

Fine Arts
Humanities
Social & Behavioral Sciences
Biological Sciences
Physical Sciences
Mathematics

Expanding Minds
Exploring Worlds



Arts & Sciences
Project 50 Forward
Strategic Plan

December 1, 2010

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College of Arts and Sciences

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On the cover: *The Mars Exploration Rovers, Spirit and Opportunity, are fast approaching their seventh anniversary on the Martian surface even though their primary mission was only intended to last three months. Three Stony Brook faculty members from the Department of Geosciences, Deanne Rogers, Tim Glotch and Scott McLennan, are on the rover science team and continue to carry out research and involve students with the data returned from these remarkable robotic explorers.*

Achieving Academic Greatness



About the University strategic plan

Project 50 Forward, the University Strategic Plan for the next decade, has three parts: Operational Excellence, Academic Greatness, and Building for the Future. Here we present the contributions to Academic Greatness[™] by the College of Arts and Sciences. As the Project 50 Forward mandate describes, this component of the University's overall plan:

"Academic Greatness will be achieved through implementation of a comprehensive Strategic Plan that is being developed with input from many sources within the academic community including faculty and University leadership. It includes a significant review of the academic structure, systems, and programs to identify areas where efficiencies may be implemented. At its core is the goal to provide an academic structure that is responsive, accountable, and committed to our students, providing them with the most effective tools possible so they can reach their educational and research goals in a timely manner."

About the College of Arts and Sciences strategic plan

Stony Brook's College of Arts and Sciences (CAS) is the academic and research heart of the university. Its faculty is large and diverse, offering 36 majors, 39 minors, 29 masters programs, and 27 doctoral programs spanning from the fine arts to the physical sciences. The challenge in creating an overall vision for such a multifaceted entity was to stimulate the creativity of the faculty and then with the help of the CAS Strategic Planning Steering Committee, forge an overall plan for the college that is forward looking and expansive, aiming to create **the college of the 21st century**.

The Steering Committee was composed of the Dean, Nancy Squires, and four department chairs, Diane Doran-Sheehy (Anthropology), Robert Haltiwanger (Biochemistry), Benjamin Hsiao (Chemistry), and Nick Mangano (Theatre). This group solicited input from departments and individuals and looked at various measures by which the college and the units can be evaluated. The goal was to develop a plan that would **promote excellence at all levels**: undergraduate education, graduate education, and professional scholarship. Particular emphasis was placed on **opportunities for increased interdisciplinarity and collaboration**.

The result is a combination of **building on past successes** and **creating new ventures** that recognize changes in our world, in our students, and in our scholarly fields. We believe that the product is one that can stimulate future creativity and enliven our dialogue with other parts of the university and the surrounding community.

CAS mission statement

The College of Arts and Sciences is committed to improving the quality of life of our students through the arts and sciences. Positioned within one of the top research universities in the nation, the College is committed to excellence in our individual disciplines, and to interdisciplinary learning and collaboration. The College has a track record of innovative programming and unique opportunities to explore the infinite possibilities the convergence of arts and science can offer.

We believe that the study of the arts and sciences creates informed, inquisitive and inventive citizens who are prepared to contribute to the rapidly changing global environment in which we live.



Department of Africana Studies

About the Department

The Stony Brook Africana Studies Department is an **intrinsically interdisciplinary unit** that focuses on the **histories, sociology, philosophy, literatures, politics, anthropology, religions, and experiences** of people of African heritage wherever they are found within the larger national and global contexts. In addition to being intensely grounded in the scholarly enterprise, our faculty encourage social commitment, promote sensitivity to the civil rights of all people, and teach responsibility to community.

Africana Studies has existed as an academic unit at Stony Brook since 1968. Like other Black Studies programs, it was established as a result of the heated conflicts, debates, and civil unrest that affected civil society in the United States throughout the 1960s. These social upheavals that addressed issues of civil rights were spearheaded by people of a variety of ethnic and racial backgrounds who came from all sectors of US society, but most especially from college campuses throughout the United States. In addition to addressing other important civil rights issues, the social activists who participated in these movements pointed out and sought to rectify the glaring biases and evident intellectual shortcomings manifested in the ways in which the traditional disciplines were being taught on US campuses as they tended to ignore, devalue, and misrepresent the contributions of peoples of African heritage and ancestry and thus distort our understanding of the world. The Stony Brook AFS unit obtained formal departmental status in 1998. Over the years, the undergraduate



program has enrolled thousands of students of all racial and ethnic backgrounds who find the courses offered by the AFS faculty intellectually challenging, extremely informative, and exceptionally enlightening. After years of struggle, the Stony Brook Africana Studies Department obtained New York State's Department of Education's approval for its Master's program in 2007 and started our Graduate Certificate in Africana Studies in Fall 2010. In addition to building a successful Master's program, our plan is to initiate a BA/MAT degree and also to develop a Doctoral program in African Diaspora studies in the not too distant future.

Stony Brook's AFS faculty members are internationally-renowned scholars, with specialization in a variety of disciplines. They have published innovative, ground-breaking, and pioneering works in fields as diverse as **slavery and civil rights, Caribbean immigrants' transnational identities, African American women's history, black British literature, and Francophone Caribbean literature.**

Vision for the future

Our vision is to refine the interdisciplinary tools of investigation needed for well-grounded and trend-setting Black Studies (**multi-prismatic lens, varied methodologies, philosophy of social responsibility**) and to focus our research on investigating and seeking answers to contemporary questions about the characteristics and implications of the ever-changing nature and characteristics of the **global African Diaspora**. In addition, we are interested in shedding light on the various meanings, transmutations, and locations of "Blackness" in the global ecumene of the 21st century, the emergence of **transnational identities** among the black immigrant populations world-wide, the notions of **Black nationalism** and **Pan-Africanism**, the evolutionary **intersections of race, class, and gender**, the changing characteristics of **"Black" writing and literary criticism**, as well as the multifarious manifestations of **Black activism, community involvement, and social commitment**, in order that our students will make a difference in, and contribute significantly to, the life realities of the 21st century and beyond.



Department of Anthropology

About the Department

Over the last 25 years, the Department of Anthropology at Stony Brook University has become one of the best scientific anthropology programs in the United States. This transformation is largely due to the establishment of the innovative **Interdepartmental Doctoral Program in Anthropological Sciences** primarily in partnership with the Department of Anatomical Sciences. This inter-disciplinary approach, together with a clear departmental focus of an empirically-derived evolutionary perspective on the human condition has created a stimulating intellectual environment for the faculty and provided superb training for graduate students.



The Stony Brook University Department of Anthropology is a small department with a highly active, productive and internationally recognized faculty noted for its research in the fields of **paleoanthropology, primate behavior, archaeology, and social anthropology**. Currently it ranks first

among U.S. universities in terms of its impact on the field of Anthropology, based on average citations per journal publication (www.sciencegateway.org/rank/index.html). We train Ph.D. students through an Interdepartmental Doctoral Program in Anthropological Sciences (IDPAS), which was created in 1983 and within a decade was ranked as one of the top programs in the country. Currently, the Anthropology faculty contributes greatly to the University's undergraduate teaching mission, in both traditional and non-traditional ways. We have established innovative field schools, study abroad programs and numerous research opportunities for undergraduates.

Our areas of expertise are of great interest to the public at large, and as a result we provide considerable visibility of Stony Brook to the public through newspaper articles, television programs, and films that feature our faculty members. Our contributions, along with those of our associated institutes (**Institute for the Conservation of Tropical Environments, Turkana Basin Institute, and the Institute for Long Island Archaeology**) and field sites, extend far beyond the University through conservation efforts, training scientists in developing nations, and assisting war-torn nations through training programs and election monitoring.



Vision for the future

Our vision for the future is to further extend our research through two interdepartmental initiatives. The **"Early Civilizations"** initiative will unite faculty from Anthropology and the Humanities to examine the emergence and nature of the world's first urban societies from multiple perspectives. In collaboration with the Department of Ecology and Evolution, the new program in **"Human Evolutionary Biology"** will examine how evolutionary forces shaped and continue to shape the human condition. We propose to add new areas of research in **human genetics, human behavioral ecology and the evolution of human disease** to expand upon and strengthen our current strengths in paleoanthropology, enabling us to maintain our top-ranked position in the field.



The Department of Anthropology has long experience in interdisciplinary education, obtained primarily through our partnership with the Department of Anatomical Sciences. The result has been a world-class graduate program and a research group that together is better than the sum of its parts. Our departmental vision for the future is to capitalize on this experience to forge new ties to implement new and

innovative undergraduate curricula for the 21st century at Stony Brook University, and by doing so, expand, strengthen and diversify interdisciplinary research on contemporary issues.

Department of Art

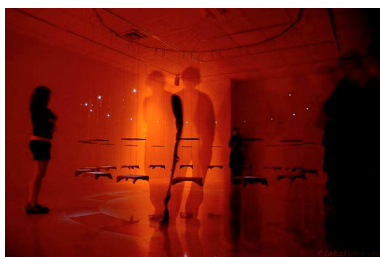
About the Department

The Department of Art at Stony Brook University has consistently been at the cutting edge of developments in art history, criticism and practice. Here, in the 1960s, Lawrence Alloway **coined the term “Pop Art,”** Allan Kaprow **invented the “Happening,”** and the visiting artist Nam June Paik taught students to see the recently invented technology of **“video” as a creative medium.** Since that time, we have continued to embrace new directions in the study and making of art, at the core of an **integrated curriculum** for undergraduates and for graduate students.



*History of Photography
teaching assistant Travis English
with SB students at MoMA*

In art history, these range from **interdisciplinary perspectives** in 19th and 20th century art criticism to more **non-canonical topics:** the scholarly analysis of visual and material culture, including the moving image and digital media, global artistic traditions and contemporary diasporic art. Our studio **artists work in a wide spectrum of traditional and new media,** from sculpture, print-making, painting and photography, to digital media, installation art, and performance.



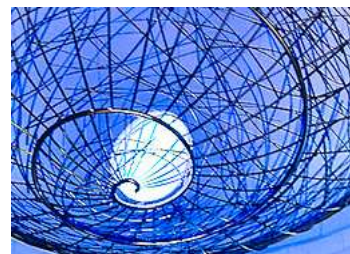
*MFA Takafume Ide, Propagate
(2006). 16-channel sound coupled
to LEDs, Shown in the Lawrence
Alloway Memorial Gallery, SBU*

Undergraduates can major in Art History and in Studio Art, and can enroll in the Digital Arts Minor. Our **graduate degrees** are the M.F.A. in Studio Art, and the M.A. and PhD in Art History and Criticism. These programs have worldwide reputations: currently Art has 18 **international students** from 13 countries, including 4 Fulbright Scholars. All our students, and our faculty, are well served by the resources of a large research university: our emphasis on **critical theory** has led to a natural connection to both Philosophy and Women’s Studies, just as our concern for **performance** has with Music and Theater Arts. The field of **visual and material culture** has given rise to collaborations between Art and the Humanities Institute, CLCS, and a range of other Humanities and Social Sciences Departments; and our concern with **media** has led to joint work with **Computer Science** in the College of Engineering.

Vision for the future

While maintaining our studio foundation in drawing, painting, printmaking and sculpture, we plan greater emphasis on **the intersection of art and technology** through the introduction of increasingly **“hybrid” working environments.** Here students can develop their visions through a diverse range of materials and media, supplementing traditional methods with the most advanced practices in digital **imaging,** digital sound and video **editing,** computer aided **modeling,** and information **visualization.** An **accelerated MFA** program targeted at working artists and professionals will bring a new dimension of practical experience to our student body. Planned collaborations with **Computer Science and Materials Science** will expand the productive, interdisciplinary relationships our MFAs have long enjoyed.

Within art history, we must continue **our leadership in modern and contemporary** European and American art history, criticism and theory; this includes a radical reimagination of our journal *Art Criticism.* At the same time we intend to expand into **modern Asian art,** and also into **modern Latin American art** -- areas of explosive artistic growth that are of great interest to our students, to their parents and, we hope, to potential donors. We seek to strengthen our collaboration with the Philosophy Department’s **MA program in Art and Philosophy at SB-Manhattan,** and utilize this valuable space as a way of more closely integrating New York’s cultural institutions into our curriculum. Finally, a new MA/MBA program will better prepare our graduates to take advantage of the **wide range of curatorial, administrative, and entrepreneurial opportunities** within the increasingly important world of art and media cul-



*Prof. Nobuho Nagasawa,
Landings (2009; detail). Soto
Station, Metro Gold Line, Los
Angeles*

Department of Asian and Asian American Studies

About the Department



Conceived for the new millennium, the Department of Asian & Asian-American Studies is transforming Asian and Asian American Studies in the U.S. We are one of the few programs that are **strong in East Asia and South Asia**. We study globalizing Asian societies in relation to their ancient traditions. Our bold vision **integrates Asian Studies with Asian American Studies**. We have a dynamic outreach program and in turn, strong community support.

We offer **two majors**, Asian & Asian-American Studies and Religious Studies, and **six minors**, in China Studies, Japan Studies, Korean Studies, South Asian Studies, Asian & Asian-American Studies and Religious Studies. Our **interdisciplinary curriculum** encompasses languages, linguistics, literatures, cultures, arts, philosophies, religions, histories, societies, politics, environment and science. We teach some 100 courses a year, taken by over 26,000 students since 2002. Our new teacher education programs lead to New York State Initial **Teaching Certification in Chinese and Japanese**. Our rich Study Abroad programs provide a stimulating experience of the cultures, arts, and societies of China, India, Japan and Korea. A **Master's program in Contemporary Asian Studies** will start in 2011.

Our faculty's **research focus** may be described as "**traditions and transformations:**" We have specialists in the **intellectual history** of South, East, and West Asia, in **Hinduism, Buddhism, Taoism, and Islam**. We have a unique **concentration of experts** in the structure, acquisition, use, maintenance, and teaching of **Asian languages**. The former Director of the Baghdad Museum, an expert in **cultural heritage preservation**, and the former Ambassador of India to several countries, an expert on **China-India-U.S. relations**, as well as the world's leading experts in **Sufism** and in **World Englishes** are on our faculty. We work on issues as diverse as cultural dimensions of **ecology** in China, the language of **business** in India, globalization of **performing arts**, Asian Americans in postcolonial **media**, and **mental health** issues of the elderly Asian Americans.

Our faculty's research is supported by **prestigious fellowships and grants** from the National Science Foundation, the National Endowment for the Humanities, the Fulbright program, the Spenser Foundation, the National Academy of Education, the U.S. Department of Education and the American Institute of Indian Studies. Their publications are required reading around the world, they are featured in major media, and they have extensive collaborations with institutions in Asia and the U.S.

Our Department is a campus leader in **community relations and advancement**. Our mission is supported by the dynamic **Center for India Studies, Japan Center and Center for Korean Studies**. With their help, we enhance our course offerings, sponsor intellectuals and artists, offer scholarships, support faculty and sister departments in their Asia-related initiatives, organize conferences, cost-share research grants and conduct numerous Outreach programs. We work closely with the **Charles B. Wang Center** to offer a rich array of programs on cultural and social issues.



Students at an undergraduate research seminar

Vision for the future

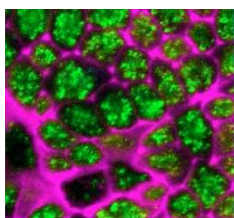
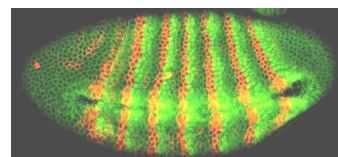
Today, the study of Asia is crucial. Academia has realized the necessity of **integrating Western and non-Western modes of thinking and problem solving**. The **rise of Asia and the U.S.' involvement with, and in, Asia**, make this a pragmatic imperative. With our twin emphasis on traditions and transformations, we are poised to assume a leadership role in teaching and research in this century.

Over the next decade, we will build on our successes to **increase external research funding** in areas such as language teaching, as well as in advancement. We will **deepen our core research strengths and extend our interdisciplinary orientation** to include business, journalism, and social change. We will constitute a valuable component of the proposed **interdepartmental doctoral program in languages, literatures, and cultures**. We will **train professionals** for the academia and outside, with a sound foundation in traditional Asia, comfortable with a trans-national vision and skilled in cross-cultural communication, and to become leaders of their professions in Asia as well as Asia-related settings in the U.S.

Department of Biochemistry and Cell Biology

About the Department

The Department of Biochemistry was founded over 40 years ago to develop world-class research programs on the structure and function of biomolecules, with the goals of understanding the **molecular basis of disease** and **developing novel approaches for biomedical intervention**. The mission of the Department was expanded in 1988 to include **Cell Biology**, the study of cellular and subcellular structure and function. The Department represents a nexus between basic science and biomedical research, and the research mission requires that there be close ties with both the physical and biomedical sciences at Stony Brook. As a result, the faculty has collaborations that stretch across the University and maintain facilities that are widely accessed as University resources. This bridge between the basic and biomedical sciences is reflected in the inclusion of the Department in both the College of Arts and Sciences and the School of Medicine.



The Department administers two Ph.D. programs: **Biochemistry and Structural Biology** (BSB) and **Molecular and Cellular Biology** (MCB), which are supported by an NIH-funded training grant. Both programs are interdepartmental and multi-institutional, including faculty from **Brookhaven National Laboratory** (BNL) and **Cold Spring Harbor Laboratories**. The quality of our faculty is reflected by the fact that our graduate programs are ranked in the top 50 (US News and World Report) and that our faculty are quite successful in obtaining external funding from NIH, NSF and other agencies (over \$10 million in research expenditures per year).

The Department also actively participates in undergraduate education, through both the Biochemistry and Biology majors. Combined, Biochemistry and Biology represent the largest major on campus, and the Biochemistry majors are often some of the best and brightest students on campus. The Department offers many research opportunities for undergraduates in faculty labs.

Vision for the future

The Department seeks to continue to grow in stature over the next decade with the goal of being recognized as one of the top 10% of departments nationwide with similar roles. We plan to do this by building on existing strengths and filling strategic gaps in our research profile. Two areas of existing strength are *Molecular and Cellular Communication* and *Genomic Regulation*. Cellular communication involves how cells interact and respond to their environment as mediated by glycoproteins in the membranes that surround the cell. *Genomic Regulation* involves how the information in DNA is stored in chromosomes, copied when cells divide, and translated into proteins that carry out cellular functions. **Defects in Cellular Communication or Genomic Regulation** can result in a wide variety of diseases. **Current research in the Department has links to many diseases, including several types of cancer, neurodegenerative diseases such as Alzheimer's, infectious diseases, infertility, and birth defects.**

To further enhance these areas of strength, we seek strategic hires in these areas with expertise in **Structural Biology** and **Systems Biology**. Structural Biology visualizes the spatial characteristics of cells and molecules down to the atomic level. Such hires will take advantage of the relationship and resources at **BNL**, in particular the **National Synchrotron Light Source II** currently being built. NSLSII will be the brightest light source in the country and will be an outstanding resource (and significant draw) for the best and brightest Structural Biologists. *Systems Biology* is a new and exciting field seeking to follow all of the genes, proteins, carbohydrates, lipids, or metabolites in a system simultaneously. This approach, rather than one molecule at a time, provides a global view of changes occurring within a cell in response to different conditions. Hires in these areas will strengthen biomedical research at Stony Brook overall. Combined with the present expertise in the Department, the addition of Structural Biology and Systems Biology in these areas will allow us to better understand the fundamental concepts underlying the molecular details of disease, allowing the development of the next generation of therapeutics.

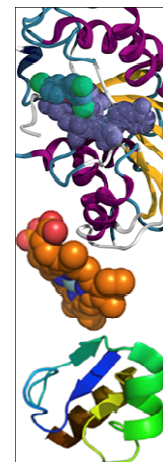


Department of Chemistry

About the Department

The mission of the Stony Brook University Department of Chemistry is to carry out world-class research and education in the **molecular sciences** and to apply new knowledge to **improve our quality of life**. The department has a long tradition of inter-disciplinary research and education where undergraduates, graduate students and postdoctoral researchers all work closely with faculty to develop and pursue common interests. Since its founding in 1958, the department has launched more than 600 Ph.D. and 400 master's degree graduates into successful careers in industry, academic institutions, and government agencies.

In the Chemistry Department, innovative education and frontier research in chemistry with emphasis on **chemical biology, computation, materials** (for energy and water), **photon and nuclear sciences** lead to technological breakthroughs in health and energy, as well as improvements in the environment. A notable example is the work of **Professor Paul Lauterbur, Nobel Laureate** in Medicine & Physiology in 2003, who made his pioneering discoveries in Magnetic Resonance Imaging (MRI) in the Stony Brook Chemistry Department in the 1970's by combining principles of biology, chemistry and physics. In a 2011 ceremony the department will be designated by the American Chemical Society as a **National Historic Chemical Landmark** for the discovery of MRI.



Stony Brook Chemistry is a top 30 graduate program as rated in the latest National Research Council rankings. The strength of this program reflects the high-caliber of our faculty, many of whom have obtained international recognition (two National Academy of Sciences members and one National Academy of Engineering member). With more than \$18 million in external funding and state-of-the-art facilities, the department offers an outstanding environment for chemical research and education, training the chemists of the future.

Vision for the future

The human population is expanding rapidly, particularly in the developing world. This rapid growth will inevitably strain natural resources, pollute the environment, and allow the proliferation of diseases. Chemistry, as a central science in interdisciplinary approaches, will provide solutions to many of these emerging challenges. We envision that the Stony Brook Chemistry Department, with core strengths in several areas, will become a leader in tackling these challenges.

Effective instruction in large enrollment courses is a major challenge at all large universities. Innovations in **active learning** allow Stony Brook Chemistry to be a national leader in meeting this need. The department will champion a **technology-based Seawolf Active-Learning Center**. The center will have flexible learning spaces with advanced communication technologies; enabling the instructor to engage students in learning and problem solving with real-time feedback on their work.



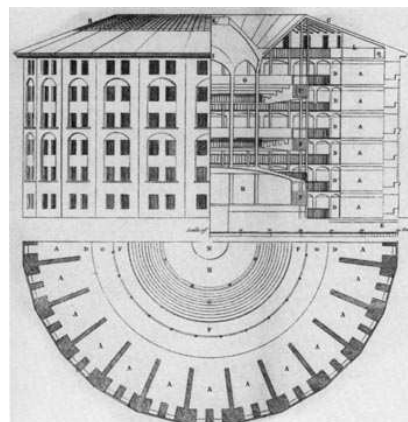
The core strengths in research will enable the department to strengthen existing interdisciplinary centers with cutting-edge programs in health and energy: the **Institute of Chemical Biology & Drug Discovery (ICB&DD)** with its mission to establish a world-class center in chemical biology and drug discovery (e.g. cancer therapeutics, infectious diseases); the **Laufer Center for Physical and Quantitative Biology** with its mission to promote interdisciplinary and translational research in computational biology; the **Northeastern Center for Chemical Energy Storage (NECCES)** with its mission to explore key knowledge to develop new and improved battery systems; and the **Joint Photon Sciences Institute (JPSI)** with its mission to develop frontier scientific programs to capitalize on the extraordinary brightness of the most advanced synchrotron facility in the world, NSLS-II. Chemistry will play a central role in interdisciplinary research at SBU and globally addressing **sustainability**. One effort underway is an emerging research center focusing on the development of low cost and low energy water purification technologies to empower people to purify the global water supply.

Department of Comparative Literary and Cultural Studies

About the Department

At CLCS, we teach literature, cinema, and media historically, comparatively, and theoretically. We house **three undergraduate majors** – **Cinema and Cultural Studies (CCS)**, **Humanities Interdisciplinary (HUM)**, and **Comparative Literature (CLT)**, and two minors (CCS and CLT); and **four graduate programs** (M.A. and Ph.D. in both Comparative Literature and Cultural Studies). We are especially proud of the fit between our undergraduate and graduate programs enabling Ph.D. students to complete their professional training by assisting in the delivery of our undergraduate curriculum. Our research programs are thus fully integrated into our teaching mission.

The seed for CLCS was planted in 1973, when a Comparative Literature undergraduate major was introduced. M.A. and Ph.D. programs in the same discipline were under way in 1977. We became the Department of Comparative Literary & Cultural Studies in 2003 when we added a new Ph.D. emphasis in Cultural Studies. The name change also reflected the extremely rapid growth of our undergraduate major in Cinema & Cultural Studies, which was officially launched in 1998.

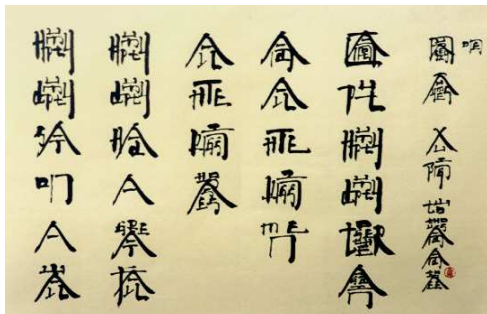


CLCS faculty are committed to **theoretically sophisticated research** into all cultural phenomena, especially literature, cinema, and visual media. **Interdisciplinarity** is essential to our mission. In addition to advancing knowledge, we are devoted to interrogating how knowledge is established and what functions it has served. To cite the work of just a few of our faculty, we teach and publish on the social and cultural construction of gender, the literature and cinema of migrating populations, the legacies of colonialism, the psychoanalytic interpretation of texts, the relationship between philosophical and literary discourses, and the American reception of works of art from Europe, Asia, and Africa. We are pleased to note that our faculty presently teach more students per capita than those of any other department in the Humanities at Stony Brook.

Vision for the future

Now that our Ph.D. in Cultural Studies is as successful as the long-established Ph.D. in Comparative Literature, our immediate goal is to nurture the newly-approved M.A. in Cultural Studies. We would also like to team with the Program in Women's and Gender Studies to help transform their Graduate Certificate Program into a full-fledged doctoral degree. Finally, we would welcome the prospect of extending and strengthening our ties with the Consortium in Digital Arts, Computing, and Technology.

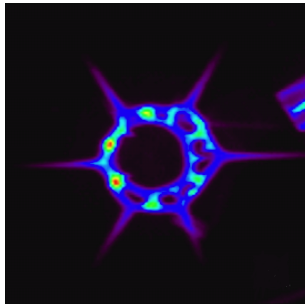
CLCS scholars are unafraid to redefine themselves by immersion in new areas of research. With an internationally renowned, highly productive research faculty, CLCS is at the forefront in shaping the **study of literature, film, video and electronic media in this century**. As these fields evolve, we plan to extend our **international recognition** by redoubling our efforts to obtain major grants and fellowships. Already the home base for **two journals** – *Pulsations*, edited by Patrice Nganang, and the *Journal of Visual Culture*, edited by Raiford Guins – we are now planning to bring at least one more widely-read periodical to Stony Brook via CLCS.



As nations continue to mutate into **complex cultures** in a generalized diaspora, we are poised to advance our scholarly mission in this new millennium.

Department of Ecology and Evolution

About the Department



The Department of Ecology and Evolution (E&E) at Stony Brook University has had an international reputation for excellence since its inception as one of the first departments in the world in this field. Its faculty have had a strong influence on the intellectual development of ecology and evolutionary biology, and its graduates have gone on to become influential scientists, teachers, and conservationists. Core areas of strength include **evolutionary population genetics, evolutionary genomics, functional, population, and landscape ecology, and quantitative methods in ecology and evolutionary biology**. Faculty and students contribute to basic and applied knowledge in areas including the genetics and evolution of disease organisms, human population genetics, landscape ecology of Andean humming-

birds, biological invasions in aquatic and terrestrial systems, the evolution and ecology of insect crop pests, restoration ecology, mathematical theory of the dynamics of natural populations, ecological stoichiometry in marine systems, patterns of species richness in reptiles and amphibians, assessing and mitigating risks to threatened organisms and ecological communities, and rapid contemporary evolution in natural fish populations, in experimental bacterial cultures, and in organisms' resistance to pollutants. Faculty and their students do research on every continent as well as in marine systems, on subjects ranging from yeast genomics to oceanic nutrient fluxes. The department has been particularly strong in developing quantitative methods in ecology and evolution, from geometric morphometrics to quantitative systematics and methods for the statistical synthesis of ecological and evolutionary data from many different sources. E&E faculty have trained students both at Stony Brook and in field sites on Long Island and all over the U.S., in Latin America and Madagascar; they have written major textbooks on evolution, ecology, and marine biology that are used throughout the world, and they have been active in public outreach. Alumni of the program include leading researchers and teachers in major universities in North America and abroad, as well as decision makers in governmental agencies, and leaders of NGOs.



Vision for the future



EE&E is building on interactions with SoMAS, Departments of Anthropology, Biochemistry & Cell Biology and Neurobiology & Behavior, the Laufer Center for Computational Biology and Genome Science, and with Brookhaven National Laboratory, Cold Spring Harbor Laboratory, American Museum of Natural History and others. In addition to our history of excellence in training Ph.D. students, we recently launched a newly expanded **Masters program in Applied Ecology and Applied Evolution**. To meet the research and educational challenges of the new millennium, the department is in the process of expanding in the areas of evolutionary genomics, the ecology and evolutionary biology of global change and of complex systems, and quantitative and statistical modeling and analysis. We have excellent facilities and support for computational re-

search, molecular biology and genomics, advanced capabilities in X-ray fluorescence microscopy, and extensive greenhouse facilities. E&E and the Department of Anthropology have proposed a new joint undergraduate major in **Human Evolutionary Biology** which would combine evolutionary genetics and genomics, behavior, disease ecology, and the evolutionary history of our species.



Department of Economics

About the Department

The department of economics is a highly active and research oriented department that emphasizes excellence in the core areas of economics: **Strategic Thinking**, **Macroeconomic Policy**, and **Empirical Studies of Individual Behavior**. Since 1969, the department offers an excellent PhD program, currently attracting students from more than 15 nationalities, with placements in top academic and government institutions, as well as the private sector. The department also offers a newly established MA program that aims at preparing students for successful careers in industry and the government. In addition, the BA program in economics is one of the largest undergraduate majors in the university, also attracting an increasing number of students from other majors.



The department enjoys a worldwide reputation for excellence in Strategic Thinking thanks to the **Center for Game Theory in Economics**, which was founded in 1989. With the continuous support from the NSF during the last 22 years, the center has organized the most important yearly conference in game theory in the profession. It has attracted eight **Nobel laureates** in economics, including our own **Robert Aumann** (pictured above), Nobel Prize winner in 2005.

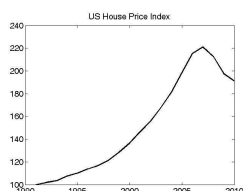
The department also has a prominent group of researchers in the other core areas, who are currently studying some of the most pressing economic issues affecting our societies. These include the effects of aging on the social insurance system, the relationship between the current financial crisis and the housing sector, and the consequences of urbanization in developing countries. The research on some of these issues has appeared in journals like *Nature* and *Science*, as well as popular media like the *New York Times* and the *US News and World Report*.

The department also hosts the Center for Study of Working Class Life, a highly multidisciplinary center, which organizes every two years, the most important international conference on issues regarding the study of class in our society.

Vision for the future

Our vision is to excel in the following three major areas in which we already have strengths.

Strategic Thinking fosters interactions with areas as varied as mathematics, political science, computer science, ecology and evolution, and biology, where the understanding of how agents behave strategically, and the solution concepts from game theory have many important applications. We expect to strengthen these interactions in order to tackle key unresolved questions, such as the resolution of international conflicts and the understanding of the extinction and survival process of animal species as well as of modern businesses.



Macroeconomic Policy research has grown in importance due to the recent financial crisis, which requires a better understanding of the links between financial markets and the economy. In the future, our group will deepen our understanding of the effectiveness of the government response to the financial meltdown, the interactions between the housing bubble burst and the stock market crash, as well as the slow growth in US employment.

Empirical Studies of Individual Behavior studies the interactions between economic agents using data on households, firms and government programs. This area has also many natural interdisciplinary connections with the health sciences, medicine, applied math and statistics, which use similar econometric techniques and analyze related questions. We are in the process of starting a **Center in Applied Econometrics** that will foster cutting edge research on key issues such as the consequences of demographic changes and immigration on social insurance programs, the economic impact of the health care reform or the effects of Social Security reform.

Department of English

About the Department

The English Department focuses on how literature has always been immersed in a network of cultural practices and beliefs, and we teach our students that reading literature carefully can shed light both on specific historical moments and on problems that people have struggled with across centuries. The department's award-winning faculty address literature as it relates to history, religion, politics, psychology, prejudice, emotion, science, technology, and other aspects of human experience.

The English faculty is known for its excellence in scholarship and teaching. Its 24 members have published over 100 scholarly books, novels, plays, and volumes of poetry and have won over 50 national awards from the **Guggenheim, Woodrow Wilson, Fulbright, Mellon, and Rockefeller foundations** and the NEH. Distinguished Professor **Roger Rosenblatt**, a novelist, playwright, and former commentator for PBS and Time, has won many honors, including an Emmy. Peter Manning received the Distinguished Scholar Award from the Keats-Shelley Association. Distinguished Professor E. Ann Kaplan recently won the Society for Cinema & Media Studies' Distinguished Career Achievement Award.



While the English faculty covers a number of literary periods, our intellectual interests cluster in a few key areas that make our program unique. Many of us are interested in **cross-cultural interactions**, whether these occurred at the end of the Roman Empire, in Europeans' first encounters with Native Americans, or in contemporary engagements with globalization. Other faculty approach literature through **cultural studies**: they explore the interrelated history and meaning of texts, objects and practices, including Renaissance maps, statues of Queen Victoria, radio, film, and fashion. Others address **literature and religion**, including anti-Semitism in medieval drama and Chaucer, perceptions of Islam in the Renaissance, and evangelical-Christians' attitudes towards Jews and Muslims today.

The department's research and teaching is enhanced through a close affiliation with the Humanities Institute, whose director, E. Ann Kaplan, is a renowned authority on film, feminism, and psychoanalysis. Our work reaches beyond the SBU campus, enhancing Long Island's secondary school education through our highly effective **English Teacher Education program**, headed by Kenneth Lindblom, the editor of **English Journal** (with 20,000+ subscribers world-wide). We are also home to one of the top journals in nineteenth-century studies, **Victorian Literature and Culture**, which is co-edited by Adrienne Munich. Our Poetry Center is the site of many poetry readings and scholarly talks.

The English faculty prides itself on its excellent teaching and has won several prizes for it. The department recently established an innovative Honors Program that includes training our undergraduates in peer-teaching of writing and doing professional-quality research.

Vision for the future

In the next decade, the department's focus on **English in a trans-national and trans-historical global perspective** will grow stronger. We will pay increased attention to the rise and impact of Global Englishes and the role of the new media in disseminating English as a *lingua franca*. English faculty helped establish, and will continue to participate in, the **interdisciplinary Center for the Understanding of Jewish-Christian-Muslim Relations**, which addresses one of the most urgent issues of our time. Other initiatives are: the study of **Atlantic Cultures**, including Long Island's Atlantic coast, as a border zone of human and natural engagements; the interdisciplinary exploration of the **history of modernity**; and a study of **media history** across the centuries. These new directions of growth build bridges to other programs and disciplines, invigorating the intellectual community at Stony Brook and making the university a leader in scholarship in and beyond the humanities at the start of the twenty-first century.



Department of European Languages, Literatures and Cultures

About the Department

The Department of European Languages, Literatures, and Cultures was created in response to Europe's growing importance as a social and economic force in the modern world, and to a renewed recognition of the European role in global civilization. The department specializes in **French, German, Italian, and Russian and Polish languages**, as well as **Latin, Ancient and Modern Greek**. It combines basic language training, as the necessary foundation for a broad range of careers, with advanced research at the side of leading scholars of **European culture, literature, and language**. Thanks to the high quality of its courses of study and the career paths they open, ELLC typically leads Stony Brook's humanities and fine arts programs in the number of enrolled undergraduates. Students of the European languages and cultures go on to work as financial and policy analysts for international companies. They work for non-governmental organizations, for publishing houses, and for the print and broadcast media. They consult in fields such as marketing, advertising, aerospace, and computer engineering. They use their language and culture skills in government, banking, and diplomacy. The department leads Long Island in graduating teachers to train such specialists and in preparing Americans to communicate with the rest of the world.



Vision for the future

ELLC is interdisciplinary and intercultural at its core and the department will continue to build on its fundamental **mission to reflect and react to modern European cultural history**. The United States is a world leader but the world it leads is made up of cultures that increasingly demand awareness of their own histories and rights to development. ELLC's pressing goal is to establish new levels of **translingual and transcultural understanding** among students. The advanced knowledge of languages in all their cultural complexities without the simplifications and reductions in which a single language assumes a sole or imperial function will continue to inspire ELLC's curriculum. The department will continue to incorporate **new technological advances** in uses of the Internet and modern media and to combine them with a strongly developed **study abroad program**. A rock-solid undergraduate base will serve as a foundation for developing graduate study beyond the existing M.A. and M.A.T. degrees. Capitalizing on the new and first University Endowed Chair on campus, the department has submitted a proposal for a Masters Degree in European Studies, which will ensure that our graduates have the background to go on in non-humanistic area, as well as in disciplines ranging from History to Literatures to Social Thought. The department will take advantage of a particular opportunity to become an American leader in advanced study of European culture. A central principle of a new doctorate program will be an interdisciplinary approach, involving affiliated faculty with language, literature, culture, pedagogy, and critical theory interests, that allows due regard for the **multifaceted nature of cultural phenomenon** and **Europe's fundamental and unique contribution to world civilization**.

Department of Geosciences

About the Department

Stony Brook's Department of Geosciences has a rich tradition of integrating experimental, observational, and field-based approaches for solving fundamental problems in the earth, environmental, and planetary sciences. The Department focuses its efforts chiefly in the sub-disciplines of **geophysics, geochemistry, and environmental and planetary sciences**. Notable accomplishments over our 45 year history range from the first radiometric determination of the age of the moon to experimental confirmation of the mineral constituents in Earth's deep interior. Our world-leading faculty maintain modern lab facilities and conduct research world-wide.

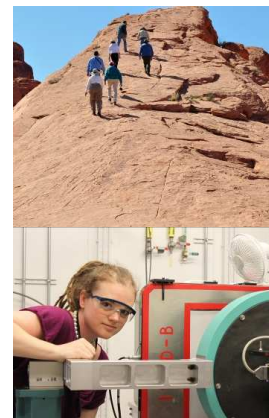
The Geosciences Department benefits from close ties to the National Synchrotron Light Source at nearby **Brookhaven National Lab**, partnerships in national and international seismic networks and observatories, and direct involvement in **NASA's lunar and planetary science missions**. The Department is also home to the internationally recognized Mineral Physics Institute, which combines experimental, theoretical, and observational studies of Earth's deep interior and novel high-pressure materials. The Geosciences Department together with the Mineral Physics Institute garners in excess of \$6M annually in external funding to support research and graduate students.

The Department's graduate program ranks among the top 35 in the nation based on the most recent US News & World Report ranking. In addition to PhD and Masters programs, we offer a Masters in Teaching, as well as BS and BA degrees. Our PhDs fill the ranks of faculty at leading universities and research labs, and we have trained professionals throughout the energy industry and at environmental companies, as well as at state, local, and federal agencies.

Vision for the future

Never before in human history has an understanding of Earth and the environment been so important for society's future well being. The critical states of **energy and water resources** and the impacts of **natural hazards** have heightened awareness of the need for Geosciences research and student training. The recovery and development of energy, in every form, have impacts on the environment, ranging from coal mining accidents to emissions of greenhouse gases. Subsurface geologic sequestration of CO₂ has emerged as a leading candidate for mitigation of industrial CO₂ emissions. Climate change is altering river flow and groundwater recharge patterns, accelerating retreat of glaciers and ice sheets, and raising sea level, the latter especially impacting coastal areas in the Northeast. Increased reliance on nuclear power also raises a host of unanswered geologic questions, ranging from the long-term fate of uranium released into groundwaters underlying mining operations to the permanent geologic storage of spent nuclear fuel. Chemical pollutants continue to plague natural waters and soils, which represent critical resources for communities and agriculture and pose threats to human health.

As the core discipline for study of the Earth, Geosciences assumes the crucial responsibility of addressing these many challenges facing society. Our vision as a department is to further develop our research and teaching programs, specifically focusing on **energy resources** and environmental impacts, **planetary dynamics** and improved predictive capabilities for **earthquake activity**, the interplay between **geochemical and biological processes near Earth's surface**, and exploration of planetary processes and Earth's deep interior. Our Department is strengthening connections with Brookhaven Lab's **National Synchrotron Light Sources**, the **Center for Functional Nanomaterials**, and the Stony Brook-BNL-shared **Blue Gene computer**, as well as expanding involvement in NASA programs for planetary and **lunar science missions**. The Geosciences has emerged as one of the most dynamic scientific fields and one having great societal relevance. Our Department is committed to meeting the challenges confronted by human habitation on Earth.

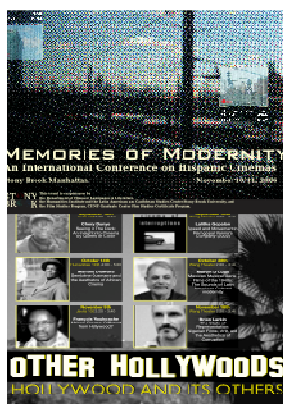


Department of Hispanic Languages and Literature

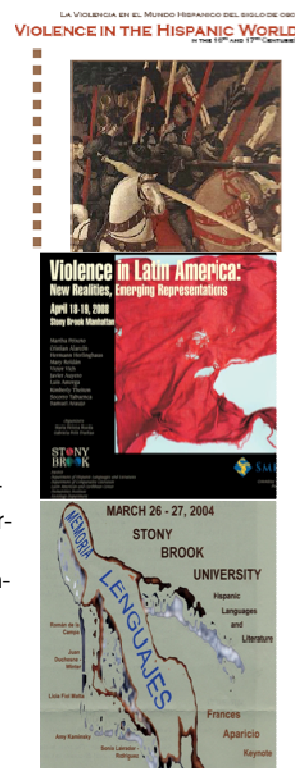
About the Department

Originally established at Stony Brook as part of a department of Romance Languages, Hispanic Languages and Literature became an independent department in 1970, anticipating a trend toward the creation of autonomous Hispanic Studies departments in recognition of the growing importance of Hispanic cultures both internationally and within the US. Both our undergraduate and graduate programs are designed to serve a broad constituency of students with courses devoted to the **language, literatures, cultural histories, and linguistics of Spain, Latin America, and Latino communities in the United States**. At the undergraduate level Hispanic Studies attracts students as a core Humanities major that challenges them to develop their critical and analytic skills while acquiring linguistic and cultural proficiency in the third largest "global language." Our faculty work closely with both undergraduate and graduate students to integrate research and classroom experiences and to provide them with the tools to succeed academically and in their chosen profession. Since its beginnings the Department has helped to launch thousands of BA, MA and Ph D students into careers in government service, international business, and the health and education professions. Our doctoral alumni have risen to positions of prominence, not only in universities across three continents, but also in various governmental and cultural institutions: Juan Carlos Marset (PhD '90) recently served as Undersecretary of the Ministry of Culture in Spain; Juan Mestas (PhD '80) was deputy chairman of the National Endowment for the Humanities and later became Chancellor of the University of Michigan-Flint; and Angela Pérez Mejía (PhD '96) currently serves as Cultural Director of the Central Bank of Colombia, to mention only a few.

Vision for the future



The Department of Hispanic Languages and Literature at Stony Brook has long been committed to innovative teaching and research. In recent years we have developed new curricula to include courses in **trans-Atlantic literary and cultural relations, Latino and Latina writers, cinema and visual culture, immigration studies and Hispanic theoretical and applied linguistics**. The department is especially cognizant of its role in the midst of a growing urban/suburban Latino community. Three quarters of the students who enroll in our upper division courses are **heritage speakers** of Spanish whose family origins reflect the full diversity of the New York Latino population. Our long-range plans include further developing and strengthening our teaching and research resources in Latino studies. We further envisage the possibility of collaborating with the new creative writing and journalism programs to develop Spanish language certificate or MA/MFA programs in these fields. Another area we are working to expand is that of cinema and visual analysis. Stony Brook's Hispanic Languages and Literature Department has played a pioneering role in introducing cinema studies into the undergraduate and graduate Spanish/Latin American/Latino studies curriculum. Many if not most of our literature/culture faculty incorporate visual culture into their study of early modern, 19th century and contemporary Spain and Latin America. With the encouragement of the Graduate School, we have developed a draft proposal for the creation of a **graduate certificate in the Visual Cultures of Latin America and Spain**. Thirdly, in view of Brazil's increasing global influence and growing integration with its Spanish-speaking neighbors, we seek to redevelop Stony Brook's preeminence as a center for **Brazilian studies**.



Department of History

About the Department

History teaches us our human identity through comparison with our pasts. It trains us to access, analyze and synthesize large amounts of data in terms that anyone can understand.

The History faculty is active in the universe of Stony Brook's intellectual life, from Africana Studies, Asian and Asian-American studies, the Honors College, and the Initiative for Historical Social Studies, to the Humanities Institute, the Institute for Global Studies, the Latin American and Caribbean Studies Center, the Professional Education Program, the undergraduate colleges, and Women's Studies--to name only a few. It includes two Distinguished Professors and two Distinguished Teaching Professors. Its members have received **national and international recognition** for outstanding scholarship from The American Council of Learned Societies, the National Endowment for the Humanities, the National Science Foundation, the Woodrow Wilson Center, and the Ford, Mellon, and Guggenheim foundations, among others. They have served as editors of the Association of Jewish Studies Review and Journal of American-East Asian Relations. One was the first American elected **president of the Eighteenth-Century Scottish Studies Society**, another, the only SUNY faculty member elected as **Fellow of the Medieval Academy of America** and another has been named **Fellow of the Royal Historical Society**, UK. Its current junior faculty already have staked claims to future greatness, completing a research fellowship at Harvard, receiving a shared Emmy nomination for "Outstanding Individual Achievement in a Craft: Research," for work on a PBS documentary about the Northern slave trade, and winning the Francis Parkman Prize from the Society of American Historians.

The department's doctoral alumni have entered the faculties of Brandeis, Concordia, Macalester, Bentley, Bowdoin, Purdue, Delaware, Johns Hopkins, Simon Fraser, and the Universidad de Buenos Aires, to note only a few. One holds a named chair at the University of Michigan. Another became president of the Colegio de Mexico. Our undergraduate alumni boast successful careers as attorneys for Bingham, McCutchen; Goldman, Sachs, and the United States Department of Justice. One is a New York City judge, another, the author of a bestselling baseball memoir and professional sports agent. Our former undergraduates teach social studies in dozens of Long Island school districts. One recently became president of William Paterson University.

Vision for the future

History plays a central role in SUNY's general education requirements, Stony Brook's Diversified Education Curriculum, and any truly liberal education. The department has no intention of sacrificing this core mission to peripheral initiatives or passing fads. But that core mission itself positions the department well to deliver **transnational perspectives** and **critical thinking skills** that are more important than ever in both graduate and undergraduate education. The department hopes to improve that delivery through expanding its faculty expertise to Africa and the Middle East, regions destined for central importance in the twenty-first century, and to reform its undergraduate major curriculum to offer better access to comparative themes and to the close student-faculty contact so necessary for the full development of critical thinking and writing skills.



Department of Linguistics

About the Department

Linguistics is the scientific study of language. Stony Brook's Department of Linguistics is a leading center for research and training in modern **theoretical and experimental linguistics**, with steadily increasing national and international prominence. Research areas represented in the department include **first and second language acquisition, language change, morphology, phonetics, phonology, semantics, and syntax**, as well as experimental approaches to these areas. Members of the faculty have expertise in many language areas, especially Austronesian, East Asian, Romance, Semitic, Slavic, and signed languages. The intellectual life of the department has been enriched by interdisciplinary research projects in collaboration with faculty from other departments, especially psychology, computer science, philosophy, and departments of languages, literatures, and cultures.

The department offers BA, MA, and PhD degrees in linguistics and an MA in the Teaching of English to Speakers of Other Languages (**TESOL**). The department also provides classes in English as a Second Language for Stony Brook students. We currently enroll about 140 undergraduate linguistics majors. Within the BA program, students may choose to complete a program of study leading to state certification in TESOL, and a significant number participate in research during their undergraduate years. Graduates become teachers of English or other languages, or work in computer fields, particularly speech synthesis, or in business, industry or journalism. Others pursue advanced education in linguistics, law, speech pathology, philosophy, psychology, or computer science.

Our TESOL program, widely recognized for its excellence, is unusual in providing future teachers with the intellectual rigor and tools of the academic discipline of linguistics. Its graduates are in demand as highly effective teachers on Long Island, across the country, and globally.

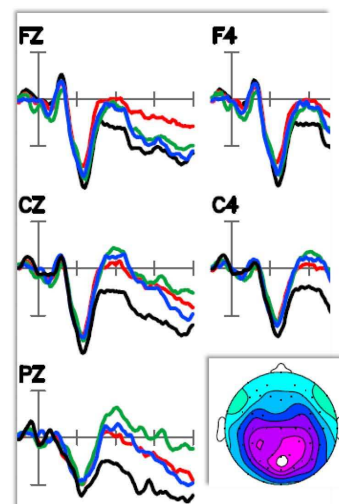
The Ph.D. program prepares students for advanced research in all branches of theoretical and experimental linguistics. Our students are exceptionally active in presenting their research at conferences, more so than those of many other leading linguistics departments. Our graduates have secured positions at prominent institutions, including Stanford, the University of Washington, Harvard, the University of Illinois, Pomona College, Reed College, Leiden University, the National University of Singapore, National Tsing Hua University, and Centre de Lingüística Teòrica (Barcelona).

Vision for the future

While retaining theoretical linguistics and the investigation of a wide variety of languages as the intellectual core of the department's research and teaching (including in TESOL), the department intends to continue the path it has taken in recent years toward increasing its range of experimental work. We have recently hired new faculty members with expertise in **event-related brain potentials (ERPs), eye-tracking, and virtual reality techniques**. Their investigations include studies of the **neural underpinnings of language processing and acquisition** (both of first and second languages) by normal and impaired individuals and how speakers accommodate their language to their interlocutors and the society around them.

Linguistics is uniquely situated at the hub of concerns addressed by a variety of other disciplines. The department looks forward to continuing its collaborative efforts with the Computer Science, Psychology, and foreign language departments. In addition to expanding our cross-disciplinary research profile in the **intersections of linguistics with neuroscience and psychology**, our long-range plans also include increasing the department's involvement in **computational linguistics** and developing (in collaboration with the School of Health Technology and Management) a program in **Speech-Language Pathology**.

We also plan to extend our TESOL program in new directions, offering advanced certificate programs for teachers and doctoral students in other subjects, such as English literature, and for individuals who wish to teach English as a second language internationally.



Department of Mathematics

About the Department

Since the time when **James H. Simons** was its Chairman, the Stony Brook Mathematics Department has been one of the world's great centers for geometry and topology. Established in 1958, the Department now plays a leading role in mathematics research and graduate education in the country, having awarded about 300 Ph.D. degrees. Our world-renowned faculty, past and present, have received such highly prestigious awards as the **Fields Medal**, the **National Medal of Science**, the **Wolf Prize**, and the **Leroy P. Steele** and **Veblen Prizes** of the **American Mathematical Society** (AMS), among others. Five of our current faculty are members of the **National Academy of Sciences**, and the Department includes past President and Vice-Presidents of the AMS. Almost all our faculty has been invited speakers at the **International Congresses of Mathematicians**, the highest forum for achievements in mathematics.

The Department's leadership role in geometry and topology is exemplified by its strength in Riemannian and symplectic geometry, algebraic geometry, algebraic topology, complex analysis, dynamical systems, mathematical physics, nonlinear partial differential equations, representation theory, Riemann surfaces and their moduli spaces, and applications of these disciplines to quantum field theory and string theory. The Department is closely affiliated with the **Institute for Mathematical Sciences** (IMS), which was founded in 1989, with **John W. Milnor**, one of the greatest mathematicians of the 20th century, as its first director. Currently the IMS is one of the world centers for the field of dynamical systems. The Department also has close ties with the new **Simons Center for Geometry and Physics** (SCGP), established in 2007 by a gift from the **James and Marilyn Simons Foundation**. Its first director is our faculty member **John W. Morgan**, who was the Chairman of the Mathematics Department of Columbia University. The Department also has a very close connection with **C.N. Yang Institute for Theoretical Physics** (YITP), which goes back to the legendary math-physics dialogs between **James H. Simons** and **Chen Ning Yang** in the late sixties.



The Department has consistently attracted funding from the National Science Foundation and from private sources, including the Clay Foundation, the Guggenheim Foundation, the Rosenbaum Foundation, the Sloan Foundation, and the Simons Foundation.

Vision for the future

Mathematics is the universal language of natural sciences and technology, and today has sophisticated applications to social sciences as well. It evolves and develops according to the fundamental problems raised by **Geometry**, **Number Theory** and **Physics**. The 20th century has witnessed dramatic progress in these areas, in particular in our understanding of the different geometric forms and shapes in the spaces of various dimensions. The most difficult case – the three-dimensional space in which we live – was recently resolved by **Grigory Perelman** (who had close ties with the Department), who proved famous **Poincaré conjecture** and **Thurston geometrization conjecture**. These types of problems are at the cutting edge of current knowledge, and they constitute the core of Department's research. Working closely with the SCGP and YITP, our faculty studies geometric forms and shapes from analytic, algebraic, topological and arithmetic points of view. This aims at the new breakthrough in understanding **both Numbers and the mysteries of the Universe**. For these highly ambitious goals we plan to hire new outstanding faculty and to collaborate with the IMS, SCGP and YITP. Our faculty also works on various applications of fundamental mathematics, including dynamics of fluids, quantum computation and wavelets. Progress in these fields will lead to dramatic advancement in many areas of human experience.

The Department also plans to expand its role in the education of the mathematics teachers in the country. There is a well-documented need for radical improvement in this area and the Department believes that it is our duty to use our resources and expertise to become a leader in this field. We plan, in collaboration with the University and private donors, to create a **Mathematics Education Center** to serve this purpose. The Center will be also used for providing courses for existing teachers and improving their qualifications.

Department of Music

About the Department

Since its founding in 1965, the Department has achieved an internationally recognized excellence deriving from the unique way its curriculum merges the strengths of the conservatory with the strengths of the academy. The faculty of the Department is noted for its excellence in **Musical Scholarship, Composition, and Performance**, for a curriculum that weds in an innovative way training in these three sub-disciplinary areas, and for its dedication to the study, creation, and performance of contemporary music. The strong sense of communal endeavor that arises from this blending of the three areas and the dedication to contemporary musical practices has formed a special Stony Brook ethos for music study.

The Department of Music offers an undergraduate music major and graduate degrees in the **History and Theory of Music, Ethnomusicology, Composition, and Performance (instrumental and vocal studies)**. Additionally, the Department offers a wide array of courses for undergraduate students, from J.S. Bach, to Count Basie, to Björk; and Departmental faculty play a central role in the Consortium for Digital Arts, Culture, and Technology.



Professor Sarah Fuller with graduate students in the History and Theory Program, Michael Richardson and Bethany Cencer



Professor Sheila Silver

As part of its curriculum, students and faculty in the Department present over **300 concerts and recitals every year**. Our ensembles include: Stony Brook Symphony Orchestra, Baroque Ensemble, University Orchestra, Wind Ensemble, Chorale, Camerata, Jazz Combos and Big Band. Each spring the Department sponsors the Stony Brook Chamber Music Festival with the Emerson String Quartet, the Department's quartet-in-residence.

The Department of Music reaches out to the Long Island community, offering musical education and performance opportunities to people of all ages in its **Stony Brook Community Music Programs**: Music Basics for Kids (Dalcroze), Children's Choir, Pre-College, and Adult Chamber Music. And through a generous Rauch Foundation Grant, students in the Department present music programs to children in Long Island public schools.

Vision for the future

The Department of Music seeks to strengthen its unique trajectory and to enhance its excellence with additional faculty who can serve the needs of the burgeoning undergraduate and graduate populations. We have particular needs in music theory, ethnomusicology, jazz, orchestral conducting, violin/viola, and choral studies. New initiatives include study of the impact of digital technologies on music creation, performance, and apprehension, and Opera Studies.

Because of the growth of the student population over the last 40 years, the Department seeks new facilities for teaching, performance, and rehearsals. And, in order to achieve the full potential of our trajectory of excellence and success, the Department **aspires to become a School of Music**. That status would entail: a larger building dedicated to music study, creation, and performance; increased faculty numbers in performance, musicology and composition; and a larger support staff.

The Department also strives to provide music scholarships to cover tuition for all graduate students and for qualified students in the undergraduate major. Building on the generous gift of Erwin and Freddie Staller, the Department of Music **strives to be an all-scholarship school by 2016**. And, in order to provide a world-class musical education, the Department seeks to become an **All-Steinway school** and to replace our aging fleet of over 120 pianos by 2020.



Professors Gilbert Kalish, piano, and Philip Setzer, violin

Department of Neurobiology and Behavior

About the Department

Neurobiology deals with the mechanisms by which sensation gives rise to perception, and thought to action. Its scope includes all animal life, and its scale ranges from single molecules to networks spanning the human brain. Its social implications extend as far as human thought - into the domains of law, economics, philosophy and creativity as well as medicine and psychiatry. Understanding how nervous systems operate, and developing treatments for neurological and psychiatric disorders are vital to maintaining a robust rational and healthy society. The missions of the Department of Neurobiology and Behavior are: to excel in neuroscience research, and to prepare and inspire our students to meet these challenges. Founded in 1979 as one of the first neuroscience departments to **bridge undergraduate and medical schools**, the Department has taken advantage of the unique environment to advance the understanding of brain and mind, as well as to contribute to multiple teaching missions at Stony Brook. As the focal point for the field of neuroscience at Stony Brook the Department is central to efforts to understand nervous system function, translate that understanding into clinical treatments, and train the next generation of neuroscience researchers and clinicians.

The department has substantial research strengths in **neural circuits and behavior, neurogenesis and regeneration in the developing and adult brain, motor control and regeneration in the spinal cord, computation and theory, sensory perception, cellular communication, and neurological and psychiatric diseases**. These research efforts are supported by government agencies such as NIH as well as by private foundations such as NARSAD, Multiple Sclerosis Society, Parkinson's Disease Foundation, Christopher and Dana Reeve Foundation and the Alzheimer's Disease Foundation. Our researchers have been recognized by numerous awards including NIH Director's Pioneer Award, Howard Hughes Investigator Awards, Klingenstein Fellowships, NARSAD Research Investigator, Javits and Merit Distinguished Investigator Awards from the NIH, Sir Bernard Katz Award, and the Presidential Early Career Award for Scientists and Engineers, among many others. Faculty members teach a range of classes encompassing physiology and neuroscience to Stony Brook undergraduates and are responsible for basic neuroscience education of medical and dental students and participate in post graduate training for Neurology residents and fellows. The Department also administers the interdepartmental and inter-institutional **Graduate Program in Neuroscience (PiN)**, which includes faculty in many departments on East and West campus, as well as from **Brookhaven National and Cold Spring Harbor laboratories**. The Program in Neuroscience has trained ~100 students who have gone on to careers in basic and clinical neuroscience research and teaching. Faculty members have won numerous awards for undergraduate and medical school teaching, have written textbooks, and have led national efforts for undergraduate and graduate teaching standards of neuroscience.



Vision for the future

The growing public awareness of the relevance of neuroscience is shared by our students: enrollment in the Neuroscience track of the undergraduate Biology major has tripled in the last 5 years. In response, we are developing a new Neurobiology laboratory course as well as advanced courses in circuits and systems neurobiology and neural disorders. Together with current core courses in basic cellular neuroscience and physiology we are forming a new undergraduate major in Neurobiology.

We are equally committed to expanding the recruitment, access and retention of students from underrepresented minorities to undergraduate, graduate, and postdoctoral training in Neuroscience, and to facilitate their transition into medical, research and academic careers. We are expanding our efforts in **public and community education** to enhance understanding of how the nervous system works and to provide informed perspectives on neurological and psychiatric diseases. In this regard, we are committed to Departmental outreach events like the annual **Mind Brain lectureship**, the **NARSAD educational forum** and the **Neurodevelopmental disorders workshops**. Future development of effective treatment of nervous system disorders requires contributions and collaboration from diverse perspectives so we are actively developing theme-based research groups centered on the strengths of the Department, the University, and affiliated institutions (Brookhaven and CSHL). Among these themes are Developmental Neurobiology Disorders, addressing schizophrenia and autism; Movement Disorders, addressing spinal cord regeneration; Sensory Perception, including developing cures for blindness; and Glial Biology and Pathobiology. On-going efforts will also expand ties with appropriate departments in the medical school, to facilitate the development of successful research programs through partnership of clinical and basic science faculty.

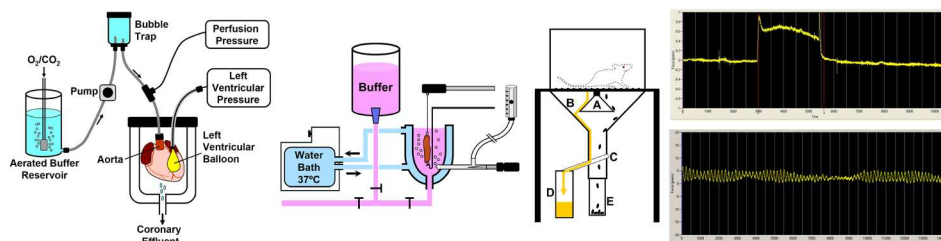
Undergraduate Program in Pharmacological Science

About the Program

Initiated in the fall of 1994, Stony Brook's undergraduate pharmacology program was the first of its kind on the east coast, and is one of only a handful in the United States. Focusing on **molecular, cellular, and organ-ismal pharmacology**, our program is taught primarily by faculty from the Department of Pharmacological Sciences, but also draws upon the expertise of Stony Brook faculty from the Departments of Anesthesiology, Pediatrics, and Chemistry. Due to the diverse and specialized nature of the subject material, every effort is made to recruit talented faculty from various departments who are capable of bringing state-of-the-art knowledge, expertise, and perspectives to the classroom.

As part of the undergraduate pharmacology curriculum, we have developed a sophisticated **undergraduate teaching laboratory** that provides students with hands-on training in modern pharmacology techniques, including the use of animal models where appropriate. This teaching approach requires advanced equipment and technical expertise, and provides students with a unique educational experience that allows them to compete successfully for positions in a variety of professional programs. Overall, approximately one-third of our graduates enter medical school, one-third enter graduate school, and the remaining pursue careers in the biotechnology sector or enter dental, law, pharmacy, and other programs.

In addition to lecture and lab classes, students in the Pharmacology Program have the opportunity to develop an individual research project with a faculty member. Research projects are generally hypothesis-driven, but may also involve advanced computer modeling techniques or other approaches, depending on the student's interest and the nature of the research. Many students conduct their research over the course of their junior and senior years, and their experimental results are submitted as a senior thesis. In addition, many students publish their results in peer-reviewed scientific journals.



Vision for the future

As our population ages and medicine usage increases, the demand for knowledge in the pharmacological sciences will also increase. The Pharmacology Program will seek to deliver a **high-quality, individualized educational experience** not only to pharmacology majors, but to undergraduates in other disciplines as well. In addition, both the lecture and lab classes will be revised and updated to reflect current advancements in this rapidly changing field. In the lecture classes, greater emphasis will be placed on emerging fields such as **pharmacogenetics** and **pharmacogenomics**.

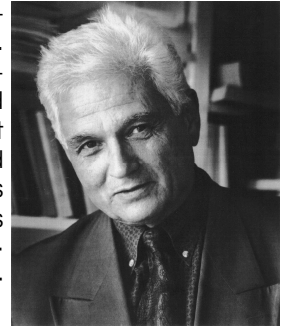
In the pharmacology lab, students will engage in a range of experiments involving both in vitro and in vivo model systems, with an emphasis on selecting a model appropriate for the experimental question. Moreover, greater emphasis will be placed on in vivo and isolated, intact organ experiments. Although in vitro approaches provide necessary and important information at the molecular and cellular levels, there is a growing appreciation that the full complexity of drug action can only be recapitulated under in vivo conditions.

Armed with sophisticated, state-of-the-art expertise and knowledge, our students will be better able to compete for positions in advanced training programs. Moreover, with the critical thinking and technical skills acquired in the pharmacology lecture and lab classes, our graduates will be attractive candidates for positions in the biotechnology industry. Indeed, it is our goal to strengthen **collaborative ties between Stony Brook University and the biotechnology sector**, thereby directly facilitating the placement of graduates in rewarding career paths.

Department of Philosophy

About the Department

Since its founding forty years ago, the Stony Brook Department of Philosophy has assumed a leadership role in the discipline due to its distinctive profile and productivity. While the Department includes leading figures of Anglo-American philosophy, it combines a **unique strength in Continental philosophy** with **methodological pluralism** and strong resources in **history of philosophy**. The profession has followed the Department in its increased emphasis on **interdisciplinary research** and its recognition of the need for philosophy to engage with urgent contemporary problems. Productivity measures such as publication and citation indexes indicate the department's leadership in fields from phenomenology and feminism to aesthetics and cognitive science. Its **distinguished visiting professor** series has included such eminent thinkers as **Noam Chomsky, Jacques Derrida, Angela Davis, and Juergen Habermas**.



*Distinguished visitor
Jacques Derrida*

Since 1975, its first graduation year, the Philosophy Department has graduated 197 PhDs many of whom play leadership roles in the profession. Standard indicators (GREs, GPAs, placement, competitive prizes, and fellowships) show our graduate students to be among the very best at Stony Brook and nationally. The Department has a thriving **M.A. program in philosophy and the arts in Manhattan** that explores philosophical aspects of fine arts and architecture. It graduated 60 students since May, 2003. No other advanced degree with a comparable concentration exists in the metropolitan area.

The Department is a leading contributor to undergraduate education, evidenced by its role in the general education curriculum, where it is one of the most popular electives in several categories, and in the leadership that Department faculty have displayed in creating and teaching in collaborative undergraduate programs such as the Honors College, Latin American and Caribbean Studies Center, Asian American Studies, Women's Studies, and Project WISE (Women in Science and Engineering). The Department plays an exemplary role in the integration of interdisciplinary studies.

Vision for the future

The Department will continue to emphasize **interdisciplinary research** and seek interdisciplinary collaboration in research and teaching in a variety of fields, including **aesthetics, philosophy of science, and global justice**. We will create a BA/MA program. We will grow our MA program in Manhattan by activating the second track on global justice, to offer a unique focus at the intersection of mobility, health, race, and gender, as well as theoretical issues in ethics and political philosophy.



*Assistant Professor
& Artist Megan Craig*

Interdisciplinary connections to be developed include **philosophy of science and technology, cognitive science, and philosophical psychology**. In these we currently have small but active programs that combine Anglo-American and Continental contributions, with interdisciplinary connections with other Stony Brook programs and resources. At the same time, we will continue to expand our already close collaboration with colleagues in the arts, literature, women's and gender studies, and cultural studies.

The Department of Philosophy envisions itself, 25 years hence, maintaining its distinctive and pioneering emphasis on Continental philosophy – including phenomenology, existentialism, hermeneutics, critical theory, feminism, post-structuralism, and deconstruction – while incorporating analytic philosophy and history of philosophy as essential components.

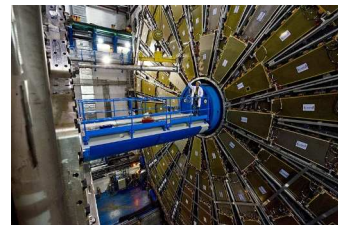
During the next quarter-century, we shall develop new paradigms of problem analysis that will lead to creative solutions pertinent to our local institutional and community issues on Long Island as well as to broader global challenges. We will put our expertise in the disciplined analysis of dilemmas that arise in diverse settings to use in ways that are at once rigorous and imaginative, pointing to new directions and thought and action.

Department of Physics and Astronomy

About the Department

In the 1960s President John Toll and Chair Alec Pond laid the foundations of an internationally prominent department by hiring top quality faculty, establishing the Nuclear Structure Laboratory and by attracting the **Nobel Prize winner Chen Ning Yang** to direct the **Yang Institute for Theoretical Physics (YITP)**. Our faculty (expanded in 1997 by the astronomy and astrophysics groups) played leading roles in many key milestones in physics and astronomy, including discovering the top quark, mapping the structure of the superconducting fullerenes, demonstrating that neutrinos have mass and morph from one type to another, introducing new techniques in X-ray microscopy, and explaining the ways that supernovas explode. We looked at the hottest matter (finding the "most perfect liquid" in nuclear heavy ion collisions) and the coldest (using lasers to cool atoms just above absolute zero).

The **YITP was the birthplace of supergravity**, an influential development in the quest for the unification of all fundamental forces. Since 1997 the Department has contributed to Stony Brook's management of Brookhaven National Laboratory, with numerous faculty members in BNL leadership roles and many research collaborations. In the 2010 National Research Council evaluation of Physics Graduate Programs we were ranked in the top 20 nationally. Another recent poll put our **Nuclear Physics program in 4th place**. We have **one of the largest Ph.D. programs in the nation**, with about 60 faculty, 180 graduate students and **research funding of about \$13M**. Soon we will celebrate a historical landmark: the 1,000th Ph.D. degree awarded by the Department. Undergraduate students taking our introductory physics courses benefit from the innovative teaching methods implemented in our classrooms and laboratories. The research opportunities and the wide selection of advanced undergraduate courses offered by the Department attract well over 200 physics and astronomy majors.



Vision for the future

Today the Department conducts research most areas of physics and astronomy. We have a large in-house research program, and use many off-campus facilities including the **Relativistic Heavy Ion Collider**, the Center for Functional Nanomaterials and the National Synchrotron Light Source at BNL, the Fermilab Tevatron, the Large Hadron Collider at CERN, the Palomar Observatory 200 inch Hale Telescope, and accelerator and underground neutrino facilities in Japan. Our faculty and students collaborate in interdisciplinary programs such as the New York Center for Computational Science, the **Simons Center for Geometry and Physics**, the Center for Accelerator Research and Education and the Laufer Center for Physical and Quantitative Biology.

Physicists and astronomers are poised to understand some of the most basic questions about the universe. Experiments are under way to explore **how the subatomic forces of nature are unified**. We are at the threshold of understanding of how those forces and gravity arise from common first principles. We hope to learn more about the peculiar 'dark matter' that dominates over the ordinary matter that makes us and the stars. It seems within our grasp to unravel the way the molecules of life form their unique structures. We can now probe the ways that **biological or synthetic structures** can be organized to store and transmit information and will seek to control chemical reactions to **engineer molecules** for specific desired properties. New very bright light-source facilities will illuminate the construction of matter, the dynamics of chemical reactions and lead to new materials to fuel the nanotechnology revolution. The hot primordial soup of particles present just after the **Big Bang** can now be replicated and studied in the laboratory. New ideas for accelerating particle beams with much smaller facilities, higher energies and greater brightness promise to transform sciences ranging from engineering to medicine. Modern computing now allows us to study **the exotic galaxies and stars** that emit vast streams of energetic particles into the cosmos. Advances in instrumentation are bringing us to the point of detecting earth-like planets in other solar systems.

The Department has made a blueprint for pursuing some of the most promising of these new opportunities. We are aided in these endeavors by a recent major gift from the **Simons Foundation**. Expanded collaborative interdisciplinary activities will bring the complementary ways of thinking about new problems that have characterized major advances in the past.

Department of Political Science

About the Department

The Political Science department offers a B.A. degree, with concentrations in comparative and international relations; American Government, law, and public policy; political behavior and political psychology, and In addition to the B.A. in political science, the department offers a **Masters of Arts in Public Policy (MAPP)** and a PhD in political science. The MAPP program offers joint degrees with the Public Health program on East Campus and the MBA program on West Campus. It also houses two experimental labs plus the Center for Survey Research.

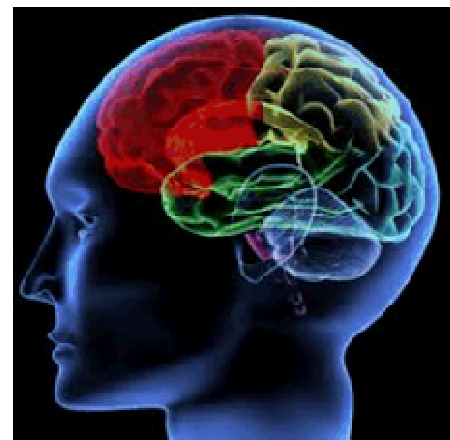


The PhD program has for a long time run a small, focused interdisciplinary program, focusing on three substantive areas: **political psychology, political economy, and American Politics**. We also provide state-of-the art training in statistical methods. One result of this sharp interdisciplinary focus has been a placement rate that on a per capita basis had us rated fifth nationally in terms of the percentage of our PhD students placed at PhD granting institutions and fourth nationally in terms of a network analysis of the quality of our placements.

Vision for the future

We envision shifting the focus of the **political economy program** to the field of behavioral (and experimental) economics. Experimental economics is concerned with empirical testing of theoretical models in laboratory settings, such as Dictator and Split-the-dollar ultimatum games. Substantively, experimental economics uses the insights from psychology to test the traditional economic models of a man as a selfish utility-maximizing actor. Behavioral economics takes these psychological insights and experimental results further and offers alternative theoretical models that incorporate emotions, altruism, sense of fairness, inequity aversion, and so on. The behavioral models can then be applied in any substantive field of economics or political science. Behavioral economics is one of the fastest growing areas in economics and, likely in the future, political science. While there are no behavioral economics programs in political science, some schools—such as Caltech, Carnegie Mellon, and NYU—have already moved in that direction. Therefore, there is an opportunity to be one of the pioneers in the field and establish early the reputation of a political economy program that provides behavioral and experimental economics training. The proximity to NYU, in this respect, could be very beneficial.

Though the **political psychology program** at Stony Brook University, which has focused on the causes and effects of political attitudes, is arguably one of the best in the nation, we envision shifts here as well. In various locations around the country, political scientists have become interested in the biological bases of behavior, including the study of genetic, neural, and hormonal influences. In particular centers of strength are emerging at UC San Diego and the University of Nebraska, Lincoln where our colleagues have received administration support to develop these subfields and foster interdisciplinary research. This is consistent with our focus on attitudes but brings new tools and theories into focus. To maintain our prominence in the field of political psychology and attract even stronger funding from NSF, we need to develop expertise in biological approaches to politics.



Department of Psychology

About the Department

The Department of Psychology is one of Stony Brook's largest and strongest departments, having awarded more than 800 Ph.D. degrees since its inception.

The Department has **four Ph.D. programs: Biopsychology, Clinical Psychology, Cognitive/Experimental Psychology, and Social & Health Psychology**. One of the department's great strengths, however, is its high degree of collaboration that transcends traditional academic boundaries and the numerous cross-cutting themes of study available as part of our graduate training. Since its inception the Clinical Program has been at the forefront of research-based clinical training and has been consistently in the top 10-20 programs in the U.S. In the last US News and World Report rankings, the entire department became one of a handful at Stony Brook in the top 50, reflecting the Department's growing strength and impact.

The Psychology Department is a welcoming place for undergraduates. The Department offers many research opportunities in faculty labs, as well as exciting opportunities for additional engagement such as the **Psychology Honors Program, PSI CHI (the national honors society), the Minorities in Psychology group, and Neuroscience Axis**.



Vision for the future

Over the past decade the department has increased its emphasis on interdisciplinarity and has developed a focus on the study of the brain. As a result, the department now has considerable expertise in **cognitive neuroscience, social neuroscience, affective neuroscience, and clinical neuroscience**. This evolution offers many opportunities for collaborative research that increases understanding of the brain and behavior. With support from the National Science Foundation, the department recently acquired its own research-dedicated fMRI scanner. This has led to the creation of the **SCAN (Social, Cognitive, and Affective Neuroscience) Center**, which is emerging as a focus of interdisciplinary research, hosting researchers from across campus.

The department's long-range plan includes further strengthening of interdisciplinary neuroscience, in collaboration with colleagues in other West Campus departments, in the Medical School, and in Brookhaven National Labs. In addition to the SCAN Center, we are developing shared facilities to support evoked response potential (ERP) and eye-tracking studies. There has also been growing use of new technologies to assess molecular genetic and epigenetic mechanisms. Together with existing facilities, these additional resources will support cutting-edge studies of both normal function and dysfunction.

In the next ten years, Psychology will strengthen its collaborative efforts, both within and outside of the department, capitalizing on natural links to departments such as Neurobiology, Psychiatry, Linguistics, Computer Science and to the Genomics Core Facility. Both behavioral and neuroscientific research will build on our expertise in basic cognitive and affective functions including memory, attention, perception, language use, emotion regulation, impulse control, and decision making. This work will increasingly inform **translational efforts to understand the causes of disease and develop more effective treatments**; our current research is already clarifying the mechanisms underlying autism, depression, anxiety, and antisocial and borderline personality disorder. We will also expand our research into **pressing social problems** such as prejudice and discrimination, the effects of stress on health, and the prevention of child abuse and family and marital dysfunction. As these processes and problems are inherently dynamic, a major goal is to incorporate a cross-cutting developmental perspective, examining changes during the life span, from infancy to old age. The twenty first century offers a revolutionary opportunity to reveal how the brain supports the complex and wondrous workings of the mind, and the Psychology Department is determined to help lead these advances.



Department of Sociology

About the Department

The Sociology Department, founded in the 1960s, rapidly became an internationally visible center of innovative education and ground-breaking research. It pioneered a series of reforms designed to place hands-on research and teaching at the center of graduate education. By the early 1980s, these changes contributed to Stony Brook Sociology's status as one of three institutions spearheading the development of **modern social movement theory**. The Department also became the main locus of development of **New Economic Sociology**, pioneering embeddedness theory and establishing large-dataset network analysis as an essential tool for understanding economic processes.



Environmental protest in Argentina

Since the 1990s, the Department has been in the forefront of integrating **globalization** into the undergraduate curriculum: vivifying the international relations minor, launching the **United Nations course** bringing students into dialogue with UN officials through teleconferencing, providing original leadership for the Undergraduate College of Global Studies, and developing Stony Brook Oxford

which combined overseas study with immersion in the scholarship of globalization.

Vision for the future

In constructing SBU as a pre-eminent hub of globalization scholarship, our faculty have helped construct the analytic and methodological perspectives in which they work, and are key figures in most of the important areas of global sociology, perhaps most notably in the study of masculinity. SBU is the institutional home for the premier journal in the area (*Men and Masculinities*) and the source of seminal work by both faculty and graduate students. We intend to extend and deepen the project of making the Stony Brook University an international center of research and education in a globalized world.



Unveiling Inequality

Curriculum. Stony Brook's curriculum must embrace the 21st century globalized world and prepare our students to understand and master it. The Sociology Department is working to implement the creation of a **globalization major**, with the full range of courses and programs needed to fulfill its immense potential. These include foreign language and foreign study requirements, preparation for cross-border occupations, exposure to research into global issues, and international internship programs to create work experience in the globalized economy.



Walmart in China

Research. We are forming working partnerships with scholars in collateral disciplines to harness cross-discipline expertise and enrich the quality of the research. Toward this end, we have developed cross-disciplinary conferences (the annual **Graduate Ethnography Conference** and 2011 **National Boundaries Conference**) aimed at inspiring collaborative research.

Environment. We will make the **Global Environment** a central focus including collaborative graduate training, joint seminars, seeking interdisciplinary training grants, exploiting NSF mandates to develop environment projects combining physical, biological, and social scientific research, and developing a **major in Environmental Studies** (integrated with Global Studies) that features research-based interdisciplinary team teaching.

Expanding the Methodology of Global Studies. Social science research in global studies requires rigorous analysis of vast amounts of data derived from previously intractable sources. We are collaborating with colleagues in Computer Science and other social sciences to develop efficient methods to digitize and analyze these essential sources of data. This **Center for Computational Social Science** will be a national archive for usable datasets developed at the center, a source of innovative research using these datasets, and a site for training international scholars in the newly-developed methods needed to utilize this resource.

Sociology's strategic plan will contribute to constructing Stony Brook University as an exemplar for universities in the globalized world.

Department of Theatre Arts

About the Program

The Theatre Arts department offers several programs at the undergraduate and graduate levels. With courses at our Stony Brook main campus and our campuses at Southampton and in Manhattan, students have an unparalleled range of opportunities and interact with artist-teachers, scholars and theatre professionals of the highest caliber.

BA in Theatre Arts: The BA in Theatre offers an interdisciplinary course of study in a liberal arts context. The program is for students who wish to pursue theatre in graduate studies or the profession, as well as for those who may seek careers in other fields. Advanced students who wish to develop their craft in a particular area, such as acting, directing, playwriting or design / technical theatre, may do so through upper level course work or independent projects guided by faculty mentors.

Minor in Theatre Arts: The minor in Theatre Arts provides the student with the opportunity to explore several aspects of the dramatic arts.

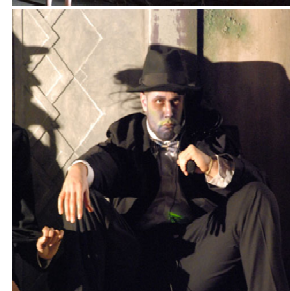
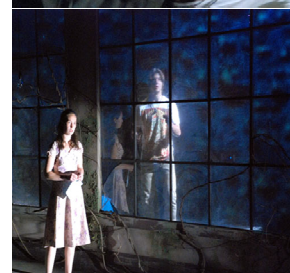
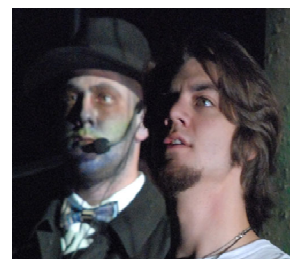
MFA in Dramaturgy: The MFA in Dramaturgy fosters practical and theatrical approaches to the creation of new and innovative work for the theatre through an interdisciplinary, collaborative curriculum encompassing playwriting, directing, and emerging forms and technologies. Students will pursue a course of study that includes Dramaturgy, Directing, Playwriting, Literary Management, Collaborative Processes, Theory and Criticism, Dramatic Literature and Theatre History.

MA Theatre: The Master of Arts in Theatre immerses students in the study of theatre history, dramatic literature and theories of theatre and performance.

BA/MA Theatre: Our newest program is a combined BA/MA degree in Theatre Arts that can be completed in five years. Students who have excelled in their undergraduate studies may apply to the program in their junior year and begin graduate level course work in their senior year.

Vision for the future

In the Department of Theatre Arts we nurture the individual student to achieve their full potential, and to be collaborative and entrepreneurial in their creative endeavors. We provide a foundation in past traditions and literature, and are committed to the development of new work for the theatre -- work that embraces **new media and technology** that are an integral part of our rapidly changing culture. We foster academic and artistic excellence through interdisciplinary courses, innovative theatre productions / performance labs, interdepartmental collaboration, workshops, and Master Classes taught by professional artists from the New York theatre scene and beyond. Students have the **graduate Cabaret**, where they write, direct, act, and produce original work; and the **John Gassner New Play Competition**, which solicits new plays from around the country and presents readings and panel discussions at our Manhattan campus. Our close proximity to the city makes possible professional internship opportunities at some of our nation's leading arts institutions. We are fortunate to have within one university several campuses and centers for learning that support our interdisciplinary mission. Our future includes increased collaboration with Stony Brook's own **Staller Center for the Performing Arts**, the area's leading presenter of prominent performing artists and a world-class film festival. We have partnered with the new **Center for Communicating Science** in collaboration with actor and science devotee Alan Alda; and with our Southampton campus, which offers courses and workshops with some of the top theatre artists in the profession, including Emily Mann, Jon Robin Baitz, Jules Feiffer, Lanford Wilson, Christopher Durang, Marsha Norman, Alec Baldwin and Julie Andrews. Finally, we are exploring increased opportunities with **Long Island's Watermill Center**, which has already welcomed our students. Founded by theatre director Robert Wilson, the Watermill Center fosters research and experimentation in an integrated approach to the arts for the stage.



Undergraduate Biology Program

About the Program

Undergraduate Biology provides support for all BIO course offerings at Stony Brook University. The department coordinates course offerings from the Departments of Biochemistry and Cell Biology, Ecology and Evolution, and Neurobiology and Behavior in support of two different academic majors. The Biology major is currently the largest major at Stony Brook with a total of more than 2,000 undergraduates. Biochemistry, currently with over 500 students is widely viewed as one the strongest majors on campus. Undergraduate Biology manages course scheduling, student registration, teaching assistant assignments, exam administration and oversees assessment of students, faculty and the curriculum for more than fifty different courses that are offered to nearly 12,000 student registrants annually. The department provides technical support for all BIO laboratory courses with full responsibility for delivery of the introductory laboratory courses that are taken by all Biology and Biochemistry majors as well as by students in other majors who intend to pursue careers in the health science professions, a total of almost 2,000 students per year. The department coordinates interactions of the three life science Departments with other units, including the offices of the Registrar, the Graduate School, TLT, Student Affairs, Human Resources, University Advancement, the Dean of the College of Arts and Sciences and the Provost. Student services offered by Undergraduate Biology include participation in student orientation, academic advising, course evaluation for transfer students, student clearance for graduation, and sponsorship of commencement for the Biology and Biochemistry majors.

A notable accomplishment of Undergraduate Biology is the development of a new integrated Introductory Biology Laboratory curriculum. These two sequential, inquiry-based courses differ from traditional content-based approaches that present obstacles to the development of critical thinking skills due to the breadth of knowledge (and accompanying vocabulary) in the biological sciences. The laboratory exercises are arranged in a gradual and collective manner to develop skills in observation, the use of tools and the collection and analysis of data from biological experiments. Physical as well as conceptual models are used to kick-start inquiry-based exercises that have students actively involved in hypothesis testing. Capstone experiences in the second semester involve student-driven experimental design and science communication. Modern educational technologies, including Podcasts, web-based learning tools and Classroom Response Systems (Clickers) are used to engage the students and also have allowed the department to assess the impact of this new curriculum on student success.



Vision for the future

Undergraduate Biology intends to emerge as a nationally recognized leader in science education. This vision will be accomplished through efforts in the following areas.

- The department will provide leadership in modernizing the life sciences curriculum. Assessment of the introductory biology laboratory courses indicates that inquiry-based, cooperative learning approaches have a positive impact on student learning outcomes. We will work with faculty to incorporate successful strategies in their courses while also conducting a comprehensive review of the overall curriculum to insure that our students receive an education that mirrors the enormous excitement and pace of discovery in modern biology.
- The increasingly interdisciplinary nature of knowledge in the life sciences requires interactions that extend beyond the core Departments of Biochemistry and Cell Biology, Ecology and Evolution, and Neurobiology and Behavior. Undergraduate Biology will engage faculty in Anthropology, Biomedical Engineering, Chemistry, Marine Sciences, Microbiology, Pathology, Pharmacology, and Psychology to develop an interdisciplinary curriculum.
- Undergraduate Biology will work with other Departments and the University administration to develop improved mechanisms for educating large numbers of students. Two glaring needs are learning spaces that can accommodate large numbers of students while also allowing for integration of pedagogical approaches that involve active learning, and a Test Center of sufficient size to be useful for the University.
- Long-term student success is enhanced by student-faculty interactions outside of the classroom. Undergraduate Biology will act as a catalyst in broadening faculty participation in career development activities that enhance student success.
- The department will develop new tools for monitoring and improving student success and satisfaction. We will implement attitudinal surveys at multiple points, including an exit survey for graduating students, and will assess the impact of different activities (e.g. research, teaching practica, readings, advising) on student outcomes.
- Undergraduate Biology will work to promote the recognition of excellence in teaching. Faculty whose primary duties involve undergraduate instruction do some of the best and most innovative teaching at Stony Brook. We will take a lead in establishing guidelines for rewarding these efforts and the career development of these teachers.
- Distinguished alumni such as Rear Admiral Steven Galson (former Surgeon General of the United States), Dr. Margaret McGovern (soon to be Director of the Stony Brook Children's Hospital) and Dr. Michael Stebbins (Deputy Director of Biotechnology in the White House) can serve as valuable role models for our current students. Undergraduate Biology will engage our alumni to enrich the opportunities to Stony Brook undergraduates.

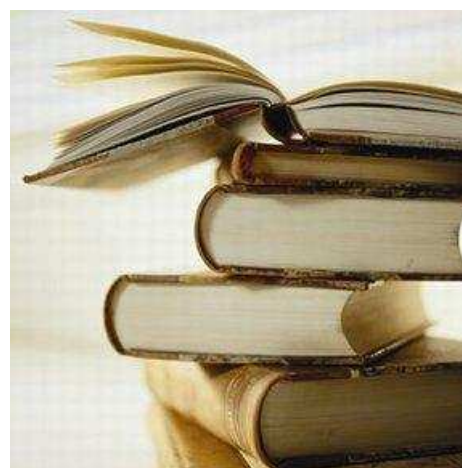
Women's and Gender Studies Program

About the Program

The Stony Brook University program in Women's and Gender Studies taught its first Introduction to Women's Studies course in 1976, emerging as an academic discipline deeply rooted in women's history and theoretical feminisms. A highly productive program, Women's and Gender Studies is an interdisciplinary area of scholarship and research that focuses on the significance of gender as a variable in experience, history, and culture. The program has been at the forefront of recognizing the centrality of gender in approaching new models of knowledge and in assessing questions of epistemology, enhancing and critiquing the explanatory categories of race, class, sexuality, nation, and disability.

The Women's and Gender Studies Program has five academic offerings: an undergraduate major, an undergraduate minor, two 18-track specializations in **Gender, Sexuality and Public Health** and **Gender and Social Change** (with an option to pursue a 5-year BA/MA in Women's and Gender Studies and Public Health), and the Graduate Certificate in Women's Studies, with over 100 graduates completing the Certificate. One of the great strengths of the Women's and Gender Studies Program is this 15-credit Graduate Certificate, which familiarizes students enrolled in Ph.D. programs with new areas of inquiry, placing graduate students at the cutting edge of interdisciplinary work that will transform knowledge in all fields in the 21st century.

With its emphasis on interdisciplinary research and teaching methods, and its wide network of affiliations and collaborations across and beyond the university, Women's and Gender Studies at Stony Brook has become a key player in a more integrated approach to scholarship.



Vision for the future

Over the past decade, the program has increased its core faculty in fields connected to gender role development, comparative literature, political science, cultural ethnography, health studies, queer theory, and feminist histories and theory.



Our long-range plan is to further strengthen and broaden our **inter-departmental approach to research** with established affiliations with colleagues in other academic departments, inclusive of Arts & Sciences and the School of Public Health. To facilitate long-term expansion, the Women's and Gender Studies Program would like to develop autonomous M.A. and Ph.D. programs, building on the free-standing Certificate.

The core strengths in research and pedagogy from the Women's and Gender Studies Program will enable us to offer students theoretical and methodological tools that helps them maximize their potential in their work lives, scholarly fields, and surrounding community.

Writing and Rhetoric Program

About the Program



Tutoring session in the SBU Writing Center, 2010

The Program in Writing and Rhetoric offers upper level undergraduate courses in many areas, including Writing about Nature, Literature, Ethics, Religion, or Film; Writing the Personal Essay; and Writing Senior Theses in a variety of majors. We offer graduate courses in **Writing about Science**, and a **Graduate Certificate in Teaching Writing** that includes courses in research, linguistics, rhetorical theory, and strategies for teaching writing.

The goal of the Program in Writing and Rhetoric is to help all Stony Brook students, regardless of major, be confident and capable writers when they graduate. We do this through a variety of courses we offer, all of which are limited to twenty students so that we can give individual atten-

tion, and through our **Writing Center**, where tutors will **help any Stony Brook student or alumnus in one-hour one-on-one tutoring sessions**. We have many non-native speakers of English in our wonderfully multicultural university, and our teachers and tutors give special attention to helping non-native speakers become proficient writers in English.



Pat Belanoff at conference, March 2010

Almost all Stony Brook students in their first year take our core course, WRT 102, a writing workshop designed to teach students how to find and select evidence, to construct an argument, to use and cite scholarly sources, to write full and complex paragraphs, to write in a distinctive and confident voice, to keep their reader or readers constantly in mind when writing, and to write in accurate, readable English. We teach these WRT 102 classes using electronic classrooms so that students can use the most current electronic writing and research tools as they write.

Students' writing proficiency at the end of WRT 102 is judged by portfolios they submit, a Stony Brook innovation initiated by past Program Directors Peter Elbow and Pat Belanoff, which has since spread throughout the country and become the national norm.



Peter Elbow at SBU Writing Program Conference March, 2010

Vision for the future

Stony Brook is a community of writers. Everyone here from the most distinguished research professor to the newest first year student writes as a matter of course, both to learn and to communicate his or her special insights. In the Writing Program we want everyone at Stony Brook to take pride in their unique contribution to this community of writers -- to expect excellent writing from themselves, of their colleagues, and of the people they are mentoring -- so that writing will enhance learning throughout our curriculum and so that all our graduates will be noted by professional schools, graduate schools, and employers alike as not only masters of their major fields of study, but as skilled writers and communicators in those disciplines. Funding that keeps our teaching staff professional, increases our access to electronic classrooms, and allows us to continue to expand our curriculum to adapt to student needs, will allow us to achieve this vision.



William Marderness, Hugh Patterson, Jennifer Albanese, Carolyn Sofia, Kevin Cloutier, Marie O'Brien

Envisioning the future of the College of Arts and Sciences

CAS: The First 50 Years

The College of Arts and Sciences (CAS) is the home of the original departments at Stony Brook University over fifty years ago. Since then many other important departments have been added. The college itself was officially formed in the early '90s by combining four divisions: Humanities and Fine Arts (HFA), Life Sciences (LS), Physical Sciences and Math (PSM) and Social and Behavioral Sciences (SBS). Through the years the excellence of the CAS departments has been a major contributor to Stony Brook's growing national and international reputation.

CAS mission statement:

The College of Arts and Sciences is committed to improving the quality of life of our students through the arts and sciences. Positioned within one of the top research universities in the nation, the College is committed to excellence in our individual disciplines, and to interdisciplinary learning and collaboration. The College has a track record of innovative programming and unique opportunities to explore the infinite possibilities the convergence of arts and science can offer.

We believe that the study of the arts and sciences creates informed, inquisitive and inventive citizens who are prepared to contribute to the rapidly changing global environment in which we live.

Major Strengths:

Education. The college contains 27 departments and programs. It offers 37 undergraduate majors and 47 minors, and 61 graduate programs (24 Ph.D., and 37 Masters). The College also provides general education for students in all Schools and Colleges via the Diversified Education Curriculum. Annually 79% of the course seats, across the University, are in CAS courses.

Innovative Research and Scholarship. The strength of the research and scholarship is reflected in the excellent showing of CAS departments in national rankings. Nine of the CAS graduate programs were in the top quartile nationally in the recent National Research Council rankings. In the most recent rankings of graduate programs by U.S. News and World report, 13 CAS programs were in the top 50.

External funding. In the sciences and social sciences, another measure of quality and innovation is the ability to garner external funding. In 2009/2010, the total CAS expenditures from external (mostly federal) sources was 45.5 million. When compared to peer departments at other research universities, the vast majority of CAS departments have greater per capita funding than their peers. (For example, according to a 2008 Delaware study, 10 of the 11 CAS departments had greater research expenditures than their peers.)

Collaborations. One strength of Stony Brook University is its location, allowing collaborations with nearby Brookhaven National Lab, and Cold Spring Harbor Lab. These facilities allow for research partnerships with excellent scientists in related fields and access to state-of-the-art technology not available on campus. Many CAS faculty members (from Physics to Philosophy) take part in cross-institution collaborations and many Brookhaven and Cold Spring Harbor employees have joint or affiliate appointments in CAS departments.

Similarly, the location of Stony Brook midway between the cultural centers of Manhattan and the arts communities on the east end of Long Island enhances the capacities of many departments, particularly those in the fine and performing arts.

Links to the community. CAS departments provide education and entertainment for the local community. The Departments of Music, Theatre, and Art, housed in the Staller Center for the Arts, provide a wide array of cultural experiences. Over 250,000 students, faculty, and community members from all over the region attend Staller events, workshops, master classes and outreach events annually. Several CAS departments are actively involved in pre-college education locally, and many scientists in the College mentor local students in their science projects.

Weaknesses that need to be addressed.

Large class sizes and insufficient teaching staff. With the decrease in state support for hiring faculty and the increase in undergraduate enrollment, with every year the College falls farther behind in its ability to offer courses of reasonable enrollment. CAS departments have student FTEs that range up to 225% of that of their peers (Delaware Study, 2008.) Additionally over the past year, due to budget cuts, CAS has had to decrease the pool of part-time faculty by 50% (70 FTE). Not only does this trend result in fewer small-class

has dramatically reduced the ability of the College to provide support funds for research and scholarship in the form of start-up funds for new faculty members' research, funds for travel to professional meetings by faculty and graduate students, and seed money for innovative projects. The value of our stipends for graduate students is very far below that of our peers, making it hard to compete for the very best graduate student prospects.

CAS: Into the 21st Century

The CAS strategic planning process proceeded from the bottom up. Departments, Programs, Centers and Institutes engaged in developing visions for the future. Central to these visions were plans to raise more CAS departments into leadership positions in their fields. The following presents examples of initiatives in several critical areas. (For more information and other examples see the two CAS brochures: Department Strategic Plans, and Centers and Institutes.)

Examples of interdisciplinary initiatives that will move Stony Brook into a leadership position

The Center for Accelerator Science and Education (CASE) was formed as a joint institute of Stony Brook University and Brookhaven National Laboratory (BNL). The CASE mission is to educate and train the next generation of accelerator scientists and technologists and to develop a unique program of educational outreach providing young students and secondary school teachers with access to a research accelerator. CASE scientists have identified three principle areas of research: high gradient laser acceleration, coherent electron cooling, and energy recovery.

The Consortium for Digital Arts, Culture and Technology (cDACT) represents collaboration between the CAS departments of Art, Music and Comparative Literature and Cultural Studies, and the Computer Science Department in the College of Engineering and Applied Sciences. It brings together artistic creation and scholarship with study and application of new technologies. Since its inception in 2007 it has sponsored many installations and performances, and it offers several popular courses in the Digital Arts Minor.

Center for Science and Mathematics Education (CESAME) is already a leader in the field of education. It has received impressive external support and has created several degrees programs including the new Ph.D. in Science Education. CESAME brings together faculty from many departments in CAS and Engineering, as well as from the School of Marine and Atmospheric Science, Cold Spring Harbor Labs, and Brookhaven National Labs. It was the brain child of Dr. David Bynum (Department of Biochemistry and Cell Biology) who brought the center to national and international attention as a model for science and math education that reflects Stony Brook's passion for both education and research, and a model that we hope will find equally effective application beyond the sciences.

Stony Brook Center for the Arts. The departments and programs in the Fine and Performing Arts are developing a plan to create an educational and performance center that will foster collaboration across departments, produce educational innovations, and produce a more visible footprint on Long Island, from Southampton to Manhattan. The programs involved in the planning are Art History, Studio Art, Music History, Music Composition, Music Performance, Theatre Arts, and the Consortium for Digital Arts, Culture and Technology. Importantly, the emerging plan involves closer collaboration with the Staller Center for the Arts. Central to the success of the merger are major revisions in the administrative structure, creation of interdisciplinary educational programs, the hiring of a specialist in advancement for the arts, and a specialist in public relations who will interface with the community.

Enhancing Research and Scholarship

Support for scientific research and education. Although CAS departments have an excellent track record in external funding for research, the capacity for internal support is waning. The two most urgent needs are funds for providing competitive start-up offers for new faculty members and competitive stipends for graduate students so that we can attract the very best. The college will work both on advancement opportunities and on restructuring the college budget to help alleviate this situation but help from higher levels of the University is also needed.

Stimulate culture of outside funding in the Humanities and Fine Arts. While faculty in the Sciences, and in some of the Social Sciences are well acculturated on the role of external funding, for other Social Science departments this needs encouragement, and in the Arts and Humanities the mind set needs to be created from the ground up. To that end, a staff member in the College of Arts and Sciences has been assigned to work with the Research Foundation to identify sources of funding and to communicate these to

the chairs of the relevant departments. As we proceed, we will offer other aids to faculty members in their search for external support for their research.

Promote advancement activities throughout the college. We have been energetically pursuing advancement opportunities for the college and have identified a number of significant opportunities that could be transformative. We are also educating chairs and faculty about the importance of advancement in securing a bright future. For example, in November 2010 we adapted the spring-appeal approach suggested by Advancement to allow for each chair to write a personal appeal to the department alumni, by highlighting the department's most significant and exciting opportunities for support. Greater contact between departments and alumni should help boost University-wide spirit and fund raising.

Undergraduate Education

Create innovative cross-disciplinary majors. The CAS faculty continues to think creatively across disciplinary boundaries, and there are many examples of recent products. One of the most exciting is the proposal for a new major in **Human Evolutionary Biology**. The proposal results from a collaboration between faculty members in the Departments of Anthropology and Ecology & Evolution. The new major will combine a strong foundation in the natural sciences and a comparative approach to examine how evolutionary forces shaped and continue to shape the human condition. Areas of specialization will include *human evolution and morphology*, *human and non-human primate genetics and genomics*, *the evolutionary basis of behavior*, and *the ecology and evolution of human disease*. The major would be suitable for students planning careers in the fields of medicine, dentistry, public health, allied health, biotechnology, and related academic fields such as biological anthropology and evolutionary biology.

Introduce modern pedagogic technology. Our classrooms are not conducive to the use of modern pedagogical techniques. CAS therefore enthusiastically supports proposed initiatives such as the **Seawolf Active Learning Center**. This facility, proposed by the Chemistry Department, would provide flexibility in the physical arrangement of classrooms so that students can actively engage with each other in the learning process. The design is based on recommendations stemming from pedagogical research into effective learning strategies.

Hires in strategic teaching areas of high demand that will also strengthen research. Hiring decisions in the past appear to have been made largely without reference to teaching demands, thus creating large inequities in teaching load across departments within the College. While scholarly excellence clearly has to be the driver in hiring decisions, we believe that it is possible to pursue excellence and still meet the instructional needs of our undergraduates. We plan to achieve this by several approaches, but most particularly by reorganization of the college units into more efficient and effective departments that will at the same time promote cutting-edge scholarship and the highest quality education for our students. The melding of the Arts departments into a broader Stony Brook Center for the Arts Education is one example, and another that is in the planning stages is a center for second-language acquisition research and pedagogy.

Stronger links to the community

Many individual instances of community outreach occur in CAS. Because they are unsystematic, unsystematized, and largely unsupported, much work needs to be done to improve their effectiveness and enhance our bonds to the community. Our major effort at this point is to make the emerging Stony Brook Center for the Arts THE center for the arts on Long Island. Community education will be expanding, along with performance and exhibition offerings. The efforts will encompass all Stony Brook sites from Southampton to Manhattan.

End note. To every extent possible, all components of the CAS plan will enhance education and scholarship simultaneously. Quality in both areas is essential to the CAS mission and we strongly believe that one does not need to be sacrificed for the other.



College of Arts & Sciences

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