

Stony Brook

REVIEW

VOL. 8, NO. 1

SPRING ISSUE



**More Than
1000 Helping Hands**
(SEE CENTERFOLD)



*As Tutors, Counsellors,
Health Aides, Youth Workers,
Planners, Researchers, Environmentalists —*

Stony Brook Students Help Long Island

Debra Harris, a junior in the School of Social Welfare, has devoted three years to community-oriented projects both related to and apart from her academic program. "I cannot understand," she recently commented, "how students can spend four years in college and not become involved with outside activities." Ms. Harris, whose outside activities have ranged from fieldwork with the Nassau County Department of Drug and Alcohol Abuse to her present work as a youth counselor in the Robert Cushman Murphy Junior High School, Setauket, is not alone in her endeavors.

More than one thousand Stony Brook students—over 10% of the University's 9000 undergraduate student body—are involved with projects affecting the outside community. Many of these projects are undertaken on a strictly voluntary basis. Others are done through a specific academic program, which often motivates participants to continue as volunteers beyond completion of their program requirements.

In the Department of Psychology, approximately 400 students are engaged in a myriad of health and social service activities in the bi-County area. At Central Islip State Hospital, 160 work under the supervision of hospital personnel in both day and evening programs designed to help patients relate to one another. About 140 Stony Brook students provide tutoring in reading and other academic skills to children at both Northeast Nassau and Kings Park Hospitals. They also supervise these children on visits to the University's bowling alleys, swimming pool and other recreational facilities. Some students have undertaken to compile a referral handbook on Suffolk County health and social services.

The well-known Youth and Community Studies Program became an official component of the University in September 1973, although pilot work was being done two years prior to that time. Under the direction of Martin B. Timin, the two-semester program serves a tri-fold purpose. Each project must benefit the community institution, usually in the form of a community education or community planning project or else as an evaluation of some ongoing community project. Secondly, the project must serve an academic need, giving students access to institutions and people in the community from which they can foster their understanding of such subjects as psychology, sociology, economics, urban studies and so forth. Thirdly, the project must satisfy the students involved, who receive 10 credits each semester and are strongly encouraged to complete the full program.

Approximately 35 students presently are involved in this year's program; they devote two full days each week to fieldwork and related seminars. The projects fall into one of three areas: Community Studies, such as the Huntington Town and Babylon Town Youth Boards and the recent evaluation of the Half Hollow Hills alternative high school; Law and Social Change, including work with lawyers and judges involved in criminal justice, family court and

probation; and University Concentration, such as involvement with the Residential College Program, which organizes academic and extracurricular activities in student living quarters. Only applicants who are dedicated individuals willing to devote maximum time and effort towards the sponsored projects are accepted to the Youth and Community Studies Program and many more applications are received than can be accepted.

Through Dr. Marvin Kristein's Economic Research Bureau, five students are currently studying commuter patterns on Long Island. According to Dr. Kristein, "This attempt to say something sensible about Long Island mass transportation" is being conducted under the auspices of the Bi-County Planning Office and is part of a larger study of employment opportunities on Long Island. The students' work is quite detailed, done zip code by zip code as they discover the relationship between where people live and where they work. Additionally, the Bi-County Planning Office is hosting senior economics majors, who are studying under Pearl Kamer, the County's chief economist.

On campus, if people are beginning to see the landscaping through the construction, it can be attributed not only to members of the University's Grounds Department but to the 80 students involved in campus recycling and landscaping projects through a group called Environmental Action (ENACT) and to their peers studying under Dr. O. Andrew Collver, Chairman of the Interdisciplinary Program in Environmental Studies. The students have addressed hearings on a broad range of environmental subjects including New York City pollution control and offshore oil drilling. They shortly will speak before several local civic associations, where they will present plans and concepts for a new park on property Brookhaven recently acquired south of the Health Sciences Center on Nichols Road. Other activities include their co-sponsorship of an

upcoming World Hunger Year Conference and continued landscaping work and care in the area of the Stony Brook Union. Among the members of ENACT can be found a bird specialist and two students serving on the University's Campus Environmental Committee. They recently acquired a telephone and have plans for establishing an "environmental hot line" to encourage the communication of environmental concerns.

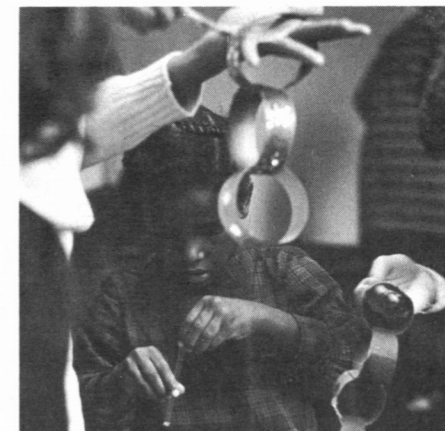
The Health Sciences Center provides a large number of community volunteers in fields such as nursing, medicine, and dentistry. For example, about 125 students provide patient care services through the Suffolk County Department of Health Services.

One rather large program is incorporated into the School of Allied Health Professions' Community Health Field Practicum. On a regular work-week basis, for a period of two-and-one-half months, students work with groups, including the American Cancer Society, Long Island Chapter; the American Lung Association of Nassau-Suffolk; the Suffolk Heart Association; Brookhaven Memorial Hospital; Planned Parenthood of Suffolk; the Brentwood Health Clinic; the National Foundation of the March of Dimes; the Martin Luther King Clinic in the Bronx; and a variety of nutrition centers for the elderly located throughout Suffolk County.

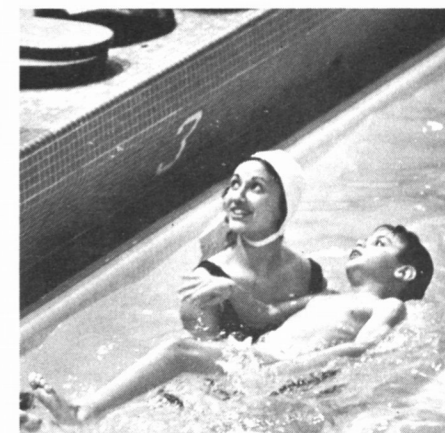
The students run stop-smoking clinics, nutrition programs for the elderly, breast self-examinations under the auspices of the Cancer Society, and established an emphysema clinic to provide victims with an avenue for sharing their problems and receiving moral support. They also work with administrators and board members of various hospitals and associations, providing assistance with writing and promotion assignments and conference arrangements. In addition they often appear as guest speakers and, at one hospital, have inaugurated a closed circuit television program on health.

Detailing the numerous other voluntary-type activities undertaken by University students would easily fill a book. Many students do not participate on a group basis in such activities, yet there are numerous examples of individuals teaching handicapped children to swim, reading to the elderly, raising money for charitable causes, providing manual and technical assistance, and gathering supplies for charities and relief organizations.

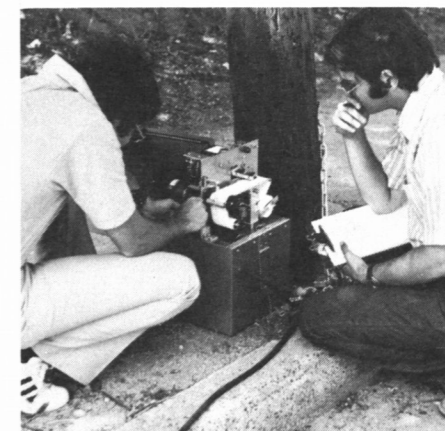
Evidently today many Stony Brook students feel as Donald Blackman, Chairman of the Black Studies Program, does. Mr. Blackman, whose program sponsors several voluntary projects primarily geared towards helping children from poverty areas, says, "Acquiring knowledge for the sake of knowledge is a luxury no one can afford in these times."



Supervising recreation



Teaching handicapped to swim



Researching, such as studying traffic flow



Organizing environmental campaigns



Acting as health aides



Instructing children



Working with disturbed youth

Thanks to a pioneering Stony Brook project—

Many American High School Students Are Finding Science Courses More Relevant



Ninth-grade Freeport High School students work with an Inquiry Board, one of the Technology—People—Environment materials developed at Stony Brook for use in high schools across the country.

As part of a national attempt to make science education more relevant to modern experiences, the Engineering Concepts Curriculum Project (ECCP) of Stony Brook has designed a series of educational programs and courses intended to bring technology into closer and more meaningful contact with the problems of everyday life.

The Project, originally under the auspices of the U.S. Commission on Engineering Education, and funded since 1965 by the National Science Foundation, was brought to the Polytechnic Institute of Brooklyn in 1968 where Dr. John Truxal, presently Dean of Stony Brook's College of Engineering and Applied Sciences and first co-director of the Project, was then Academic Vice President. In 1972 the ECCP was moved to Stony Brook where it has since been established as the headquarters for all other Engineering Concepts Curriculum Centers across the nation.

Now under the direction of Adjunct Professor Emil J. Piel and Adjunct Assistant Professor Thomas T. Liao of Stony Brook's College of Engineering, with the assistance and active leadership of Professor Ludwig L. Braun, Staff Associate Thomas Lanagan and Dean of Engineering John Truxal, the ECCP continues to further the Commission's original aim of motivating student interest in science and emphasizing the role of science education in helping man better adapt technology to his own needs.

The most significant and far-reaching contribution of the ECCP thus far has been the development of *The Man-Made World*, a high school text published in 1971 and adopted by more than 900 teachers in approximately 800 secondary schools throughout the country. Designed primarily for 11th and 12th grade college-bound students, *The Man-Made World* and the corresponding course which uses this text as its basis tries to break away from the traditional approach to science as a distinct field with its individual elements of physics, chemistry, biology and earth sciences.

Courses guided by this classic approach provide students with fundamental concepts of the individual elements of science with the intention of developing a body of knowledge from which students can later draw and build upon. The major shortcoming of such programs, however, is that students are only rarely put in touch with the ideas that relate to their own background and experience.

By contrast, the newly architected courses in science education take a far more relevant and

dynamic, interdisciplinary approach. Instead of studying abstract scientific theories directly, students are presented with common yet challenging everyday problems which they must attempt to solve through scientific means. For example, as part of *The Man-Made World* course, students study traffic flow either in their school or community. At one Idaho school where the course was given, the class determined that the town's two one-way streets should be interchanged. In the process of planning this change, the students had to familiarize themselves with underlying scientific concepts and principles: the dynamics of moving vehicles with the fewest possible bottlenecks, and techniques for studying alternative simulated designs. Doing something constructive about traffic flow also involved a consideration of related issues: costs, politics, environment and human behavior. Through the practical application of scientific thinking, the classroom evolved into an open forum and science education was transformed from an exercise in rote memorization into a dynamic experience, interacting with other disciplines, substantially improving the quality of the environment and human life. Socio-technological issues and problems are studied by applying systems concepts such as modeling, optimization and decision theory.

During the period of the development of *The Man-Made World* text by the ECCP there have been many successful spin-off projects. One of the most direct outcomes of the original effort was the Huntington Computer Project, instituted in 1966 to integrate computer study with regular secondary school courses. During the 1966-67 academic year when *The Man-Made World* was being developed and tested in 30 high schools, a group of test schools were supported and encouraged by the Project to use time-sharing computer facilities as part of their testing procedure. Dr. Ludwig Braun was placed in charge of this pilot effort. As a result of his involvement, it was decided that computer simulations were valuable in many science and social science areas, not specifically part of the existing content of *The Man-Made World*. The development of computer simulations for mathematics, physics, biology, and social studies became the Huntington Computer Project, now funded independently by NSF and supported by its own teacher, student and resource manuals.

In addition to the Huntington Computer Project, *The Man-Made World* course developed at Stony Brook has had an impact on numerous other experimental satellite efforts: innovative multi-disciplinary team approaches to teaching high school courses based upon the text; activity-oriented modified versions of *The Man-Made World* geared for non-academic high school students; college-level technology courses derived from *The Man-Made World* text material; and guidelines for establishing the ECCP philosophy as part of nationwide teacher education programs.

Technology — People — Environment is the name of the Program which has been developed especially for junior high students who have been academically unsuccessful. A unique, non-textbook, multi-media approach has been devised which is an activity-oriented, multi-disciplinary way of introducing science, math, language arts and social studies content. Packages of materials—including filmstrips, transparencies, games, puzzles, stories, posters and workbooks—are grouped into subject categories, such as people and technology, machines and human users, quality of life, and future energy options. The first of these kits, which have been pilot-tested in more than 125 schools by 4000 students, will be in use in September.

Although the ECCP programs have been successful in affecting the structure and focus of secondary as well as college-level science education, many more curriculum changes are foreseen by ECCP. In the forefront of further programming and experimentation, Stony Brook's pioneering ECCP headquarters committee has set up an expanded program of summer and fall pilot studies to test out additional ways of integrating technological advancement with educational demands. Last fall, working together with BOCES and especially Arthur Sullivan, head of BOCES Coordinating Activities Committee, Stony Brook's College of Engineering sponsored a college-level lecture-laboratory course for 250-300 high-ability high school students. The students, chosen from local Nassau and Suffolk County schools, attended Saturday sessions from September through December to learn more about current research in engineering as well as modern technology's impact upon modern life. Grades were given and upon the satisfactory completion of the course, the high school students were awarded three advanced university credits from Stony Brook.

In order to prepare high school teachers for the new secondary curriculum materials they'd be working with, a three-week workshop funded by the National Science Foundation last summer offered instruction in the application of the ECCP's scientific manuals: *The Man-Made World* designed for use with 11th and 12th grade college-bound students, and *Technology-People-Environment*, a workbook published by Stony Brook and aimed at 8th-10th grade low achievers. Teachers participating in this workshop returned to the University on alternate Thursday evenings during the fall to do follow-up studies.

Another ECCP activity has operated in conjunction with Stony Brook's Upward Bound Program, a project which offers remedial tutoring to a specially selected group of students who show promise but lack of sufficient achievement in their academic studies thus far. As part of this program, 22 Suffolk County high school students came to the University for a two-hour technology course each day last summer. In the class students reviewed the same *Technology-People-Environment* mini-courses that teachers in the three-week workshop were studying. According to Dr. Liao, one of the overseers of this as well as other ECCP projects, motivation among the Upward Bound students was high: the group was eager to learn and interest was maintained by competitive games organized to match wits and technological expertise between students and teachers.

In addition to these Projects the ECCP has been responsible for introducing a new Masters program in Applied Sciences which was offered by the Department of Electrical Sciences for the first time in 1973. Open to secondary school and community college educators as well as others interested in the design and implementation of interdisciplinary curricula, the program began with only 20 people and has now grown to 40 graduate students.

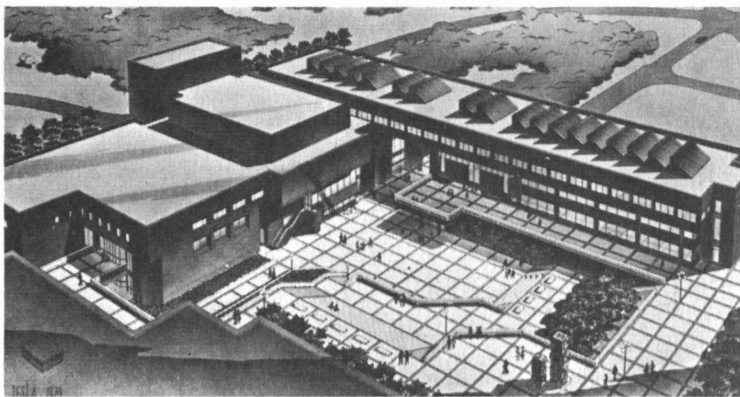
On the undergraduate level, the ECCP has been equally active in curriculum planning, its most recent project being the publication of a two-volume text called *Man & His Technology* which revises and expands *The Man-Made World* for college-level audiences. This spring a new text entitled *Technology — Handle With Care* is being published.

Throughout its involvement in these projects, Stony Brook has contributed significantly to the development of a more technologically enlightened world. The task of teaching individuals how they can control their environment and technology, however, is only in its early stages: a formidable beginning with a long way yet to go. Dr. Truxal, former co-director of ECCP, cautions that in science and socio-political or private life, "there are no simple solutions to big problems. But if we are to come even close to solving them, all of us have got to try to understand the world that man has built."

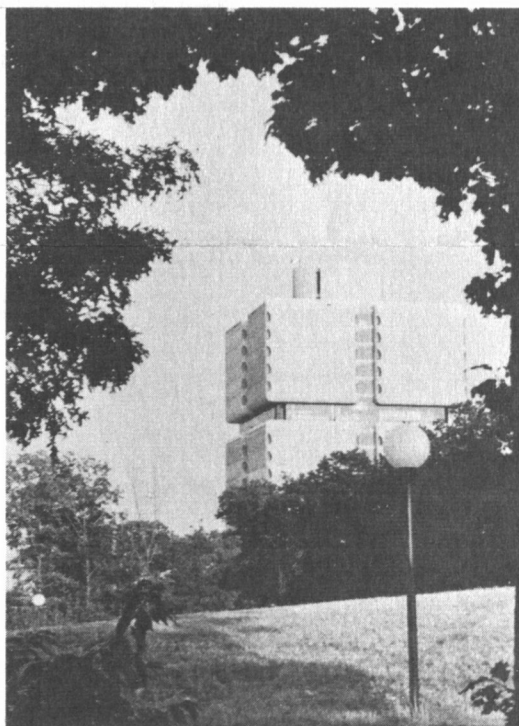
— Sharon Jaffe



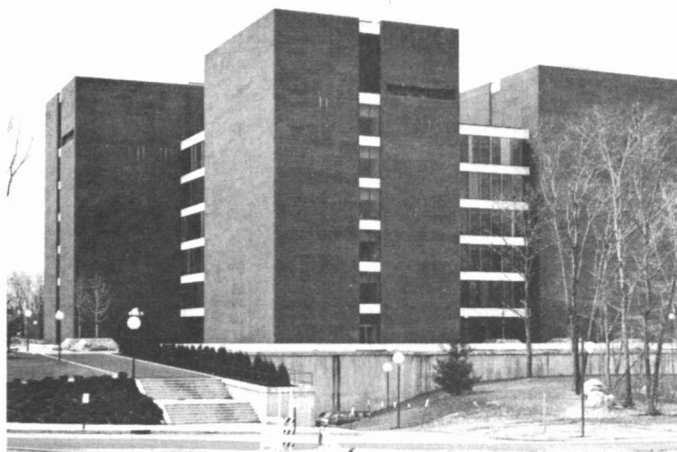
Graduate Chemistry Building



Fine Arts Center



Health Sciences Center

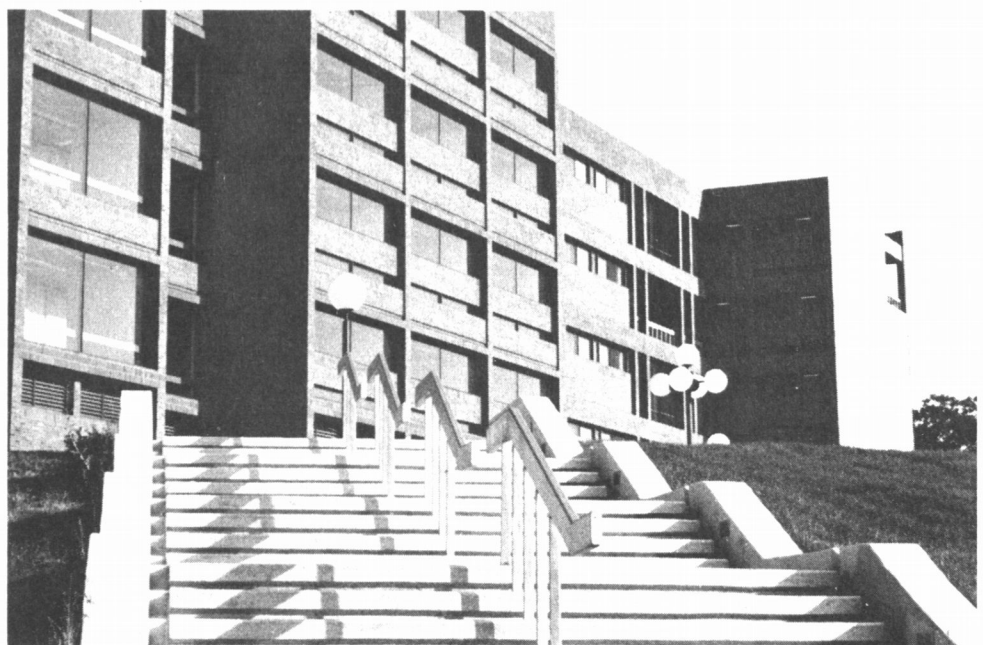


Biological Sciences Building

Campus Progress

COMPLETED
UNDERWAY
STARTING

- BIOLOGICAL SCIENCES BUILDING**
The three departments in the Division of Biological Sciences and several departments of the Health Sciences Center's School of Basic Health Sciences moved into the new building in early fall 1974. The structure provides much-needed space for offices and expanded facilities for laboratories and greenhouses.
- GRADUATE CHEMISTRY BUILDING**
First occupied in 1973, the seven-story structure contains well-equipped laboratories and offices for the Department of Chemistry.
- MATH/PHYSICS COMPLEX**
When the Physics and Mathematics Departments completed their moves into the new complex in January, it marked the completion of the scientific portion of the main campus. Modular construction of the laboratory sections of the structure allows great flexibility in the use of the research facilities.
- HEALTH SCIENCES CENTER**
- Stage I* - The seven-story megastructure, topped by the Clinical Sciences Tower, is nearing completion with partial occupancy expected this summer.
- Stage II* - Work on the 540-bed University Hospital has begun. Steelwork will be going up in June and the building is scheduled for opening in 1979. It will be approximately the height of the existing Stage I tower and will include a helipad for emergency helicopter referrals. The hospital is expected to handle 150,000 cases each year, from complicated heart surgery to appendectomies to simple ear infections.
- Stage III* - Work is expected to begin this spring on Stage III-A, a smaller tower for the Basic Health Sciences. Stage III-B, consisting of facilities for the School of Dental Medicine and Dental Clinic to be contained in an addition to the megastructure, is still in the planning stages. Projected completion date is the early 1980's.
- FINE ARTS CENTER**
- Phase I* - Classrooms, offices and studios for the Music and Art Departments are contained in the section of the Center already constructed. A summer occupancy is expected.
- Phase II* - Construction is expected to begin this year on the adjoining section which will contain a 1200-seat theatre, two large experimental theatres, a concert recital hall and an art gallery, as well as offices for the Theatre Arts Department. Construction will take about two years.
- SOCIAL AND BEHAVIORAL SCIENCES BUILDING**
A seven-story structure has been designed to provide offices, classrooms and special facilities for the Departments of Economics, History, Political Science, Anthropology, Sociology and Education. Construction contracts are expected to be awarded and ground broken for the project this spring.



Math/Physics Complex

Over 100 Courses Now Open For Summer

Producing a play, doing geology fieldwork, or getting a basic orientation to graduate work are just three of the more than 100 course offerings that will be available to warm weather students this summer at Stony Brook.

The University's dual summer sessions, running for six weeks each from May 20 through June 27 and from July 8 through August 15 will provide an opportunity for intensive study in undergraduate, graduate, or continuing education subjects. For the first time this year, prospective students will be able to utilize a walk-in advance registration period which will simplify course selection and payment procedures.

One highlight of the summer offerings is a Summer Theatre Workshop, a learning-by-doing approach to the crafts and skills of theatrical work. Under the direction of Theatre Arts Professor Tom Neumiller, students will be responsible for the total operation of a summer stock company, and produce a series of plays at the nearby Port Jefferson Summer Theatre. This immersion in theatre will allow students to experience a variety of behind-the-scenes and on-stage roles, with the audience, as much as the instructor, determining their effectiveness.

On-site work in a Summer Geology Field Course will provide students with a different kind of experience away from the campus. Granville,

For a catalog of Summer Session course offerings or further information contact the Office of the Summer Session at 246-6559. N.Y., a small town on the New York-Vermont border east of the southern end of Lake George, will be a rural home to budding geologists for three weeks this summer. Providing their own food and camping equipment, the students will function as a geologic survey team, mapping out the natural features in this area of Taconic deformation. The fieldwork will be followed by a week of study and analysis on the campus.

An Introductory Course to Graduate Work in Liberal Studies will provide prospective graduate students with a refresher course in academia and an orientation to the skills of writing research papers and developing independent projects. Designed for those already holding a bachelor's degree, the course will prepare students for doing graduate work successfully.

An intensive look at one dimension of interpersonal relationships is the focus for a Workshop in Human Sexuality. Two continuing education courses, Human Sexuality, and Sex, Reproduction and Marriage, will examine the processes of continuity and change in the roles of women and men, psycho-social sexual development, conventional and unconventional conduct, sexual therapy and sexual education. The sessions will be held mornings and afternoons from July 8 through 24. ▼

ATTENTION ALUMNI

A message for the many Alumni included on the *Review's* mailing list: It is very likely that State budget cutbacks will force us to mail future issues of the *Stony Brook Review* only to those Stony Brook alumni who have paid their annual dues. Alumni who haven't already done so may use this coupon to pay their current Alumni Association dues.

Membership Dues: Stony Brook Alumni Association

Return this form with your check payable to "Stony Brook Foundation, Alumni," to:
SUNY Stony Brook Alumni Association, P.O. Box 654, Stony Brook, New York 11790.

Individual Annual \$5. Joint Annual \$7.50 Amount Enclosed \$ _____
(when husband & wife are both alumni)

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(please include maiden name in parentheses)

Name of spouse (if both are alumni and this is a joint membership)
_____ Class of _____
(please include maiden name in parentheses)

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