Section 3
Institutional Student Activities and Initiatives

Introduction

Great strides were made in Student Programs during fiscal year 2003 (FY03). There was a significant increase in the number of student interns.

The focus continued to be on providing meaningful, educational, challenging internships for all students. This effort supported the Laboratory's goal of developing a highly educated and skilled workforce for the future.

The priority in FY03 was on fundamental programmatic improvements that would be of benefit to all students, all mentors, and to the various special programs in which students participate.

Students at the Main Auditorium listen intently during the FY03 All-Student Meeting with Laboratory Deputy Director for Science and Technology William H. Press.

Programmatic Improvements

Student Programs at Los Alamos National Laboratory (LANL, the Laboratory) focused on four target improvement areas in fiscal year 2003 (FY03). These areas were of importance because each one dealt with improving Student Programs from an institutional perspective and ensuring that the programs were aligned with the mission of the Laboratory. The changes implemented will make the program more valuable to the Laboratory, to mentors, and to students. The areas addressed were: revision of the student transcript and salary-review process; revision of the Student Program Administrative Policies; revision of the Student Exit Survey; and establishment of an institutional web site for students and mentors.

The Student Transcript and Salary-Review Process. A year of research took place before changes were made to the previous transcript and salary-review process for students. Changes were necessary because data showed that a significant number of students were exceeding the allotted time to complete their degrees. Since the purpose of student programs and internships is to provide a professional-development experience in which students can gain real-life experience while attending college, it became clear that the Education Program Office (EPO) staff had to revisit practice and policy and move toward maintaining the credibility of the program by monitoring students' academic progress. In order to accomplish this goal, the staff made significant changes in policies and put into place a system that would better support the students while also supporting the Laboratory mission and moving students consistently from one program to the next and on to employment.

The changes are being introduced in a two-year process. FY03, the initial year, focused on educating LANL students and mentors about the changes and supporting compliance and implementation scheduled to begin in FY04. The major changes to the program in FY03 were as follows:

- All students are now required to submit a transcript including fall grades and spring enrollment each February.
- EPO staff members review each transcript individually and verify good academic standing and academic progress toward the student's selected degree.
- Beginning in fall 2003, students were required to enroll in a minimum of nine credit hours (or the equivalent of nine credit hours);
- Students were directed to limit their work time to 75% during the academic year. (Students in Special Programs were excluded from this process.)
- An "exception process" was developed and is available to all students.

The food line at the 2003 All-Student Picnic in Urban Park drew considerable interest.

In FY04, the implementation process will include the following:

- Continuing and year-round students will be required to submit an updated transcript in mid-February to verify good academic standing and cumulative credit hours completed and must maintain university course-load enrollment status.
- Salary increases will be effective upon the student's actual start date.
- Exceptions to the work-time or credit-hour requirements will be addressed on an individual basis by the Student Program Advisory Committee and the EPO staff.
- Failure to comply with the requirements will result in cessation of pay increases and may result in termination.
- There will be no retroactive salary increases for students who submit transcripts after the start date.

In FY03, as part of the education phase of the changeover process, letters were sent to students and to mentors and were posted on the Students' Association website. Letters were also included in the student, mentor, and liaison toolkits and in the New Student Orientation packets. During this initial phase, student transcript submittal was high, and the program received good input and comments from both students and mentors.

As the program prepares for the implementation phase that will begin in January 2004, EPO staff members will track progress and continue to provide support to students and will make the exception process available to those who need it.

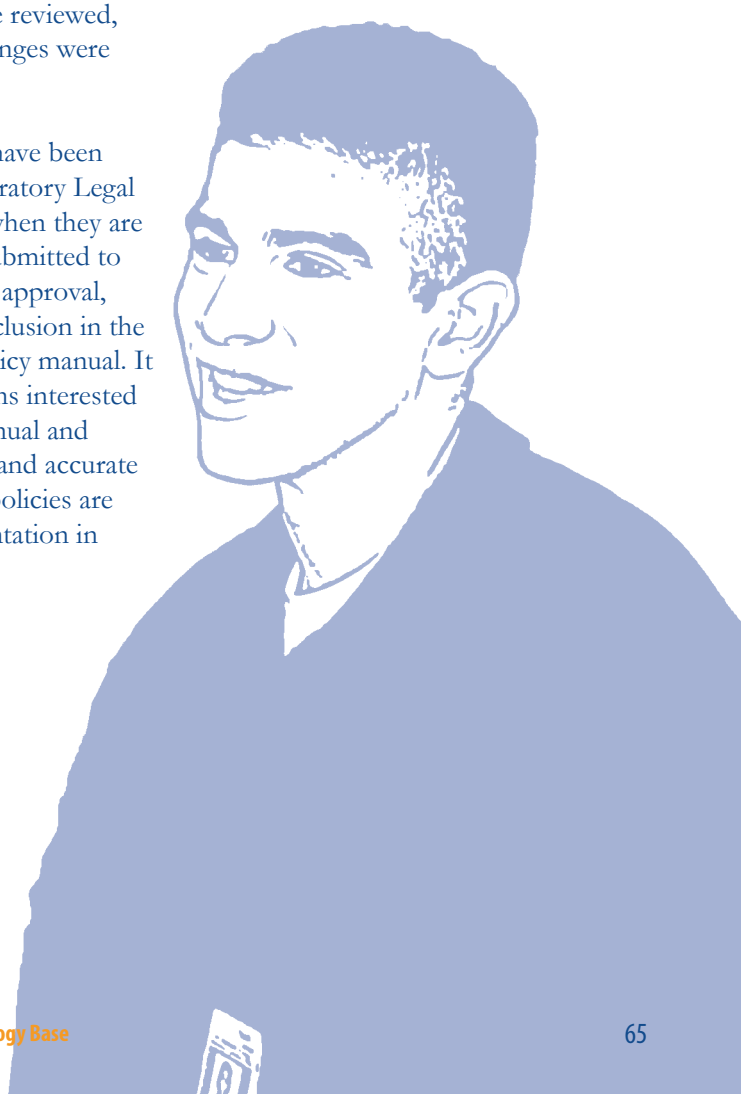
The Student Programs Administration Manual. As the staff sought to improve Student Programs at a systemic level, it became apparent that there was a need to go back to the foundation of the program and address what was in place. Many of the policies had not been reviewed since the late 1980s. The staff determined that some of the policies in place had not been enforced, that some were outdated, and that some were no longer relevant to the program.

Student Programs staff members spent a significant amount of time researching the policies, how they related to the program, and how the program operated. Staff members also met with related organizations to develop additional information, and that information was considered before changes were suggested. All of the policies for the high school cooperative, undergraduate, and graduate programs were reviewed, and then significant changes were recommended.

The proposed policies have been transmitted to the Laboratory Legal Office for review, and when they are returned, they will be submitted to a review board for final approval, implementation, and inclusion in the Laboratory's official policy manual. It is imperative that persons interested be able to go to the manual and find complete, current, and accurate information. The new policies are scheduled for implementation in FY04.

The Student Exit Survey. The Student Exit Survey was in place when EPO assumed oversight of Student Programs several years ago. In FY03, the survey was not producing the information necessary for evaluation.

EPO staff members worked with a survey expert from within the Laboratory and began to address the areas of Student Programs from which information was needed to improve the survey. Several focus groups were established to review and comment on the survey as changes were made. Student focus groups were of the most value. The students were very helpful in providing feedback that improved the survey overall. Student recommendations covered topics ranging from selecting wording to clarifying the meaning of questions. Students also made suggestions on how to improve the use of the survey electronically.



The Student Exit Survey revision was completed and has been implemented. The new survey is more attractive; the technology supporting it has been improved; and it is now easy to complete.

The data from the Student Exit Survey, available in early October FY04, will be analyzed and reviewed, and in January FY04, EPO staff members will meet with divisions and division student liaisons to obtain specific feedback and suggestions. EPO will use the data collected to continue to make improvements to the program. Being able to provide quantitative and qualitative data to the divisions will help Laboratory personnel to connect with Student Programs and will make it easier for any organization to do short- and long-range planning related to its needs.

Institutional Web Pages about Student Programs. Communication is crucial to the success of Student Programs, and in order to communicate with customers (divisions, mentors, liaisons, students, and the external audience), EPO must be able to develop one clear message that is easy to find and navigate. The Laboratory has similar goals.

With this in mind, EPO set out to make changes to its web pages (internal and external) that would be supported at the institutional level and would make them one-stop sources of information about Student Programs. The web pages needed to include information about student salaries, benefits, requirements, and policies. They also needed a common look that would support various types of information.

Several committees were organized to review what was in place and to make suggestions for improvement. The end result was web pages that were clear, concise, easy to find, and student-friendly with a warm and inviting look. EPO websites are now professional, and they have a look and feel that is attractive to students. The web pages can be viewed at: ***http://www.lanl.gov/education/.***

In addition, the process produced several other marketing tools that now use the same principles and design. A compact disc brochure was developed and has become extremely popular, and the annual mentor, student, and liaison toolkits also have the same design.

Distinguished Students Program

Providing Mentors and Managers with Early Access to Top-Quality Students

Program Description. Fiscal Year 2003 (FY03) was the second year of operation for the Distinguished Students Program (DSP) at Los Alamos National Laboratory (LANL, the Laboratory). This initiative strives to take a new approach in placing top-quality undergraduate and graduate students in rewarding research positions at the Laboratory and to be more strategic in the selection of students for building the future Laboratory workforce. The program utilizes timely half-day work sessions as a key technique toward recruiting excellent students and matching them with mentors and assignments that provide a good fit with their interests.

Under the leadership and encouragement of William H. Press, Laboratory deputy director for science and technology, this program has initiated a new way of recruiting top-notch students. This program supports the Laboratory in fulfilling Institutional Goal No. 7: "Focus on diverse, entry-level, and strategic hiring."

The program recruits from highly recognized schools in science and engineering. Students must have majors in engineering, mathematics, computer science, or science and be the recipients of multiple scholarships to be selected. These high-performing students must also have a minimum grade point average (GPA) of 3.5 on a 4.0 scale. The Laboratory provides resumes to its scientific staff before work sessions (which are usually held in November and March) so that offers of summer internship assignments can be extended earlier than would otherwise be possible. This early contact and notification achieves the goal of attracting students to the Laboratory before the competition is able to hire them.

Representatives of upper management attend the work sessions and are given the opportunity to review the prescreened student resumes. Interested mentors contact students immediately after the work session to determine whether there is a match of student interests and technical needs. This recruitment strategy has allowed divisions to compete for students, allowing the students to chose which research assignment appears to be the most challenging or the best fit.

What is different about this approach? The Laboratory is more proactive, efficient, and strategic with its student placements.

In addition to the cutting-edge technology that Laboratory scientists can offer these exemplary students during their summer internship assignments, the students provide the Laboratory with new ideas and new perspectives. This diversity of thinking, as well as the broad ethnic diversity provided by these prestigious programs and universities, creates an enormous advantage for the Laboratory. The program is an effective and competitive placement event for the best and brightest students.

Laboratory Deputy Director for Science and Technology William H. Press speaks at the FY03 All-Student Meeting at the Main Auditorium in Technical Area 3.

Performance. The goal of the program is to develop a diverse workforce of individuals with enhanced problem-solving and technical skills to meet the Laboratory's current and future scientific and technological needs and to contribute to the research of technical line organizations. The objectives of the DSP that support this goal state that the program shall do the following things:

- Require that students contribute directly to ongoing Laboratory research projects;
- Attract students to learn in Laboratory-identified critical-skills areas;
- Strengthen and focus students' fields of study and career plans;
- Increase the diversity of the students chosen to participate in national research programs;
- Increase students' knowledge and skills in science, math, engineering, and computer science; and
- Increase students' understanding of the research process.

Students are recruited through a variety of strategies that include individual contacts at universities, recruiting visits to targeted universities and colleges, and the use of student ambassadors.

Students spend their time at the Laboratory conducting science research with their mentors and participating in special supplementary educational activities that include tours, field trips, lectures, workshops, technology training, and demonstrations. In addition, students are given the opportunity to be instructed in preparing and displaying a scientific poster, giving a technical presentation, and writing a scientific paper.

Highlights of This Year's Accomplishments. The Laboratory held a work session in November 2002. Program staff members worked with representatives from each of the technical divisions to identify summer internship opportunities for about 196 outstanding students. As a result of this session, matches were identified between many of the students and organizations within the Laboratory. Approximately 21% of the students whose names were presented at the work session were offered internships and accepted them.

Kai Yu, a Stanford University student, works on a project that was part of his Dynamic Summer School experience in FY03.

Distinguished Performance Awards

Student Distinguished Performance Awards. The winners of the third annual Student Distinguished Performance Awards at Los Alamos National Laboratory (the Laboratory) were announced on the evening of August 7, 2003, at the Student Symposium Awards Banquet. Bill Robertson, chairman of the Student Programs Advisory Committee (SPAC), presented the awards and congratulated the students for their outstanding performance and their contributions to the Laboratory. Mentors nominated more than 40 students for these awards, and seven received them—four in the undergraduate category and three in the graduate category. Students were honored in both technical and administrative categories. Each award included a plaque and cash. SPAC, a committee of Laboratory technicians, staff members, and student representatives, coordinated the awards and will continue to sponsor them annually.

Student Distiguished Performance Awards

Undergraduate	Name	Group/Division
Administrative	Noel Angel	Waste Management and Environmental Compliance (NMT-7)
Administrative	Shauna Kackley	Environmental Applications (RRES-EA)
Technical	Angela Acuff	Computational Science Methods (X-8)
Technical	William Clay	Safeguards Science and Technology (NIS-5)

Graduate	Name	Group/Division
Technical	Mikhail Blinov	Theoretical Biology and Biophysics (T-10)
Technical	Aleksandr Stefaniak	Industrial Hygiene and Safety (HSR-5)
Technical	Murali Krupakar	Plasma Theory (T-15)

Mentor Distinguished Performance Awards. The Mentor Distinguished Performance Awards were also announced on August 7, 2003. This was the second year for these awards, which recognize and honor mentors for their efforts. Thirty-five mentors were nominated for this award, and five received awards. Each award included a plaque and a gift certificate. Robertson presented the awards.

Mentor Distinguished Performance Awards

Mentor		
Technical	Wu-Chun Feng	Advanced Computing Laboratory (CCS-1)
Technical	David Poston	Nuclear Design and Risk Analysis (D-5)
Technical	Phyllis Russo	Safeguards Science and Technology (NIS-5)
Technical	Kurt Sickafus	Structure/Property Relations (MST-8)
Administrative	Belinda Padilla	Industrial Business Development (IBD)

Symposium 2003: Championing Scientific Careers

The annual Student Symposium at Los Alamos National Laboratory (LANL, the Laboratory) was held on August 6 and 7, 2003, at the University of New Mexico-Los Alamos. As in past years, it was a major success.

The event continues to grow each year as the number of students and postdoctoral appointees participating increases. The symposium provides students and postdoctoral appointees with an opportunity to present their research and the projects that they conduct at LANL by means of a poster presentation or a technical talk. Laboratory mentors encourage students to participate in the event and often make participation a requirement of student internships. The symposium is recognized as the most appropriate means for a student to summarize internship experiences.

The event dates were coordinated in advance with Sandia National Laboratories in an effort to encourage participation of external exhibitors. This year, four students and one staff member from Sandia participated. Each of the four students presented a technical talk.

A series of seminars presented at Symposium 2003: Championing Scientific Careers (the Symposium) included: "How to Prepare an Abstract," "How to Prepare a Poster Presentation," "Presentation Skills," "How to Prepare a Resume," and "How to Prepare a Curriculum Vitae." These seminars were all well attended and added to the overall high quality and professional look of the presentations.

Professional-development seminars were also part of the annual symposium. The FY03 topics were: "The LANL Postdoctoral Program," and "How to Apply to Graduate School." Symposium participants proposed these seminars because they addressed topics about which students wanted more information.

The Symposium, a day-and-a-half event, was crowded with participants, Laboratory staff members, mentors, and visitors viewing the student poster and technical presentations and chatting with exhibitors. More than 180 students and postdoctoral appointees presented their work. Of that number, 104 gave poster presentations, and the remainder presented technical talks. The categories represented were: biosciences, chemistry, computing, earth and space sciences, mathematics, nontechnical information, and physics. Laboratory technical staff members, affiliates, and academic professionals judged the presentations.

The event concluded with a banquet and awards ceremony. Calvin Mackie, an associate professor of mechanical engineering at Tulane University, delivered the keynote address. Symposium 2003 represented an encore appearance for Mackie, who spoke at the symposium for the second time because of the popularity of his inspirational and motivational address the previous year.

Forty-six symposium awards were presented. Following is a list of the awards:

Outstanding Poster Presentation

Category	Student Status	Student Name
Biosciences	Undergraduate	Christopher Horne
	Graduate	Kristina Kommander
Chemistry	Undergraduate	Willie Montoya
	Graduates	Ingrid Castro-Rodriguez and Kimberly Jantunen
	Postdoctoral Appointee	Artem Masunov
Computing	Undergraduates	Walter Viot and Stephen Markham
	Graduate	Sara Nichols
Earth and Space Sciences	Undergraduate	Diana David
	Graduates	Sioban Corish and Kari Brown
Engineering	Undergraduate	Michael Kozar
	Graduate	Joseph Stone
Materials Science	Undergraduates	Laura Addessio and Clarissa Yablinsky
Mathematics	Undergraduates	Charles Cantrell, Jelena Pjesivac Grobvic
	Graduate	Margaret Romeis
Physics	Undergraduate	Matt Cannon
	Undergraduate	Marwan Rihaoui
	Graduate	Denise Pauler
	Graduate	Matthew Price

The Awards Banquet at Symposium 2003 drew a large crowd of students to the new hall at the University of New Mexico-Los Alamos. The man at the podium is Science and Technology Base Programs Leader Allen Hartford.

Outstanding Oral Presentation

Category	Student Status	Student Name
Biosciences	Undergraduate	Lawrence Cabusora
	Undergraduate	Agnes Zurek
	Graduate	Anthony Sena
Chemistry	Undergraduate	Kit Rodolfa
	Graduate	Nadya Kobko
	Postdoctoral Appointee	Amanda Bean
Computing	Undergraduate	S. Davis Herring
	Graduate	Carl Leichter
Earth and Space Sciences	Undergraduate	Kassandra McLean
	Graduate	Susan Stephens
Engineering	Undergraduate	Andrew Dye
	Graduate	H. Omar Wooten
	Postdoctoral Appointee	Scott Sportsman
Materials Science	Undergraduate	Zhuohan Liang
	Postdoctoral Appointee	Ross McDonald
Mathematics	Undergraduate	Jelena Pjesivac Grobvic
	Graduate	Tomas Dohnal
Nontechnical Information	Graduate	Pallab Mozumder
Physics	Undergraduate	Stephen Bracht and Corrie Lambrecht
	Graduate	Larry Shultz
	Graduate	Igor Polonsky
	Postdoctoral Appointee	Fivos Drymiotis

Robert Smith, right, Students' Association chairman in FY03, presents a Symposium 2003 award.

Calvin Mackie, keynote speaker at the Symposium 2003 banquet, is an associate professor of mechanical engineering at Tulane University. He gave a motivational and inspirational talk on the need to continue one's education. He was a repeat speaker because people had liked him so much the year before.

The Students' Association

The Students' Association (SA) at Los Alamos National Laboratory (LANL, the Laboratory) continued to thrive in fiscal year 2003 (FY03). The organization increased its offerings of student activities, improved its communication with students, and increased its presence within the Laboratory as the students' voice.

SA sponsored its traditional meetings, including the annual all-students meeting with the Student Programs Advisory Committee (SPAC) on June 10, 2003; the all-students meeting with Laboratory Deputy Director for Science and Technology William H. Press on June 26, 2003; and the all-students meeting with Laboratory Director George (Pete) Nanos on July 24, 2003. These meetings addressed student-related progress at the institutional level as well as more general issues ranging from the state of the Laboratory to the bid process for Laboratory management, conversion of students to LANL employees once they complete their degrees, and efforts to make the Laboratory and Los Alamos more attractive places for students to launch careers.

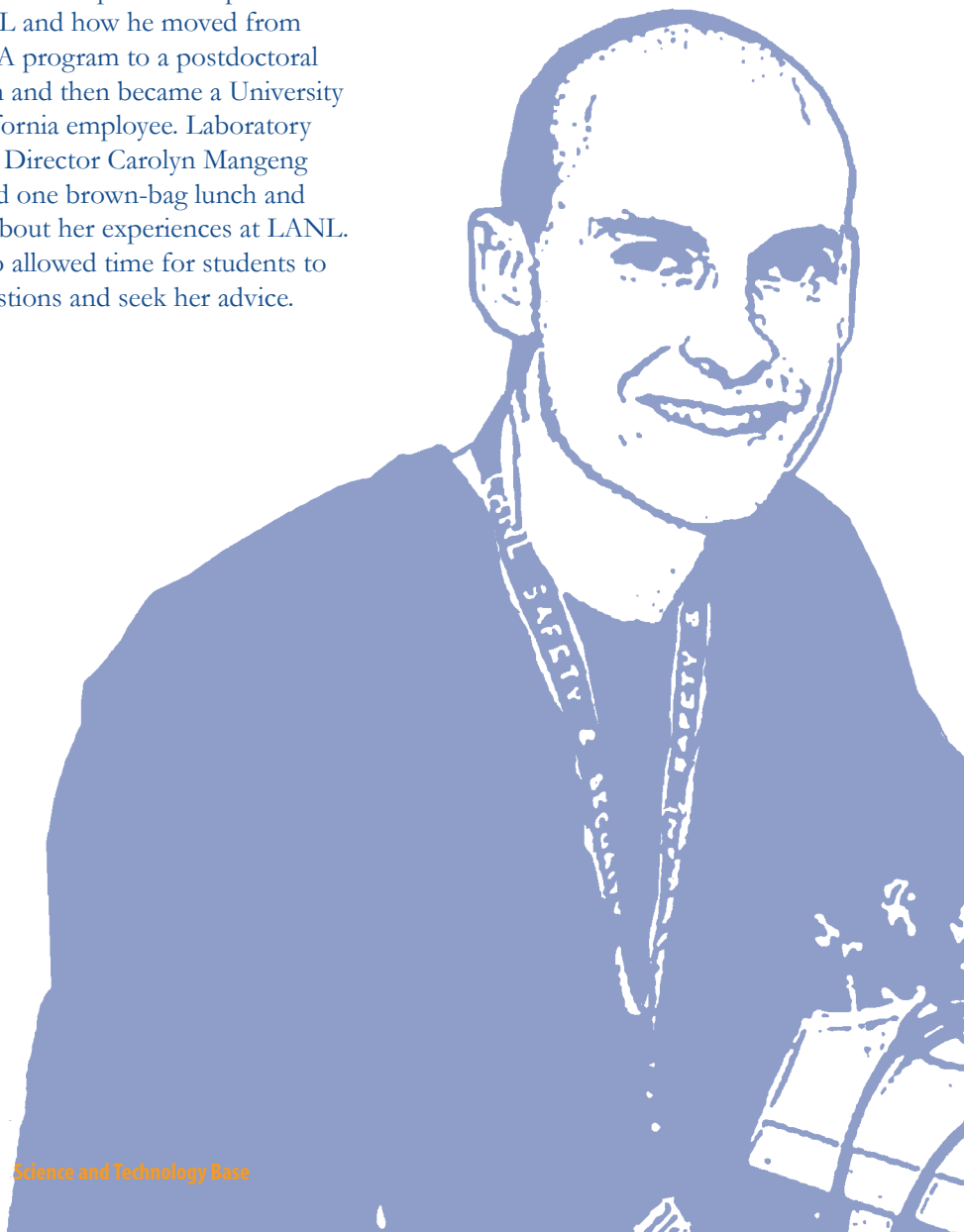
SA hosted the annual student picnic in FY03, serving more than 750 students and mentors.

SA also increased the number of student breakfasts offered. These breakfasts allowed Laboratory divisions to talk about their specific research while giving students greater knowledge of the breadth of science that takes place at LANL.

Several LANL tours were offered this year—among them, a tour of the Dynamic Experimentation Division (DX), and a geology tour sponsored by the Risk Reduction and Environmental Stewardship Division's Environmental Applications Group.

A new component added to SA activities in FY03 was the Graduate Research Assistant (GRA) brown-bag-lunch seminars held every Wednesday. They provided graduate students across the Laboratory with a chance to get together and discuss issues. Often, a speaker was invited to present information or to serve as a resource. For example, Tom Tierney, a former GRA who had recently been converted to a technical staff member, talked about his personal experiences at LANL and how he moved from the GRA program to a postdoctoral position and then became a University of California employee. Laboratory Deputy Director Carolyn Mangeng attended one brown-bag lunch and talked about her experiences at LANL. She also allowed time for students to ask questions and seek her advice.

One important addition to SA communications this year was placement of the Student Forum on the SA website. This Student Forum announces social activities and helps students to meet others with similar interests. The Student Forum has always been a popular tool, and with its new look and abilities in FY03, it quickly increased its popularity and level of use. The SA website received a major overhaul. The site is now attractive, has useful information, and serves as a one-stop information hub for students. A monthly calendar lists professional-development, social, and educational activities.



SA also held the first Mentor Appreciation Day, created in response to a suggestion from a student who thought it would be appropriate to acknowledge the time and effort that mentors provide to students. Mentor Appreciation Day was held on July 31, 2003. A special edition of "Student News, Student Views," an electronic newsletter, profiled several stories and pictures submitted by students who talked about their mentors and recognized them for their support and guidance. Many students took advantage of the opportunity to celebrate, taking their mentors to lunch, decorating their offices with signs of appreciation, and giving them cards with notes of thanks. Mentors were thrilled with the gesture. Everyone seemed agreed that Mentor Appreciation Day should be an annual event.

Finally, SA inducted new officers on August 7, 2003, at the Student Symposium Awards Banquet. The officers have already completed their yearly planning meetings and have developed a full calendar of student activities for next year.

Evaluation of Student Programs

A formative evaluation of Los Alamos National Laboratory Student Programs was conducted in the year 2000 by a research team at Ethnography and Evaluation Research, the Bureau of Sociological Research, the University of Colorado-Boulder. The report was completed and presented in 2001.

The evaluation was extremely valuable because Science and Technology Base Programs-Education Program Office (STB-EPO) had recently begun oversight of Student Programs, which had until that time been assigned to the Human Resources Division. The evaluation detailed a large amount of feedback from students, mentors, and liaisons from 1998 to 2000. The evaluation was especially helpful in providing guidance about what changes might be made, both in aspects of the program and in design of the program.

EPO relied heavily on the evaluation and made many changes and additions to the program based on its recommendations. In 2003, it was time to invest in another evaluation to gather more current information about the programs and possible future directions.

In July 2003, a contract for a new evaluation was signed with Katherine Clark of the Science and Policy Research Company. This independent evaluator was asked to look at Student Programs and various aspects of other EPO programs including the Critical Skills Development Program.

By the close of fiscal year 2003, the evaluator had spent considerable time looking at tools and documents already in place; had interviewed students from all programs individually and had worked with several student focus groups; had completed meeting individually with mentors and holding focus groups with them; and had met with other relevant Laboratory organizations including the Ombuds Office to gather as much information as possible about the Laboratory and its resources for students.

The evaluation was scheduled for completion in January 2004. Once it was completed, the contractor planned to prepare an official report.

This evaluation will allow for a broad perspective on Laboratory Student Programs and will be valuable in preparing for the future.