

Annual Report for the Graduate School: 2004-05

Changes in the Service Environment

Two factors have increased the challenge of meeting the University's graduate enrollment targets. One is the cost of recruiting and supporting more graduate students: it will cost an additional \$2.8 million for tuition, stipends, and health insurance to meet our enrollment targets for 2005-06. The second is the dramatic decline in applications from prospective international graduate students at U.S. universities during the last two years, which has been attributed to the increased difficulty that international students have in obtaining U.S. visas, increased competition for international graduate students from universities outside the U.S., and the perception that international students are less welcome in the United States than they were before 9/11. Reflecting this national trend, our number of international applications declined by 25.5% in 2003-04. As compared to those 03-04 numbers, 04-05 application numbers have stabilized. Also, since the Graduate School has assumed responsibility for the clearance of international graduate students for admission up through the issuance of I-20's, the turnaround time on completion of international admissions has significantly improved, which may improve international enrollment in the future. However, we may never make up the 25% in international enrollment lost in 03-04.

The demand for new graduate programs at NC State continues to grow, and we continue to benefit from the national commitment to increase the production of science/engineering Ph.D.s from under-represented groups. Six new master's programs, two new doctoral programs, and five graduate certificate programs were either approved this past year or are in the process of approval or development. We have also received three major federal grants to support our efforts to recruit and retain doctoral students in science and engineering: two GAANN awards for doctoral fellowships in biotechnology and electronic materials, and a new award from the NSF AGEP program. We also have a pending renewal application in for our NIH/NIGMS-funded BRIDGE Program.

For fall 2004, 7103 prospective students applied to the Graduate School; 2780 (39.1%) were admitted. Of these, 1823 (64.7%) enrolled. As compared with fall 2003, this represents a 12.6% decrease in applications, a 3.0% increase in numbers admitted and a 4% increase in new students enrolling. Total fall 2004 enrollment (on-campus and off-campus) was 5971 - a 5.5% increase from fall 2003. International students (1322) comprised 22.1% of the total enrollment - an increase from 1235 students and 21.8% of total enrollment from the previous fall.

As compared to fall 2003, enrollment of students from underrepresented groups in fall 2004 was mixed. African American enrollment decreased slightly. In fall 2004, African American graduate students (440) constituted 7.4% of the total enrollment, down from 445 and 7.9% of total enrollment in fall 2003. Hispanic American students (109) comprised

1.8%, up from 84 and up from 1.6% in fall 2003. Native American students (25) made up 0.4% in 2004, up slightly from the 2003 number of 22 (0.4%). The enrollment of women is also up from last year, from 2512 to 2599 students. U.S. citizens who are not North Carolina residents (548) made up 9.2% of fall 2004 enrollment – an increase in the total number of students from fall 2003 (up from 525) but a slight decrease in percentage of total enrollment from 9.3%. At the other end of the pipeline, in 2004-05, the Graduate School conferred 1717 graduate degrees (1374 master's and 343 doctoral), 24 fewer than in 2003-04. Approximately 75% of the graduates were U.S. citizens, of whom 6.8% were African Americans, 0.8% Hispanic Americans, and 0.1% Native Americans.

Compact Plan: Major Initiatives
(Excluding those in sections on Diversity Initiatives, Instructional Program Advances, and Fund-Raising)

Enhancements to On-line Graduate Administration and Information Resources (CPI 9 and Codicils 3& 4):

The transition to total on-line graduate admissions for 63 departments is substantially complete. We continue to educate Directors of Graduate Programs and other graduate administrators about our on-line administrative information resources utilizing a comprehensive communication and training program, including newsletters, automatic orientation e-mail for new administrators, and training sessions and labs. The Graduate Information Services team has delivered a Graduate Program Review and Assessment Management System now being used by program directors and others responsible for graduate program review and ongoing assessment. The Graduate School Program Information Services team continues work with the Financial and Human Resources Divisions to plan the migration of the Human Resources Production and Reporting systems to a web-based version. The projected completion date for this project has been delayed from October 2005 until Spring 2006 due to business requirement changes suggested by Human Resources.

Increasing Funds for Graduate Fellowships (CPI 5): Unfortunately, we were recently notified that all three of the NSF IGERT proposals submitted in 04-05 were not funded. On a positive note, however, we have just received word that two of the seven new NSF IGERT pre-proposals submitted this year have been approved for full proposals. They are the proposals for International Traineeships in Climate Informatics (prepared with the grant-writing assistance of Jaine Place) and Management of Sustainable Agricultural Production and Conservation of Resources. The Graduate School provided additional support (program development, data, and recruiting plans) for several other NSF IGERT pre-proposals from our campus, including Plant and Fungal Bioengineering and Behavioral Biology. The Graduate School currently manages federal grants, including our continuing BRIDGE and AGEF grants, with a total value (through 2007) of approximately \$8.8 million. In addition, we were awarded another AGEF grant for a collaborative effort among NC State, UNC-CH and NC A&T. The total amount of the grant is \$10 million, with \$3.3 million being awarded to NC State

through 2010. For 2004-05, the Graduate School administered 25 different fellowship and traineeship programs that supported 189 students and had an annual value of approximately \$2.4 million. Almost \$1.6 million of this was used to support female and minority students.

Space Allocations Required to Improve Operational Efficiencies (CPI 10): The Graduate School personnel scheduled to relocate to Rm 212 Peele completed that move. We are now making plans for all of the Graduate School staff to vacate Peele Hall, with the ultimate goal of moving into a renovated Alumni Building.

Institutional Effectiveness (CPI 11): The Graduate School continually assesses its performance using data collected through formal surveys of, and informal conversations with, students and faculty.

Improving Graduate Student Recruiting (CPI 3): The Graduate School has continued the graduate recruiting proposal award program this year with a total of \$35,400: \$31,000 from the Vice Chancellor for Research & Graduate Studies and \$4,400 from the Graduate School budget. In the recruiting award program, 33 proposals were submitted, and 28 were partly or fully funded, with departments/programs providing a 1:1 funding match. The Graduate School once again partnered with Creative Services to revise and update a recruiting CD. A self-contained recruiting document for those without Internet access, it is also a portal to programmatic materials available on the web for those with Internet access. To date, we have distributed over 10,000 copies to Directors of Graduate Programs and at recruiting fairs. Prospective students who receive a copy are encouraged to use it to obtain more specific programmatic information. Future plans call for an annual review of the CD, with updates to be made as needed.

Graduate Student Support Plan (GSSP) (CPI11): The GSSP permanent budget managed by the Graduate School in 2004-05 was \$17.38 million. This includes \$1.5 million earmarked for the matching tuition remission program, which was implemented in 2001-02. The Provost and Vice Chancellor for Research and Graduate Education made a \$0.5 million one-time allocation to the GSSP budget for 2004-05. As of May 23, 2005, we are projecting that the entire permanent budget and the one-time budget commitment will be used in 2004-05. In addition to the \$17.88 million that the Graduate School manages, other university budgets will contribute approximately \$6.6 million to the plan in 2004-05. The numbers of students participating in the GSSP in Fall 2004 were as follows: 2,527 for health insurance, 2,354 for in-state tuition, and 1,224 for tuition remission.

Diversity: Initiatives and Progress (CPI 3 and 4 and Codicil 2)

Funded by a grant from the NSF AGEP program, our comprehensive minority recruitment/ mentoring initiative is well underway. In addition to our continuing AGEP funds, in March 2005 the Graduate School received an additional \$3.3 million in NSF AGEP support. In February we hosted our 6th Visit NC State Day, which 60 students from 24 colleges

and universities attended. In our AGEP Summer Research Experience (SRE), 12 undergraduates from other universities and 13 from NC State are working with faculty in science, math, engineering, humanities, and the social sciences. In our complementary academic-year research experience (ARE), 40 minority NC State undergraduates have participated to date. We are also continuing our NSF-funded North Carolina Alliance to Create Opportunity Through Education (OPT-ED), a collaborative effort among all North Carolina's NSF-sponsored diversity programs (middle school through graduate school) to increase the number of minority Ph.D.s in science and engineering. In September 2004, we held our third OPT-ED Alliance Day, which featured a poster session, oral research presentations, student/faculty panels, and breakout workshops for over 500 participants. We are also the lead institution on an NIH/NIGMS-funded Doctoral Bridge Program, the goal of which is to increase the number of minority researchers in the biomedical and life sciences. To date, 21 BRIDGE students have completed an M.S. degree at one of our partner institutions (Fayetteville State, NC A& T, NC Central, and UNC-Pembroke). Of these, 10 have entered Ph.D. programs at NC State, and 2 have completed the Ph.D. This year our staff attended 36 recruiting fairs for minority and first-generation college students. With \$30,350 in diversity funds, we supplemented departmental and college awards to recruit minority students and used \$216,678 for retention supplements. All told, 100 students received awards this year, with the average award being \$2500.

Instructional Program Advances

Facilitating the Development of New Graduate Degree Programs (CPI 8): Two new graduate degree programs were approved by the UNC Board of Governors (BOG): a Master of Social Work and a Ph.D. in Communication, Rhetoric and Digital Media. The BOG also approved the "Intent to Plan" for a Master of Arts in Anthropology. The Administrative Board also approved five Graduate Certificate programs this year: Agricultural Education, Nonwoven Science & Technology, Horticultural Science, Design & Analysis of Environmental Systems – Watershed Assessment and Restoration, and Molecular Biotechnology. We are currently working with graduate faculty on four proposals at various stages in the campus approval process. The first of these, to change the current Ed.D. in Higher and Adult Education to a Ph.D., has been modified several times, and we are currently working with the Department to finalize the request. Regarding the second, for a Ph.D. in Fisheries and Wildlife Sciences, a Request for Authorization to Plan has been approved by the Administrative Board and submitted to UNC-OP. The third and fourth of these, a request to move the Asheville cohort program in Adult & Community College Education to Charlotte and a Request to Establish Wake and Durham County cohorts for the Ed.D. in Educational Administration and Supervision, are awaiting BOG approval. One program, the M.S. in Social Studies-Teacher Education, has been submitted to UNC-OP for termination.

Course Actions: The Administrative Board of the Graduate School approved a total of 137 graduate course actions during 2004-05: 56 new and 76 revised courses, as well as 5 course drops.

Program Reviews: During 2004-05, panels composed of internal and external faculty and disciplinary specialists conducted in-depth graduate program reviews for Genomic Sciences, Adult and Community College Education, Natural Resources, Fisheries and Wildlife Sciences, Plant Pathology, Electrical & Computer Engineering, and Online Engineering. Post-reviews were also completed for Statistics and Biomathematics.

Improved Assessment of Graduate Program Quality (CPI 2): Concurrently with the graduate program reviews conducted this year, the Graduate School has continued to implement a revised program review process, which includes the development of procedures (modified external program review and outcomes assessment) and infrastructure (databases, resource documents, website, reporting mechanisms, etc.) necessary to manage the new process. Also, we used the assessment plans developed in our pilot program with Mechanical & Aerospace Engineering, Math Education, Science Education, Food Science, and Psychology in workshops for all graduate programs led by Dr. Michael Carter. Our goal is for each program to have objectives, outcomes, and an assessment plan in place by the start of fall semester (05). As a result of the deliberations of the Academic Affairs Assessment Planning Team, the Graduate School is implementing three changes in its administration of formal program review and outcomes assessment: (1) partnering, where possible, with Undergraduate Academic Programs in formal program review; (2) simplifying the Biennial Reporting Guidelines for the [outcomes assessment plans](#) and possibly the [self-study guidelines](#); and (3) extending the assessment pilot through one year of data collection, analysis, and reporting in selected programs.

Professional Development and Mentoring of Graduate Students and Faculty (CPI 6 and Codicil 1): In 2004-05, 21 fellows from 16 different departments participated in the Preparing the Professoriate Program, each paired with a faculty mentor. Ten student participants received cash awards, two were GAANN Fellows, and the rest, because of budget cuts, attended the seminars unfunded. Student evaluations were very positive, rating the experience from very valuable to excellent. Under the direction of Dr. Gary Comstock, the Research Ethics program offered PHI 816 (Introduction to Research Ethics) in Fall 2004 and in Spring 2005 with an enrollment of 10 and 14 students, respectively. The Graduate School also held 6 workshops for students in 2004-05 on aspects of graduate education such as applying for NSF fellowships, applying to Graduate School, and succeeding in Graduate School.

Task Force to Evaluate the Post-Docs' Position at NC State (CPI 12): The recommendations made by the task force appointed in 2003 have been accepted by the Vice Chancellor for Research and Graduate Studies. Their full implementation is pending further review by Human Resources and the Office of Legal Affairs.

International Teaching Assistants (ITAs): We screened 139 ITAs in 2004-05 for oral English proficiency.

Administration: Achievements and Staff Changes

Achievements: This past year Graduate School staff contributed to the larger graduate community in a number of ways. The Graduate School was the co-recipient, with the University of Georgia and the University of Florida, of a grant to study doctoral completion rates. The grant is administered by the Council of Graduate Schools and funded by the Pfizer and the Ford Foundation. Dean Robert Sowell was invited to participate in a conference on Graduate Education and American Competitiveness at the Library of Congress in Washington, DC, in March. The conference was sponsored by the Council of Graduate Schools and Oak Ridge Associated Universities. Dean Sowell was also invited to be a charter member of the Board of Advisors for the Graduate School at Georgia Southern University. He attended the first meeting of the Board in April. Associate Dean Duane Larick gave a workshop on “Assessment and Review of Graduate Programs” at the CGS Annual Meeting in December 2004. He is also currently Chair of the K-12 Program Committee and serves on the Management Committee on Life Long Learning and Careers for the Institute of Food Technologists and is Associate Editor for the Food Chemistry Division of the *Journal of Food Science*. Associate Dean Rebeca Ruffy moderated a discussion session on Research Ethics at the CGS Annual Meeting in December 2004. Assistant Dean David Shafer served as co-author and co-PI for the \$10-million NSF AGEP proposal for the multi-institutional program that was funded earlier this year. In March 2005, he gave presentations on “Making Yourself Competitive for Graduate School” at the NC Mathematics and Science Education Network Junior Science and Humanities Symposium at the Friday Center in Chapel Hill and at the 9th Annual NC-LSAMP Undergraduate Research Conference/ 3rd Annual Research Initiative for Scientific Enhancement (RISE) Colloquium at Fayetteville State University. In May 2005 he gave a presentation on the same topic at “A Higher Education Forum for All Ages” at Johnston Community College. In March he also gave a presentation on the NC Alliance to Create Opportunity through Education at the Southeast IGERT Consortium meeting, held at UNC-Chapel Hill. Finally, Dr. Shafer has been elected President of the NC State Chapter of Phi Kappa Phi for 2005-06.

Consolidation of International Admissions Processes: On October 20, 2004, the Provost and the Vice Chancellor for Research and Graduate Studies issued a directive for consolidation of all administrative processes relating to the academic admission and regulatory clearance of most international graduate students in the Graduate School, up through the issuance of I-20s. The Graduate School now shares access to the FSAAtlas web-based data and case-management software currently used in the OIS. An International Admissions Specialist position has been created to support this new Graduate School responsibility. Complete implementation of this effort will require a transitional period

of up to one year. Thus far the progress has been dramatic. Since January 1, 2005, when the first of a series of organizational changes took place, the rate of international clearance versus the same period last year has improved significantly. This means that visa certification documents, which admits need in order to obtain study visas, were issued in a dramatically more timely and efficient manner.

Staff Changes: Besides the new International Admissions Specialist position, in July 2004 the role of the Director of Workflow and Information Systems (Rick Liston) was redefined to accurately recognize areas that had been for some time informally under his direction. As a result, the Graduate School Director of Admissions and Records, who has 10 SPA personnel reporting to her, now reports to the Director of Workflow and Information Systems. Nanda Irons, formerly Administrative Officer, now occupies the newly created position of Director of Graduate Admissions and Records. Paul Siler, a former temporary employee, filled a vacant position in admissions processing. Karen Blackmond filled the vacant Accounting Technician position.

Recommendations and Concerns for the Future

Our major concerns and recommendations, many discussed earlier, can be summarized as follows:

Enrollment planning and growth: To maintain graduate enrollment at the 2004-05 levels in 2005-06 and beyond, the one-time allocation of \$0.5 million must be continued and made permanent. As we look ahead to 2005-06, it will be necessary to again increase the number of graduate students in the GSSP if we are to succeed in meeting graduate enrollment targets, which call for an increase of 123 on-campus degree-seeking students. In addition, the Graduate School and the colleges have been asked to exceed the budgeted graduate enrollment for Fall 2005 by 75 students in order to offset a shortfall in undergraduate enrollment. To provide funds for both these increases in enrollment, we estimate that we will need to provide health insurance and in-state tuition for approximately 165 additional students and tuition remission for approximately 110 additional students. We expect that the colleges will pay approximately 25% of the cost of the health insurance and in-state tuition and 10% of the tuition remission. Based on these assumptions, the total additional need for 2005-06, at current tuition and health insurance rates, is approximately \$1,800,000.

Additional personnel needs: We need additional staff to direct and support the significantly expanded graduate program review function, and increased graduate student recruitment efforts.

Research and Professional Ethics: Although the University hired a Director of Research Ethics in 2002, there is still a concern on campus that the research ethics education needs of graduate students are not being met. However, progress was made in addressing this concern during 2004-05, and we expect continued progress in 2005-06.

Adequate space for effective Graduate School operations: The current long-term space plan has the Graduate School ultimately being housed in Alumni Building. This move, once completed, would have the following benefits: 1) savings of over \$30,000 per year in lease fees for Watauga space, 2) increased efficiency of operations by consolidating staff in one building, and 3) a more “professional” image for the Graduate School as the main service location for NC State’s current and prospective graduate students. There are several issues, however, that must be addressed between now and then. First, prior to our moving, funding must be found to allow for at least “cosmetic” remodeling in the Alumni Building and ultimately for more major renovations for ADA accessibility, etc. Second, we are scheduled to vacate all or part of Peele Hall in the late summer. It is critically important that we find adequate flex space to allow us to fulfill our mission over the next year while Alumni Building is vacated and remodeled.

Fund-raising support: Continued grant-writing support by the Office of Proposal Development is critical to our successful proposals for fellowship and traineeship programs and for diversity and professional development programs.