

# CHAPTER 3

## GRADUATE EDUCATION

### INTRODUCTION

The University of Kentucky awarded its first master's degree in 1876, 11 years after the University was founded. The Graduate School, established in 1912, was initially administered by a committee of deans from undergraduate colleges. In 1920 it was given its own dean and status similar to other colleges.

From 1925 to 1948 the Graduate School was under the leadership of Dr. W. D. Funkhouser. Enrollment grew from fewer than 50 to nearly 1000. In 1948 the Graduate School was reorganized. Criteria for membership on the Graduate Faculty were established. A Graduate Council was established to advise the Graduate Dean and to serve as an executive committee for the Graduate Faculty. The position of Director of Graduate Studies (DGS) for each graduate program was established. The current organization is only slightly modified from these basic components.

During the decade of the 1960s the number of graduate students doubled to about 2,400. Approximately 30 doctoral and 270 masters degrees were awarded in 1960 as compared to 115 doctoral and nearly 600 masters degrees in 1970. The number of doctoral programs increased from 20 to about 45. Concomitant with this numerical growth was an increase in research grants and contracts, fellowships and assistantships, library and computer resources, and research equipment. Unfortunately, quality control and coordination of graduate education was hindered during this time by several University administrative reorganizations and by the short terms of several Graduate Deans.

The decade of the 1970s saw a decline in federal funding and a shrinking job market for recipients of graduate degrees. Few new graduate programs were initiated even though graduate student enrollment by 1980 had increased to nearly 3,600. The appointment of Dr. Wimberly C. Royster as Graduate Dean in 1972 was a stabilizing factor, and he served in this position until 1988.

Since the last SACS review, there has been modest growth in graduate enrollment (4,501 for the 1990/91 academic year) and in the number of degrees awarded (181 doctoral and 831 masters/specialist degrees were awarded in the 1990-91 academic year). Seven new doctoral programs (Computer Science, Mining Engineering, Public Administration, Nursing, Biomedical Engineering, Nutritional Sciences, and Business Administration) and four new master's programs (Public Health, Health Administration, Mining Engineering, Physical Therapy) were added during the 1980s, and extramural funding for research and graduate student support increased substantially. A \$20 million bond appropriation from the state legislature in the mid-1980s made possible the acquisition of major research equipment. Significant emphasis was placed on the recruitment and support of women and minorities during this decade.

During the 1970s and through the mid-1980s the Graduate Dean reported to the Vice President for Academic Affairs and attended meetings of the President's Cabinet. In 1988 the position of Vice President for Research and Graduate Studies was created (as recommended in the 1982 SACS Report). Dr. Royster was appointed to that position while temporarily continuing to

serve as Dean of the Graduate School. Dr. Daniel Reedy was appointed Acting Dean of the Graduate School reporting to the Vice President for Research and Graduate Studies in July, 1988, and became Dean in 1989.

The Committee's charge was to consider graduate admissions standards, curriculum, and instruction, including the effectiveness of present policies and practices. Special issues related to minorities, international students and gender also were to be considered. In a broader sense, the charge was to examine thoughtfully and systematically the goals, strengths, and weaknesses of graduate education at the University of Kentucky.

In carrying out the charge, the Committee addressed the SACS criteria for accreditation in the graduate programs, which include the procedures used to evaluate the effectiveness of graduate programs: productivity of graduate faculty involved in graduate education; provisions for adequate resources (libraries, computer and laboratory facilities, and administrative organization) appropriate and well-publicized admissions criteria; established procedures for evaluation of admissions by recognized professionals; official policies for completion requirements; well-defined, distinctive curricula for both the master's and doctoral levels; required frequent and systematic evaluation of graduate curricula and graduate instruction; and assurance of academic integrity of off-campus courses and instruction.

The Committee met biweekly during most of the 1990 Fall semester. Initial discussions ranged from the broad, overall charge to the Committee to the specific responsibilities required of the Committee within a time-frame placed by the Self-Study Steering Committee. A major initial responsibility was to develop by a mid-October deadline a series of questions to be included in the various Self-Study surveys. The Committee also prepared an independent survey that was sent to all 86 current DGSs in mid-December, 1990, with a requested return of January 14, 1991. About 60 surveys were returned.

During the 1991 Spring Semester the Committee divided into several groups with specific assignments to examine the Graduate School office and operations; faculty and instruction; programs, degree requirements, and students issues; and DGS survey collation and analysis. Later, other groups were established to obtain specific answers to the SACS "must" statements, to identify "issues," and to oversee focus group meetings with DGSs. Subsequent to this, individuals took the responsibility of preparing drafts to cover areas of leadership/administration, resources, programs, recruiting, and the "must" statements. These drafts were used to prepare the preliminary report.

## ADMINISTRATIVE STRUCTURE OF GRADUATE EDUCATION

The University of Kentucky is the traditional flagship institution in the Commonwealth's system of higher education, and until 1970 it was the only institution granting doctoral degrees. The inclusion of the University of Louisville in the state system changed this situation. However, the Council on Higher Education reaffirmed the role of the University of Kentucky as "the Commonwealth's only statewide institution" and directed it to "...serve as...the principal institution for statewide instruction, research, and service programs in all fields without geographic limitation." [Kentucky Council on Higher Education, "University Mission Statements," *Policy Manual* (Section II), Revised April 11, 1979].

The function and purpose of the Graduate School at the University of Kentucky is to promote, facilitate, and coordinate advanced instruction, study, and research carried on by the faculty and students and to maintain recognized standards of quality in doing so. The Dean of the Graduate School is its chief administrative officer. The Dean's responsibilities include the supervision of graduate programs in general, as well as specific oversight of several graduate centers and special graduate programs which are housed administratively in the Graduate School. In addition, until recently, several interdisciplinary research institutes and centers were placed under the responsibility of the Graduate Dean. However, the 1991 administration reorganization left the Graduate School with only those programs which had explicit graduate education responsibilities. Those programs were the James W. Martin School of Public Administration, the Patterson School of Diplomacy and International Commerce, Rehabilitation Counseling, and Nutritional Science. In addition, oversight of two programs, the Graduate Center for Toxicology and the Graduate Center for Biomedical Engineering, were moved from the Medical Center Sector Vice Chancellor for Research and Graduate Studies to the Dean of the Graduate School. The remaining multidisciplinary research centers and institutes were placed under the direct jurisdiction of the Vice President for Research and Graduate Studies.

Certain responsibilities of the Dean of the Graduate School are delegated to other positions. Currently an Associate Dean for Recruitment is responsible for recruitment, planning, and coordination. This includes administration of recruitment funds, external graduate student funding sources, and the Lyman T. Johnson Fellowship program. A new position of Associate Dean for Academic Administration was created in July, 1991, to provide oversight for both domestic and international admissions, records, and certification of degrees. Graduate degree programs delivered at off-campus locations are under the direct oversight of the Coordinator of Extended-Campus Graduate Programs, a position established in 1990. The Coordinator reports directly to the Dean of the Graduate School. Site directors in Owensboro and Paducah and the director at the University of Kentucky/Northern Kentucky University Graduate Center report directly to the Coordinator and provide liaison for students at these distant locations, assessment of new program needs, and coordination of on-site instructional graduate education activities. The Assistant to the Dean for Academic Support Services oversees tuition scholarships, fellowships, graduate student support, program reviews, graduate faculty, etc. There is a Director of Graduate Studies (DGS) for each of the 86 program areas (65 on the Lexington Campus, 13 in the Medical Center, and eight within Research and Graduate Studies; many DGSs have responsibilities for both master's and doctoral programs). The Director of the University Faculty Scholars Program, a nonacademic program which coordinates acquisition of funds to support faculty development, also reports to the Dean of the Graduate School.

The Graduate Faculty consists of the Dean of the Graduate School, Associate and/or Assistant Deans of the Graduate School, members, and associate members. Membership in the Graduate Faculty is conferred upon recommendation of the Dean of the Graduate School, and in consultation with the appropriate Chancellor and approval of the Vice President for Research and Graduate Studies. The recommendations are made on behalf of the Graduate Council which typically reviews the record of any candidate who does not clearly meet all criteria. Criteria for membership are: the doctoral degree or its equivalent in scholarly reputation; the rank of Assistant Professor or higher; scholarly maturity and professional productivity as demonstrated by publications, editorial services, research surveys, creative work, patents, and research in progress at the time of appointment; and demonstrated participation in a graduate teaching and research program.

In practice, membership is reserved for those in the tenure ranks in departments offering graduate programs. Generally membership is granted upon promotion to Associate Professor, but there are numerous exceptions. Membership may be granted later upon appropriate recommendations and approval of the Vice President for Research and Graduate Studies. There are no provisions for removing faculty from the Graduate Faculty.

There also is an associate membership in the Graduate Faculty. The criteria for associate memberships are: the doctoral degree or its equivalent in scholarly reputation; the rank of Assistant Professor or higher; and the appointment as a full-time member of the faculty at the University of Kentucky or of another faculty granting advanced degrees.

Associate membership appointments are made for a period not to exceed six years upon nomination of the Chairman and/or DGS in the program. Several years ago the Graduate Faculty approved a change in policy to permit appointment of Associate Members at the time of their initial faculty appointment (if nominated), based on the reality that many new Assistant Professors already have several years of experience as post-doctoral fellows with associated research experience and informal interaction directing graduate students.

The Graduate Faculty determines the academic policies of the Graduate School, although most of its decisions are subject to approval by the University Senate. The Graduate Faculty meets three times a year with the agenda largely set by the Graduate Dean and the Graduate Council, although individual faculty members can place matters on the agenda.

The eighteen-member Graduate Council serves as an executive committee of the Graduate Faculty. Fourteen are elected by the Graduate Faculty for staggered three-year terms apportioned by Colleges as follows: Agriculture—two; Allied Health, Dentistry, and Nursing—one; Arts and Sciences—three; Business and Economics—one; Communications and Fine Arts—one; Education—two; Engineering—one; Human Environmental Sciences, Library Science, and Social Work—one; and Medicine and Pharmacy—two. Two additional faculty members are appointed by the Dean for one-year terms with the intent to make the Council's total composition more representative. The Council also has two graduate student representatives, selected from a slate of nominations made by DGSs, that are chosen by the Council to serve for one-year terms.

The Graduate Council normally meets twice a month throughout the academic year. Its duties and activities include:

- (1) Evaluation and recommendation to the Graduate Faculty of approval or disapproval of new graduate programs, or of major alterations in existing programs;
- (2) Consideration and recommendations of additions, deletions, or changes in the Graduate School rules;
- (3) Evaluation and approval of new graduate courses, changes in, or elimination of, existing graduate courses, including undergraduate level courses which also are available for graduate credit;
- (4) Consideration and approval of applications for membership in the Graduate Faculty;
- (5) Evaluation of the quality of graduate instruction and supervision in such programs as the Dean may call to its attention and advising upon or authorizing the Dean to take such corrective action as may be necessary;
- (6) Advisement of the Dean in other matters in which the Dean seeks the counsel of the Graduate Council or in which the Council chooses to offer advice.

The appointment of the DGS for each graduate program is made by the Dean of the Graduate School upon the recommendation of the department Chair, program director, or Dean of the College. In a limited number of cases, the Department Chair also serves as the DGS. In interdisciplinary programs, the DGS is appointed by the Dean of the Graduate School after consultation with the faculty. The DGS is an officer of the Graduate School and has administrative responsibilities at the program level in a manner which complies with the Graduate School rules. Each DGS is responsible for recommendations on admission of new students and for the expenditure of any Graduate School funds allocated to the program. The Graduate School usually hosts an annual meeting of the DGSs for the discussion of graduate education in general and specific administrative issues. A meeting with newly appointed DGSs is held at the beginning of the fall semester. The Colleges of Agriculture, Business and Economics, Education, and Engineering all have an Associate Dean with responsibilities that include graduate education.

In addition to the two graduate students who serve on the Graduate Council, many departments appoint graduate student representatives to attend department meetings and to serve on departmental committees. Many individual graduate programs have graduate student organizations. A university-wide Graduate Student Association was formed in 1968 and remained active for a number of years before interest declined. Recently there has been an effort to resurrect this organization. A Black Graduate and Professional Student Organization has been active on the campus for several years.

## DESCRIPTION OF THE GRADUATE PROGRAM

The *Criteria for Accreditation* was used to assist the committee in their evaluation process. The University of Kentucky has the complementary missions of teaching, research, and service. The 146 graduate degree programs described in the *Graduate School Bulletin* clearly address these missions, particularly teaching and research. The University follows a defined series of steps (policies) related to approval of new courses, changes in existing courses, dropping of courses, and establishment of new programs, which are all administratively handled by the Graduate School. The University of Kentucky and the Graduate School strategic plans are used to guide program development and need assessments prior to the institution of any new program.

The graduate curricula are, and must be, at a more advanced level than the undergraduate curricula. As new graduate programs are developed, or as existing programs are expanded, efforts are made to assure the availability of adequate curricula and resources. While in a number of professional masters programs research receives less emphasis, research is believed to be an important aspect of all graduate education and is an essential component of all the doctoral level programs. The University organizational structure emphasizes the importance of research by the appointment of a Vice President for Research and Graduate Studies. Specific comments on the adequacy of research support are covered by the Committee on Research, but it should be understood that there is a direct correlation between the level of support for research and the quality of graduate education. The University currently provides about \$15 million annually in support for graduate students. Of this sum, approximately \$10 million provides for TA and RA graduate student assistantships and another \$3 million is institutional support for tuition scholarships. Thus, only two million is actually fellowship funding. This compares to \$718,000 in fellowship funding for 1981. There were no general fund dollars designated for graduate fellowships in 1981 compared to \$490,000 in 1991. In addition, the Graduate School supports highly qualified graduate students through tuition scholarships, fellowships, and research aid.

Faculty are assisted with competitive grant programs, travel money, equipment grants, etc. There are approximately 1200 Graduate Faculty, the selection of whom has previously been described. There is no systematic periodic evaluation of the Graduate Faculty, except routine Departmental and College evaluations for merit increases in salary.

The University libraries contain two million volumes, and a new central library is the top priority construction project for the University. Computer resources are also rapidly expanding. The administrative structure provides Vice Presidents for Research and Graduate Studies and for Information Systems (including both libraries and computers). Thus, major goals and resources for graduate education are addressed at the highest levels of the organization. The 58 doctoral programs are based on 88 master's degree programs. In turn, the master's degree programs are based on undergraduate degree programs. No doctoral program has been approved without the base of a lower level degree program.

## Graduate Admission

All general admission criteria as well as information on individual programs are listed in the University of Kentucky *Graduate School Bulletin* (Exhibit O). The *Graduate School Bulletin* and application materials are sent to all who request information on graduate studies. The University is "to provide educational opportunities to all qualified students regardless of economic or social status, and will not discriminate on the basis of race, color, religion, sex, marital status, beliefs, age, national origin or handicap." [*Graduate School Bulletin* p. 10]. Admission to the Graduate School requires a baccalaureate degree from an accredited institution of higher learning. Senior undergraduate students in the University may be admitted with no more than 6 credit hours lacking for graduation requirements, or as University Scholars if particularly gifted. The minimum general admissions criteria include official transcripts documenting an undergraduate GPA of 2.5 and/or a graduate GPA of 3.0. The Graduate Record Examination or its equivalent also is required for admission. Under the University's Administrative Regulations international students are expected to score a minimum of 550 on the Test of English as a Foreign Language (TOEFL). The faculty of many programs have set criteria which are higher than the Graduate School minima. Each level of graduate work has unique admission standards which are monitored by the individual programs. Included among additional criteria are letters of reference, placement examinations, interviews, essays, etc. Many programs have their own brochure and/or handbook specifying admission criteria and deadlines.

## Graduate Completion Requirements

The Graduate Faculty is responsible for the graduate education programs of the University. Much of the routine activity is conducted by the Graduate Council. General completion requirements for graduate degrees are established by the Graduate Faculty and enforced by the office of the Graduate Dean. All policies on time for degree completion, residency requirements, thesis or non-thesis options, and dissertation requirements are clearly stated in the *Graduate School Bulletin* which is provided to all applicants for admission. All programs have well defined course curricula which meet or exceed minimum Graduate School requirements. Master's students must pass a written and/or oral final examination. All doctoral students must pass both written and oral qualifying examinations as well as a final oral examination. Programs with special requirements are marked to note the need for consultation with the respective DGS.

## Graduate Curriculum

At least half of the minimum course requirements in the graduate curriculum must be at the 600 or 700 advanced levels. The advanced courses are taught by members of the Graduate Faculty. The required enrollment in 600-700 level courses, which are restricted to graduate students, permits these courses to be taught in a manner requiring advanced scholarly involvement which includes acquisition of new knowledge and skills to be synthesized with established bodies of information. Residency requirements for doctoral students assures the opportunity to develop intellectual skills in a university atmosphere.

The qualifying and final examinations for all doctoral students and the final examination for master's students assures competency and contemporary knowledge skills in a chosen field of study. Individual program requirements, which are approved by the Graduate Council, are designed to prepare the graduate adequately. The institutional limit on the number of courses with joint graduate and undergraduate enrollment further ensures a higher quality curriculum.

The distinctions between master's and doctoral degree requirements, including residency and the type of acceptable research, are clearly stated in the *Graduate School Bulletin*. The final examination and review of theses by the Graduate School insure that all program requirements have met the defined standards prior to the final examination of the graduate students. Association with resident faculty is assured since all courses are taught by resident faculty. The faculty/student contact may be more limited for courses taught off-campus.

The program requirements for the doctoral programs and the examination procedures, as outlined in the *Graduate School Bulletin*, assure a greater level of skills and competence than is expected of the master's candidate. It is the responsibility of the Graduate School and the DGS for each program to monitor the status of each doctoral candidate through a process described in the *Graduate School Bulletin*. The Graduate School determines the fulfillment of degree requirements. The performance of each Program is supposed to be reviewed annually by the program and is evaluated periodically by the appropriate dean. Student evaluation in all degree programs of an academic unit is an integral part of the monitoring and review process. The Graduate Faculty has jurisdiction over all programs leading to graduate degrees.

## Graduate Instruction

The University provides an environment that supports and encourages scholarly interaction between graduate students and faculty members. Each program receives a yearly Doctoral Seminar Fund to support outside lecturers for the purpose of stimulating and enriching scholarly discussions. Instructional objectives and course requirements are part of a course syllabus given to each student at the beginning of each course. Students have an opportunity to evaluate each course and instructor every time the course is offered and to make suggestions for improvement via formal course evaluation instruments and through representation on program curriculum committees. In some programs, logistical problems impede successful student evaluation of courses offered only in the spring semester. Nontraditional course formats (such as off-campus, compressed video, and satellite delivery) are well-designed and monitored for success. A minimum number of instructional hours, as well as clearly stated objectives, are established to ensure that the course content requirements are met. Student feedback via course evaluations and examinations provides an indication of the knowledge and competency achieved. The program DGS assigns an advisor to individual students by the end of their first semester. Doctoral students

are monitored by an advisory committee consisting of a minimum of five graduate faculty members. Details are described in the *Graduate School Bulletin*.

## MAJOR ISSUES

Over the course of the Committee's deliberations, numerous issues related to graduate education were raised. However, the Committee felt that a long list of items would be counterproductive and we have attempted to condense concerns into four major categories. In order of priority, these issues are Resources Related to the Support of Graduate Education, Recruitment of Graduate Students, Extended-Campus Graduate Programs, and Multidisciplinary Graduate Education. Each of these issues will be discussed in the sections to follow.

The data utilized in considering issues and concerns were obtained from the Graduate Education Committee's Survey of Directors of Graduate Study (Appendix 3-A), Self-Study Faculty and Graduate Student Surveys, an independent survey of graduate students conducted by the Graduate School (Exhibits A and B), documents provided by and interviews with Dean Reedy and his staff in the Graduate School, and written responses from Dean Reedy and former Dean Royster to a Committee request for an evaluation of how the Graduate School responded to the recommendations made in the 1982 SACS review (Exhibits C and D). In addition, interviews were conducted with the Registrar, the Acting Vice President for Research and Graduate Studies, the President, focus group meetings with invited DGSs, and forum meetings held by the Self Study Education Committee for the entire University community. A meeting also was held in the fall of 1991 with the Vice President for Research and Graduate Studies. Institutional documents reviewed included information from the Office of the Graduate Dean, Organizational Charts, *Graduate School Bulletin*, various forms used for admissions, course requests, etc., and the Administration and Governing Regulations of the University of Kentucky.

### Resources Related to the Support of Graduate Education

On a time scale of months to a few years, the effectiveness and impact of graduate education depends primarily on the skill and dedication of the faculty, students, and administrators already in place. But over periods of years to decades (the focal time scale of self-studies), graduate education must inevitably reflect the procurement and management of resources. In this section, we mean the term "resources" to include (1) funds available for the direct and indirect support of graduate education; (2) the available time, effort, and expertise of the graduate faculty; and (3) the administrative and staff support essential to graduate education.

A thorough review of the organization, administration, productivity, and funding of graduate education at the University of Kentucky cannot ignore its most striking feature: *severe resource limitation*. This has been a recurring theme in our discussions and correspondence with the President of the University, the Acting Vice President for Research and Graduate Studies, the previous Vice President for Research and Graduate Studies, the Vice President for Research and Graduate Studies, the Dean of the Graduate School, and the Directors of Graduate Study via focus groups and responses to the DGS questionnaire. Of particular significance in the context of resources are the need and opportunity to increase the quality, quantity, and diversity of graduate students and their educational experiences. We perceive that there is a very high return expected from any judicious investment of additional resources in graduate education. We develop this theme and some of its implications, and we offer some specific recommendations below.

Expectations for graduate education at the University of Kentucky are—and should be—very high. The 1989-94 Graduate Studies Strategic Plan sets specific and worthy goals to be met in the next five and the next ten years; many of these are reiterated or elaborated in the present document. *Few or none of these goals can be met without a substantial increase in resources devoted to graduate education.*

A few important symptoms of this serious condition are as follows:

- (1) Approximately 47 percent of University of Kentucky graduate students receive stipends from the institution through assistantships or fellowships, in comparison with about 60 percent at most academically respected U.S. institutions [interview with Dr. Reedy].
- (2) Despite steady increases in most types of direct funding to graduate students and programs, comments made on the DGS survey and at focus group meetings indicate that the DGSs still perceive a substantial limitation on funding relative to benchmark programs, particularly with respect to the level of stipend support.
- (3) A clear consensus among the relevant administrators—that the university must expand its initiatives in the development of multidisciplinary research/graduate training and extended-campus programs—implies substantial new resource demands for graduate education.
- (4) A decade of “taxation” (i.e. reclaiming a portion of budgets) of colleges by the Lexington Campus Chancellor has left very little funding flexibility within departments to respond to short-term needs of graduate programs.
- (5) Faculty resources are currently stretched to the limit, as indicated by (i) the overall loss of faculty members at University of Kentucky relative to benchmarks during the past decade; (ii) specific concerns expressed by Directors of Graduate Studies about insufficient research faculty in their programs and limited graduate program participation by faculty; and (iii) difficulties noted by the Dean of the Graduate School in recruiting and retaining talented, research-oriented faculty members to serve in the increasingly demanding role of Director of Graduate Studies.
- (6) The small and inflexible budget of the Graduate School has resulted in substantial staffing shortages in record-keeping and application processing and has forced the Graduate School into operating by policy rather than playing a more catalytic administrative role.

The Graduate Education Committee recommends that additional funding be aggressively sought for graduate education from all of the following sources, primarily to meet the indicated needs.

**Recommendation 3-1:** The University should aggressively seek increased extramural funding for graduate education, including recovery of associated indirect costs.

The majority of any substantial increase in funding over the next decade must surely come from extramural funding agencies and related sources. To compete effectively for these funds, more must initially be invested in faculty resources, to recruit and retain academicians, and to allow significant portions of their efforts to be focused on research and graduate training. The

resulting extramural funds obtained by these faculty members will keep the university's research and graduate training environment at the forefront, provide stipends for our research assistants and postdoctoral researchers, and help underwrite the equipment, supplies, and travel essential to graduate training.

**Recommendation 3-2: Additional line-item funding for Graduate Research Assistantships should be added to the University's biennial budget request from the Commonwealth.**

A major portion of the funding needed to meet increasing state-wide demands for graduate education at the flagship institution must be sought from the Commonwealth itself. We strongly endorse the Graduate Studies Strategic Plan which recommends allocation of general fund resources for 50 Research Assistantships over the next decade and provision of complete tuition scholarships for all RAs. We recommend a substantial increase in the overall number of faculty lines, allocating new lines primarily to programs of the highest quality and to those that are rapidly expanding. Additional funding of the Graduate School to increase staff and operating budget also should be obtained from state appropriations, rather than from indirect cost recovery.

**Recommendation 3-3: The University should reinstate a high-profile capital campaign, such as an expanded version of the Fund for Excellence in Graduate Education to support endowed chairs and graduate and postdoctoral fellowships.**

Reviving this initiative and raising it to a high institutional priority offers the best hope of substantial increases in the quality of graduate education at the University of Kentucky in this decade. Permanent and rotating endowed chairs, graduate fellowships, and postdoctoral fellowships provided through these funds could enhance significantly the environment for graduate education, as it has at most other leading academic institutions.

**Recommendation 3-4: The University should shift existing University resources, including more of those derived from indirect cost recovery, into graduate education.**

Considering the University's statewide role in graduate education, recent disproportionate increases in demand for graduate education of high quality and quantity at the University of Kentucky, and the severe limitation of resources noted above, we believe that some redistribution of University resources in favor of graduate education would be appropriate. Additional support could help provide the needed research faculty resources, operating funds and staff support for the Dean and Directors of Graduate Studies, stipends and research support funding for graduate students, and partial summer funding for Directors of Graduate Studies. This last area especially has been overlooked. The DGS survey indicated a substantial amount of uncompensated time being contributed towards DGS responsibilities during the summer by DGSs with nine-month appointments. In addition, the Distribution of Effort form used in the past by DGSs with 12-month appointments does not have a category for DGS activities. Consequently, in response to the DGS survey, these individuals indicated zero percent time related to DGS activities. In practice these "activities" are usually included with research. The Graduate Education Committee recommends the following:

**Recommendation 3-5: The University should give special consideration to compensation of Directors of Graduate Studies for their efforts related to graduate education.**

At any likely level of resources devoted to graduate education over the next decade, the University of Kentucky will be continually forced to choose between quality and quantity. The impact of such choices will influence the essence of the environment experienced by graduate scholars and, to a considerable extent, the total environment of the institution.

The statement of University Goals [see University Purpose And Mission Statement] stresses "excellence in...graduate...educational programs" recognized nationally and internationally for "overall quality" and "specific areas of strength." In an April 16, 1991, interview with the Graduate Education Committee, President Wethington emphasized increased graduate enrollment, extended-campus graduate courses and programs, graduate recruitment of additional minority students and women, and more aggressive graduate recruitment of students completing undergraduate degrees at Kentucky institutions as his priorities for graduate education at U.K. We believe resource limitations will make it unlikely that all of these worthy goals and aspirations can be achieved simultaneously and that, in practice, it will be necessary to support programs in a selective manner. With regard to the balance between quality and quantity of graduate education the Graduate Education Committee recommends the following:

**Recommendation 3-6:** The Graduate Faculty as a whole should be informed of needs and regularly consulted before final decisions are made concerning major new commitments of resources in graduate education.

**Recommendation 3-7:** The Graduate Council should be charged with reporting regularly on the development and quality of extended-campus graduate courses and programs and other issues related to the quality-quantity tradeoff.

**Recommendation 3-8:** The University should fully support the emphasis on quality expressed in the University Goals.

**Recommendation 3-9:** The University of Kentucky should respond to the expanding demand for graduate education within the Commonwealth in a manner consistent with the emphasis on quality and the available resources.

Over the past 10 years, new recurring funds have been allocated by successive presidents of the University for graduate fellowships (Dr. Singletary—Presidential and Lyman T. Johnson Fellowships; Dr. Roselle—Dissertation Year Fellowships; Dr. Wethington—Supplementary Stipends). Full tuition scholarships (in-state and out-of-state) were phased in between 1984 and 1986 for graduate Teaching Assistants on the Lexington Campus but only out-of-state tuition scholarships have been available to Research Assistants. In the Self-Study faculty survey, 76 percent supported parity between tuition scholarships for TAs and RAs. The Acting Vice President for Research and Graduate Studies, the Dean of the Graduate School, and the DGSs all emphasize that we remain behind most benchmark institutions in percentage of students funded through assistantships or fellowships, and stipend amounts paid to those funded.

Over the next 10 years demographic projections indicate increasing competition among universities for a diminishing pool of domestic applicants to graduate programs. The Lyman T. Johnson Minority Fellowships and additional funds earmarked for female applicants in male-dominated fields can help expand the domestic talent pool at this critical time. However, without a substantial increase in stipend resources, coupled with much greater recruiting efforts by personnel from individual programs, the University of Kentucky increasingly will be forced to

rely on the uncertain supply of international applicants, many with weak English language skills, in order to maintain a high level of research productivity. We believe that the University Research Assistantships sought in the Graduate Studies Strategic Plan represent a major step in the right direction to remedy the recruitment problem. The excellent students recruited with Research Assistantships and fellowship funds help create and maintain the stimulating research environment that draws other talented students and generates additional extramural funding. It also is important that multi-year fellowships be established because the University is losing promising candidates because it has few continuing awards. The recent (1991) "add-on" awards from the Graduate Dean's office for outstanding students will help to ameliorate this problem. However, we must be prepared to expand the initial investments that can accelerate this process. One additional need in this area is to support health insurance for graduate students with University resources. More than 75 percent of all faculty and students surveyed identified this as a critical need. Improving the quality of graduate programs to attract top level graduate students is beyond the scope of this section, but this also requires continued efforts in order to improve the research climate at the University.

**Recommendation 3-10:** The University should provide better financial support of graduate students by establishing University Research Assistantships; establishing parity between tuition scholarships for TAs and RAs; establishing multi-year fellowships; and providing greater flexibility for Department Chairs and Directors of Graduate Studies in allocating Departmental funds, such as setting stipend levels.

## **Recruitment of Graduate Students**

Recruitment of graduate students has been a recurring theme in discussions of the University of Kentucky's mission as the primary institution for research and graduate education in the Commonwealth. The issues addressed include the composition and quality of the graduate student population, and the operation of the recruitment process itself. While recruitment of high quality and diverse graduate students is a perennial goal for the University (as well as a necessity in an increasingly competitive educational environment), the means to achieve this end often have not been discussed thoroughly or specified. It should be noted that many of the specific issues raised during the course of this aspect of the Self-Study overlap with other issue areas that are the responsibility of other committees. In particular, coming to grips with questions of resource allocation and administration are central to so many of the problems of this University. At the heart of the effort to improve recruitment must be allocation and better coordination of resources that will enhance the University's ability to attract and retain the highest caliber candidates for graduate education.

## **Diversity in Graduate Education**

The composition of the graduate student population includes several categories that present special issues for the University. These are international students, minority students, women, and overlooked groups from the Commonwealth and region such as low income, rural, or Appalachian students (Appendix 6-C, G, H, I, J, and K). International students form an increasingly important component of the graduate student population. Minorities, and in some sectors of the University, women, currently are grossly under-represented. Finally, Kentucky has many pockets of poverty and isolated rural areas, especially in the Appalachian region, that traditionally lack access to educational opportunities and resources. It is desirable to increase recruitment in each of these categories for a number of reasons.

First, education is a resource that should be available equally to *all* groups. The availability of high quality graduate education and well-trained graduate students is fundamental to the development and prosperity of the Commonwealth and its citizens in a world that is increasingly complex, global, information rich, and technologically sophisticated. Second, it is important to increase diversity, both to ensure the richest mix of talents and ideas and to prepare students for a diverse world. Finally, it is central to the University's ability to function and fulfill its research mission to have access to the widest pool of talent available. Recruitment issues associated with each group will be discussed in turn.

### **International Focus**

Reflecting an increasingly global economy and information environment, the University of Kentucky is attempting to strengthen its international focus. One result of this effort is the growing number and importance of international graduate students (15 percent of the total graduate student enrollment for 1990-91 were classified as international students (Exhibit 3-E). In addition, shortages of qualified domestic students in some disciplines make international students a vital component of the University's ability to produce high quality research and graduate education. For these reasons it is important to continue and expand efforts to make the University an attractive choice for international students and to facilitate efforts directed towards their recruitment. At the same time, a number of problems accompanying increased international student enrollment need to be addressed. Excessive bureaucracy and red tape both within the graduate school and in the international programs office, as well as a failure to coordinate efforts across these jurisdictions, often hinders expedient processing of applications. Similarly, international students often need special services ranging from assistance with visas to emergency financial aid. Again, better organization, information, and especially coordination from the offices of international programs is necessary to avoid the delays, misinformation, and frustration experienced by both international students and the departments which enroll and employ them.

A special problem raised by growing representation of international graduate students entails a complex set of issues revolving around English proficiency. While basic English proficiency is a primary requirement for graduate student enrollment at the University of Kentucky, there is, in actuality, a very wide range in facility with the language. Language barriers impede learning, increase time-consuming editorial and language instruction tasks for faculty instructors and advisors of these students, and create major communication problems in undergraduate education when international teaching assistants may be employed as instructors. Recent developments, such as improved screening of international teaching assistants' English capabilities and the establishment of the writing laboratory, have alleviated some of these problems, but have not eliminated them. The Graduate Education Committee recommends the following with regard to international graduate students.

**Recommendation 3-11:** The Graduate School, Admissions Office, and the International Programs Office should actively collaborate to eliminate redundancy in processing applications and expedite the provision of necessary special services.

**Recommendation 3-12:** English proficiency of international students should be evaluated thoroughly prior to assignment of teaching assistantships to prevent unqualified TAs from teaching. Remedial instruction should be provided to eliminate deficiencies and improve teaching skills.

## Minority Graduate Students

Although there has been some progress in increased enrollment of minorities at the University of Kentucky, results still fall short of goals, especially at the level of graduate education. Only seven percent of the total graduate enrollment for 1990-91 were classified as minority status (Exhibit 3-E). Efforts to recruit minority graduate students should be improved by the recently established position of the Associate Graduate Dean for Recruitment. Additionally, recruitment efforts will be improved to the extent the University gains a reputation for providing a supportive climate for minority students. This can be accomplished by (1) having sufficient numbers of minority graduate students to create the community necessary to alleviate the isolation and alienation of token status (the Black Graduate and Professional Student Organization is an example of a productive effort in this area); (2) providing necessary academic and personal support service to alleviate adjustment problems (including remedial education for promising students with specific and limited academic deficiencies); (3) increasing minority representation among faculty to provide role models and mentors for minority students; and (4) insuring an environment free of prejudice and discrimination. Finally, the focus of recruitment should not be limited to African-Americans, but should be expanded to include other race, ethnic, and cultural groups. It is interesting to note that more than 70 percent of the graduate students responding to the Self-Study survey either strongly or somewhat supported the idea of additional special incentives to attract minority students. Sixty-seven percent of the faculty agreed with this assessment. In fact, the 1991 Graduate School budget contains \$638,000 designated for awards to minorities and to women in underrepresented areas [source: Dr. Reedy's response to Self-Study Graduate Education Committee]. The Graduate Education Committee recommends the following with regard to recruitment of minority graduate students.

**Recommendation 3-13:** The University should vigorously recruit minority students and establish special scholarships for them.

## Women Graduate Students

In some disciplines women comprise the majority or a substantial proportion of students while other programs have very low representation. Efforts must be made to increase recruitment into programs which traditionally have not attracted women (e.g., in 1990-91, engineering had 30 women and 107 men doctoral students and 21 women and 169 men masters students; agriculture had 30 women and 197 men doctoral students and 38 women and 67 men masters students (Exhibit 3-E). Much of this under-representation of women in graduate programs simply reflects the situation that exists at the undergraduate level. Therefore, efforts such as the program to increase undergraduate enrollment of women in engineering and math will eventually add to the pool of potential women graduate students. Efforts to create a more favorable recruiting environment include many of the same measures discussed under minority students. Additionally, a favorable climate may require greater flexibility in scheduling of classes and other activities to accommodate nontraditional students. An overwhelming 90 percent of the Self-Study Graduate Student Survey responses strongly agreed or somewhat agreed that more effort should be placed on graduate degree programs for nontraditional students. A similar 78 percent of the faculty in their Self-Study survey supported this position. About 10 percent of the graduate students responding to the Self-Study survey indicated that they had either witnessed or were the target of unwanted physical and/or verbal advances or overt aggressive acts that were related to gender. Therefore, all activities must include vigilance against sexual harassment, including guidelines, policies, and a plan for action which are communicated clearly to and understood by both students,

and faculty. The Graduate Education Committee recommends the following with regard to recruitment of women graduate students.

**Recommendation 3-14:** The University should increase efforts to include women in programs that have traditional underrepresentation via special recruitment and scholarship support.

**Recommendation 3-15:** The University should clearly communicate to both faculty and students its guidelines, policies, and plans for action regarding sexual harrasment.

### **Appalachian Graduate Students**

Kentucky is a poor state with substantial numbers of low-income residents, isolated rural communities, and a large area in the economically hard-pressed Appalachian region. It is important for the University to extend its recruiting efforts to reach persons whose educational attainment may be impeded by isolation and economic deprivation. Success at this undertaking should prove beneficial both to individuals and to the socioeconomic development of the Commonwealth. While there have been good programs to reach many of these groups (most noteworthy are those directed to Appalachian students at the level of undergraduate education), there is also a need to extend these efforts more systematically to provide similar support and opportunities for graduate education. The University Faculty Scholars Program is an example of an effort being made in this area. The Graduate Education Committee recommends the following:

**Recommendation 3-16:** The suggestions and programs for improving the recruitment of minorities and women should apply equally to Appalachian students.

The most effective recruitment process for high quality graduate students comes from contacts made by faculty with colleagues and students around the country. Participation at professional meetings is especially useful as a routine means to promote contacts which result in the recruitment of good students. The Self-Study survey indicated that 30 percent of the graduate students were strongly attracted by the reputation of a specific program or faculty member but it also should be noted that 43 percent chose the University of Kentucky because it was close to home. It is generally agreed that professional recruitment has been relatively ineffective, inefficient and expensive, with a great deal of duplication of effort. Only 22 percent of the faculty surveyed strongly agreed that professional recruiters should be used for graduate students. Formal recruitment efforts should be coordinated by the Associate Dean's office to maximize benefits and minimize expense and redundancy. In addition, more resources should be committed to effective means of recruitment at the departmental level to include providing funds for student visits to campus, supporting measures to publicize programs (e.g., brochure design and distribution), and augmenting travel money for faculty participation at professional meetings. In short, greater commitment of resources and flexibility in their deployment are key components of the recruitment process as they have been for every other issue raised in this report. The Graduate Education Committee recommends the following with regard to the recruitment process.

**Recommendation 3-17:** The major portion of graduate recruitment efforts should be carried out by individual programs, with funding and coordination from the Graduate School.

While it is difficult to measure accurately, information gathered from the DGS survey indicated a relatively high rate of success in the placement and employment of individuals receiving graduate degrees from the University of Kentucky. The survey indicated that 87 percent of all masters graduates and 95 percent of all doctoral graduates during the past five years were employed in their area. Of these, 26 percent of all masters and 75 percent of all doctoral graduates were employed in institutions of higher learning. Twenty-six percent of the doctoral graduates accepted post-doctoral positions. Thirty-two percent of the graduates were employed within the state. Dissemination of information in the form of refereed publications is an important indicator of quality of graduate education and the DGS survey indicated that 49 percent of the masters graduates and 76 percent of the doctoral graduates had either published or were under active preparation of thesis or dissertation material for publication.

## **Extended-Campus Graduate Programs**

Even though there is legitimate concern over the trade-off between quality and quantity of graduate education, a case can clearly be made in support of an extended-campus graduate program at the University of Kentucky (Exhibit 3-F). In fact, 52 percent of the faculty surveyed agreed that selected graduate programs should be accessible to students at extended-campus sites. Arguments for such accessibility include the rising age level of the graduate student population, increasing demand for course work and degree programs by Kentuckians already established in their careers, need for teachers to upgrade their skills and knowledge in response to Kentucky's educational reform initiatives, changing public attitudes toward the need to improve education, and increasing desire for adult continuing education. If learning is to become a lifelong endeavor for a large number of Kentuckians, they must have convenient access to higher education, including graduate education. Undoubtedly, this is an educational need that the University must address.

Some areas of the Commonwealth where needs for graduate education have been identified overlap the service areas designated for one or more regional universities. However, there is no doubt about the University of Kentucky's responsibility to help meet those needs because of its statewide, land grant mission. The University has expressed the desire to cooperate with the other state universities in developing advanced graduate degree programs, and some joint programs have been developed and implemented, albeit not without some problems.

The greatest constraints to expanding off-campus graduate education appear to be the high cost of delivering such programs at the desired quality level, the concern that extended-campus programs will drain financial and faculty resources from on-campus programs, and certain pedagogical problems unique to off-campus programs. Efforts are being made to minimize these constraints. Current plans include only the Doctor of Education (Ed.D.) program with specialization either in Educational Administration or Higher Education, which had a 1991-92 enrollment of 49 students. Because of the need for intense faculty-student interaction and mentoring in doctoral programs, it is likely that the number of doctoral degree programs offered at extended-campus sites will remain small. Similarly, the research requirements will likely deter the establishment of doctoral degree programs in many disciplines, particularly the sciences. The University also plans to limit extended-campus master's programs to fields not offered at the other state universities near the instructional sites. It appears that the University is following the advice of the Council of Graduate Schools to avoid trying "to be all things to all people, and thereby jeopardize their ability to provide high-quality teaching and research in areas which are most directly a part of their mission. Each institution must question and search continuously to maintain a balance between quality and outreach" (Exhibit 3-G).

The University is striving to develop more efficient ways to deliver course work at the extended-campus sites. The traditional on-site instruction is expensive in terms of faculty time and travel, especially if the distance is great; but, in a doctoral degree program, the necessity of personal contact, interaction, and mentoring makes on-site instruction virtually a requirement in at least certain aspects of the program. Much of the course work, particularly at the master's level, can be delivered by more cost effective and time efficient means, such as videotapes and live satellite broadcasts, including some interactive video. Limiting the programs and using the most cost effective delivery systems will minimize the costs of the extended-campus programs.

The Acting Vice President of Research and Graduate Studies stated that the allocation of funds for extended campus sites will be increased each year as the program plans are implemented and that funds are adequate to support the limited programs that have been established to date (April 1991 interviews). However, DGSs currently involved in existing extended-campus instruction identified insufficient funds as a significant issue in maintaining existing programs and in expanding program offerings in the future.

Other concerns identified by DGSs include lack of faculty interest needed to plan and deliver off-campus instruction and logistical problems in program planning, arrangements, and delivery. They also cited problems encountered in educating and socializing graduate students at extended-campus locations. These include lack of adequate and accessible library holdings, time constraints on students working full-time and commuting long distances to classes, lack of cohesiveness and continuity across course offerings, limited faculty contacts with students, lack of environments at instructional sites to encourage and facilitate introduction of students to the concerns of programs and disciplines, and difficulties in communicating effectively and efficiently with extended-campus students. Whether or not these problems can be ameliorated to an acceptable degree for many doctoral programs is doubtful. The Graduate Education Committee recommends the following with regard to the University's Extended-Campus Graduate Program.

**Recommendation 3-18: Extended-campus degree and course work programs should be established only in appropriate fields and at locations where strong needs and opportunities have been identified and when new funds are available to support these programs.**

These extended-campus programs must be limited to what the Kentucky Legislature is willing to fund beyond that funding required for on-campus graduate programs. Further, the programs must be limited in scope to fields that can be delivered effectively as extended-campus programs. The Dean of the Graduate School should be responsible for determining needs and interests, assessing the feasibility of programs to respond to those needs, and providing leadership in initiating such programs. The Graduate Education Committee recommends the following:

**Recommendation 3-19: The University should continue efforts in cooperative relationships with other state universities and in developing joint-degree and course work programs where feasible and mutually desirable.**

**Recommendation 3-20: The University administration must seek additional funding to permit extended-campus programs to grow as the need and opportunities increase and to avoid diminution of resources for on-campus programs.**

**Recommendation 3-21:** The Dean of the Graduate School should establish a mechanism to examine and develop solutions for educational problems related to extended-campus graduate programs across participating departments.

## **Multidisciplinary Graduate Education**

Multidisciplinary research and graduate education programs are vital for several reasons. First, an ever increasing proportion of basic research at the cutting edge of human knowledge is multidisciplinary in nature. Second, efforts to address and alleviate complex, real-world problems are dependent upon the integration of perspectives and insights from many disciplines. Finally, it is multidisciplinary research which predominantly creates the new products, processes, and materials necessary for technological advancement and economic well-being.

Several multidisciplinary programs and centers for graduate education have been established at the University of Kentucky. These may be divided into degree-granting and nondegree granting units. Historically, multidisciplinary programs have come into existence in a number of ways. Recently the Multidisciplinary Feasibility Assessment Program has provided formal support for the establishment of new programs. All programs and centers have had some, although small, general fund support, but support has come primarily from nonrecurring funds. The availability of these "soft" funds varies from year to year. Thus, in some years, minimal support and little seed money has been available to sponsor new initiatives or to develop interdisciplinary proposals. Several multidisciplinary programs that are more firmly established obtain a larger fraction of their funding from recurring general fund support. Obviously, the larger the fraction of recurring support, the greater the certainty of funding from year to year and the easier it is for units to plan and make future commitments, such as stipends for graduate students. Because traditional funding sources, such as teaching assistantships, salary savings, and return of indirect costs, are limited or unavailable to multidisciplinary programs and centers, only modest funding is available for the support of graduate students.

Faculty associated with multidisciplinary graduate education programs and centers generally have their primary appointments in traditional departments and, therefore, their participation as volunteers in multidisciplinary programs and centers receives little recognition or support in their home departments.

**Recommendation 3-22:** Efforts should be made to increase the level of certainty associated with the financial support of multidisciplinary programs for graduate education.

One mechanism by which this may be accomplished is to match the percentage of indirect costs that are traditionally returned to the departments (primary appointments) with an additional percentage to the associated multidisciplinary unit (secondary appointments), with the Vice President for Research and Graduate Studies guaranteeing a minimal level of yearly support to each unit. *This support is meant primarily to provide a firm base for attracting and supporting outstanding graduate students.*

The Graduate Education Committee further recommends the following:

**Recommendation 3-23:** Individual faculty members who hold joint appointments in multidisciplinary programs and centers should receive support, recognition, and evaluation from both their primary and secondary departments, programs, or centers.

**Recommendation 3-24:** Seed money should be provided by the University to encourage faculty to come together and develop interdisciplinary proposals and initiatives.

## SUMMARY AND CONCLUSIONS

The Graduate School at the University of Kentucky is healthy and experiencing modest growth (approximately 4500 students were enrolled in 1990/91). During the past two decades it has established a reliable and dependable mode of operation. There are approximately 1200 Graduate Faculty who are represented by a Graduate Council of 18 of their peers that meets biweekly during the academic year with the Graduate Dean to conduct the academic business of the Graduate School. The current Dean has occupied his position since 1988 and has had the opportunity to reorganize the operation of the office during the summer of 1991. This reorganization included the appointment of an additional Associate Dean and the upgrading of several of the staff positions. These actions should free the Dean to play a more active administrative/catalytic role in the oversight of Graduate Education.

There are 86 graduate program areas at the University of Kentucky, each with a designated Director of Graduate Studies. In addition to the standard doctoral and masters degrees, the University of Kentucky offers the Doctor of Education, Doctor of Musical Arts, the Specialist in Education, and 36 specialty Master's degrees. In all, 146 different degree programs are offered by the University of Kentucky.

Administratively, the graduate programs meet or exceed the requirements and regulations specified for SACS accreditation. The review and self-study of graduate education should serve primarily as a sounding board to evaluate the magnitude and future direction of graduate education at the University of Kentucky. To this end, the Graduate Education Committee restricted its comments to four general areas or issues, and in fact, even these are interdependent. Those issues are (1) Resources Related to the Support of Graduate Education, (2) Recruitment of Graduate Students, (3) Extended-Campus Graduate Programs, and (4) Multidisciplinary Graduate Education.

Many of the recommendations relate to resource allocation and concern over the fact that graduate education is expensive and currently underfunded. It is essential that competitive and high quality faculty and graduate students be supported at the highest level possible. Such support is evidenced in competitive graduate student stipends, scholarships and research support, competitive salaries for faculty, and adequate resource support to conduct research. The Graduate Faculty should be informed of and involved with decisions related to major new commitments of resources to graduate education. Greater attention needs to be given to problems related to the community of international graduate students, including assistance to enhance their English proficiency. Vigorous efforts are required to increase the number of minorities, women, and other underrepresented groups in graduate programs. Of particular concern are the current activities that will be providing extended-campus graduate programs. While the committee recognizes the academic responsibilities given to the flagship institution of the Commonwealth, it must respond to the demands for expanded extended-campus programs with restraint in order not to place greater strain on the already limited resources allotted to graduate education on the main campus. Finally, questions related to the support of multidisciplinary programs and centers are discussed. Particularly concerns are expressed over the necessary provision of some consistent base of support, for graduate student stipends.