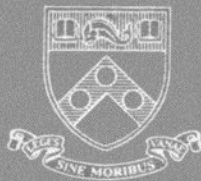


**Five Year Plan  
1987-1991**



University of Pennsylvania

**The Wharton School**

### **To the University Community:**

*The following document is the seventh in a series of School five-year plans to be published For Comment. This draft has been considered by the Academic Planning and Budget Committee, as well as by the University administration, and it will be revised periodically by the School. Readers are urged to bear in mind the University tenets on future scale, which can be found in "Choosing Penn's Future."*

*Comments concerning this draft should be sent to Dean Russell E. Palmer, at the Wharton School, 1000 Steinberg Hall-Dietrich Hall/6364.*

*—Sheldon Hackney, President*

*—Thomas Ehrlich, Provost*

## **The Wharton School Five Year Plan: 1987-1991**

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# The Wharton School

## Five Year Plan: 1987-1991

### Preface

Three years ago the Wharton School developed a Five Year Plan for Preeminence, aimed at assuring Wharton's place as the finest school of management in the world. This plan represented a collective vision, the result of meetings with faculty, students, alumni, corporate friends and staff. Each year the plan is updated, and its development and implementation follow from these guiding principles:

"Our approach is one in which we build on a foundation of outstanding scholarship in the advancement of management knowledge and the education of future management leaders, with heavy emphasis on functional training and analytical approaches. We will excel at conceptual and empirical research involving practical problems. We will also provide lifelong career assistance and education to our graduates and other selected individuals."

### Overview

In the mid-eighties we find ourselves in an exciting and extremely challenging time for the Wharton School and for management education in general. Rapid technological advances, the globalization of production and markets, and strains in the international monetary system have introduced profound changes in the world of business and industry. Thus, new needs have arisen that schools of management must meet in educating managers and leaders of the future. The focus of the Wharton School's teaching and research is to give fundamental grounding in management concepts and practice for these future business leaders. The Plan for Preeminence calls for an increasingly broadened vision of business within the total realm of society, international activities, and government relations in addition to the maintenance of the functional and disciplinary bases of business knowledge in order to enable its graduates to set the pace in today's rapidly changing world of new concepts, new tools, and new technologies. This means that we must continually strengthen both the quality and breadth of interest of our faculty and students and attract the necessary resources to meet these challenges. While performing the valuable service of clarifying the School's image and place in the field of management education, the planning process has resulted in the formulation of a comprehensive, program-specific set of expectations and strategies for achieving this vision. The pragmatic, real-world emphasis of the development process has also allowed the School to establish a budgetary plan through which Wharton's goals will be realized.

### I. Plan Development

The five-year plan emerged from studies conducted in 1982 and 1983 when groups of faculty, students, alumni, administrators, and corporate friends convened at various times to chart a course for Wharton's future. It identified ten goals which the School must meet in order to achieve its mission. Specific achievable objectives were delineated under each goal by all departments, divisions, and administrative units. Following this model, action plans are established annually with each year's accomplishments and perceived hindrances reviewed for the upcoming year's



cycle of planning and implementation. Primary objectives from the original plan and new objectives from the annual planning efforts are emphasized. These annual plans prepared by the departments, divisions, and administrative units direct efforts within the School and also provide yardsticks against which progress can be measured. Consequently, this report on Wharton's five-year plan reflects its initial implementation for the three years 1983-86 and its goals and activities for the next five years 1987-1991.

Development of the Wharton School's plan has taken place within the planning process undertaken by the University. The Wharton School shares the University's vision of collective improvement through a striving for excellence and enhanced national reputation. With the University the Wharton School "engages in planning to create an environment that supports and coordinates independent and scholarly inquiry." At the same time, the School upholds the University's established strategic aim of bringing University-wide planning to fruition by utilizing that which is Penn's special comparative advantage among great research universities—the extraordinary interaction taking place among academic programs. While each scholar and each of their respective schools reach for individual excellence, all contribute to the growth of the University. In this way many also contribute to multi-school and multidisciplinary successes.

## II. Mission and Goals

Management is the science and art of effective decision making and implementation in the context of organizations. Wharton has long been recognized as one of the finest institutions of management education. Our present mission is to assure that it is the finest school of management in the world. The role of this strategic plan is to develop a program of action through which this can be accomplished. In the past three years much has been done, but more remains for the next five years.

The generation and dissemination of management knowledge is the School's primary purpose. This involves teaching, research, service, and other leadership activities. The School builds its foundation and image on outstanding scholarship in the advancement of management knowledge and the education of future management *leaders* with heavy emphasis in the curriculum on functional training and analytical approaches. The School excels at conceptual and empirical research involving practical problems. In addition to its undergraduate and graduate courses of study, the School also provides lifetime career relevance and assistance to our graduates and other selected individuals through a variety of services and educational programs. In building on these strengths, the School will differentiate and distinguish itself from its peers among schools of management.

Clearly an excellent educational institution will consist of top-quality faculty teaching outstanding students and carrying out leading research in modern facilities supported by the necessary resources. It will build on areas of excellence, developing selected areas while consolidating, eliminating, or maintaining the others. An excellent school at a major university will foster an attitude of working together to enhance that standing both in substance and in its image portraying that substance. It will also have effective university relations.

In furtherance of these goals, the Wharton School realizes that certain general principles relating to scholarship, attitude, and resources are extremely important. As far as scholarship is concerned, Wharton's strong, diverse faculty is of primary importance if the School is to remain a place of intellectual excitement. Building up the faculty is a central concern with additions based primarily in areas of strength with some attention to a very few but key weak spots. With regard to attitude, Wharton wishes to establish a collective vision of excellence at the School and at the University generally. It intends to take an upbeat approach to achieving its own goals and to cooperating in the drive toward University goals. In the resource management area, Wharton is in a period of consolidation. Hence the School will view its activities in the light of its long range goals and will not hesitate to drop or phase out activities that do not fit with its long range goals. No future growth in enrollment is anticipated in Wharton's degree programs. The "business" of management education has become a "mature market" in recent years; after the coming inevitable shakeout, Wharton intends to hold a top position.

Finally, one caveat: Anticipating the future is a difficult task, and, as in any long-range plan of this nature, a certain amount of flexibility is implicit in the plan that will follow.

## III. The Wharton School's Approach to Education and Research

The School believes strongly in the involvement of both faculty and students in "real life" problems as well as in scholarly pursuits. The combination of the tested and the innovative, the theoretical and the practical, is a critical component of a Wharton education at the graduate and undergraduate levels, and in executive education programs. This approach is also fundamental in the work of the School's various research centers. It follows naturally from this attitude of pragmatism that the faculty of the Wharton School is committed to no single teaching methodology; faculty use lecture-recitation, seminar, case method, and field study depending on subject matter and stage of student development.

The Wharton School faculty has become noted for both the quantity and quality of its research activities. Most faculty members are devoted to both research and teaching, using their research activities to enrich their teaching both in the classroom and through student involvement in research efforts. The two functions are fundamentally joined in the School's educational philosophy. The expectation is that every Wharton faculty member will perform high quality work in each of these two activities.

In addition to the joy of discovery for its own sake and the way in which innovative research feeds into and enhances the classroom, faculty research has yet another impact: its effect upon the academic, government, and business communities. In these terms, Wharton has been remarkably successful over the past 100 years, whether judged by the opinions of its peers or by more objective measures such as citations. Research carried out in cooperation with various corporations, non-profit and government agencies, and other organizations—in addition to being an important source of revenue for the School and providing experience for faculty members—has brought substantial benefits to the participants: faculty, students, alumni, and sponsors.

In summary, in both teaching and research, the School will continue to stress the linkage between the theoretical and the practical, the classroom and the boardroom. With this approach Wharton maintains an awareness of and an ability to respond to the needs and wants of the School's various constituencies, whether they be students preparing for careers, the organizations that seek to employ them, or the School's research clients. The School views the perhaps inevitable tension that exists between a degree of "market sensitivity" and pedagogical "purity" as being both healthy and invigorating. The School's diversity is great enough to ensure a comparatively even balance between the two, and Wharton's commitment to their interaction ensures that the exchange will be mutually rewarding.

## IV. Organization

The Wharton School is composed of eleven academic departments: Accounting, Decision Sciences, Finance, Health Care Systems, Insurance, Legal Studies, Management, Marketing, Public Policy and Management, Social Systems Sciences, and Statistics. Most of these offer both undergraduate and graduate degree programs. Numbers of standing faculty by department in September 1986 are shown below.

Accounting	19	Management	31
Decision Sciences	17	Marketing	17
Finance	39	Public Policy and Management	9
Health Care Systems	3	Social Systems Sciences	7
Insurance	8	Statistics	15
Legal Studies	10		

All Wharton departments, programs, centers, and institutes report to the Dean. Additional academic administrators are the Deputy Dean for Academic Affairs, the Associate Dean for Executive Education, the Vice Deans for Undergraduate, Graduate, and Doctoral Programs and the Department Chairs. The School administers various programs, divisions, centers, and institutes performing a variety of educational and research activities and student, alumni, employee, and community service functions. Some of the centers, institutes, and programs are joint efforts with other divisions of the University. The School also offers a number of educational resources and services directly and through other parts of the University.

## Key Issues and Assumptions

### I. The Future of Management Education

It is commonly recognized that the business environment is rapidly changing. These changes are occurring in at least five broad areas: internationalization of business and industry; loss of competitive markets in manufacturing and agriculture; movement toward a larger service economy; exponential growth in high-technology; and new roles and relationships among labor, business, and government. Most large corporations in the United States are multi-national in every aspect of their operations, from financing to marketing and manufacturing. Manufacturing, in general, and agriculture, in particular, face increasingly stiff competition from international competitors and loss of national and international markets. Within the United States there is a steady movement to a greater and greater service economy. Both domestically and internationally, the growth of new technologies at an unprecedented rate is contributing to the appearance of many new firms. Finally, it is increasingly realized that labor, business, and government have many more common and complementary objectives than competing objectives.

The depth and breadth—as well as the sheer speed—of these changes will continue to present challenges for management education. Those of us providing education for future management leaders must understand how the pace of technology affects the leadership role in such areas as entrepreneurial activities, innovations, management decision processes, organizations, and operations. We must also be cognizant of the growing service industry, the increased competitive aspects in manufacturing and agriculture, and their effects on people's lives and the economy, both today and in the future. These changes will increasingly demand a greater understanding of the interrelated role of labor, business, governments, and societies in both the United States and the international arena. As business has grown and changed from local to global endeavors, so has grown its societal responsibilities. The manager today must be cognizant of how corporate actions affect and are affected by other people's cultures, beliefs, and life-styles.

In addition to instructional considerations for undergraduate and graduate students of management, the pace of this changing environment also brings about a critical demand for lifelong education and career development for those in the field. This growing need is reflected in national statistics for the past 20 years which show that programs in executive education have increased fourfold, and participants in those programs have increased sixfold. Management education now has an additional primary responsibility which has become an integral part of its central mission to educate management leaders, namely, to provide present and future graduates with lifelong support over their careers. As a result, a growing proportion of management education resources will be expended in the further development and refinement of executive and alumni education.

Most critically, these changes in the business environment demand research and new knowledge creation by an increasingly diversified faculty. It is essential to provide new opportunities for faculty growth and development in computing and information technologies, international arenas, and new disciplinary bases. Some of these opportunities will be by direct faculty self-education and research and others by the addition of outstanding new faculty with diverse capabilities and disciplinary knowledge.

### II. National Trends in Enrollment

While addressing issues related to changing curricular elements will be extremely important in successful programs of management education, equal attention must be devoted to understanding the composition of the potential student population. Over the past thirty years management education has become an increasingly important area in higher education. In 1950 less than 15% of all undergraduate degrees and 8% of all master's degrees were awarded in business. By 1982-83, 23.4% of all undergraduates received business degrees and 22.5% of all master's degrees awarded were MBA's.

However, we are now in a mature market in the "business" of management education. With this decade's decline in the number of graduating high school students, the national trend in graduates at the undergraduate level will also be downward in many institutions of higher education. This national trend may be seen in management education as well. Yet, most top-ranking schools are experiencing either increases in applicant pools or constant levels. The incentives for obtaining a business degree from a prestigious school are continually increasing. The business world, like the world of higher education, depends on a constantly renewing group of highly capable individuals, managers in the first instance and students in the latter. We project that the demand for graduates from top schools will continue, salaries will be very high, and the challenges of business careers will be even greater in the future than they have been in the past.

### III. The Wharton School Within a Competitive Business School Environment

Programs in Management Education are undergoing a strenuous test, and competition for students and faculty of the highest quality will become increasingly difficult. There is a small cadre of private business schools, Wharton (Penn), Stanford, Harvard, Chicago, Kellogg (Northwestern), Sloan (MIT), Columbia, and a few others which is striving for excellence and top ranking. While the winners and losers among all business schools are now being determined, those programs presently established as peers within a first-rate group are under extreme pressure to maintain their current status and surpass their competitors. It is likely that only two, three, or four will survive in the very top tier of management schools in this next decade. These few will attract not only the best students and faculty but also the highly competitive funds and gifts for research and teaching.

These private schools are currently devoting significant resources to their programs. For example, with a somewhat smaller faculty and much smaller student body (no undergraduates), the Harvard Business School expends approximately \$100 million annually on its programs. In these schools as well as in Wharton, more resources are being applied to the strengthening of curricular offerings, the development of research in new growth areas of management studies, the integration of computers into instruction, and the expansion of executive education. Faculties and the range of their expertise as reflected in each school's curricula will continue to determine the draw of students in an era of increasing knowledge and career specialization. Recruitment of highest quality faculty members will remain foremost, and insurance that compensation levels are high



enough to retain distinguished faculty in the face of offers from other institutions stands as perhaps the most critical factor. The table below shows that not only have we greatly increased successful recruitment from the graduates and faculties of our leading competitors but also that we have lost very few of our faculty to these same institutions.

	New Appointments—By Supplying Institutions		Resignations—By Receiving Institutions	
	FY 81,82,83	FY 84,85,86	FY 81,82,83	FY 84,85,86
Harvard	3	3	1	0
Stanford	2	5	0	0
Chicago	5	2	2	1
Northwestern	1	5	0	0
MIT	0	3	0	0
Columbia	1	4	0	2

The quality of Wharton faculty, both in terms of teaching abilities and research expertise, is excellent. The School's concern must be to ensure that this will continue to be the case.

Prior to inception and implementation of the plan, a growing discrepancy existed between faculty compensation at Wharton and that offered by institutions of comparable quality. Another compensation problem has been the widening gap between management professorial salaries and the salaries of line, staff, and research Ph.D.s in industry. Also, at the present time, the average MBA graduate's starting salary has moved up to and in the past year surpassed the average assistant professor's academic year salary at Wharton. Across the nation, as this differential has decreased between MBA and Ph.D. educational salaries, it has become more and more difficult to attract high quality young people to the Ph.D. degree. After those who have been attracted receive their doctorates, it is even more difficult to interest them in university positions, especially in fields in high demand by private industry, such as accounting, information systems, finance, and marketing. In these fields, the differential is even greater and growing. A recent survey of business schools showed the following statistics on doctoral production and corresponding academic demand for new faculty in various disciplines of business education.

**Doctoral Production 1984-85 and  
Demand for Doctorates 1985-86**

	Doctorates Granted 1985	Unfilled for 1985-86	1985-86 Openings per Business School Doctoral Graduate
Accounting	152	803	5.3
Business Law/Real Estate	9	98	10.9
Corporate Strategy/Business Policy/Business and Society	25	130	5.2
Economics	165	173	1.0
Finance	109	369	3.4
Industrial Relations	13	41	3.2
Management/Organization			
Behavior	94	283	3.0
Marketing	122	424	3.5
MIS/Computer Science	42	376	9.0
Operations Management/ Production	18	139	7.7
Operations Research/ Management Science/ Decision Science	47	137	2.9
Other/Miscellaneous	80	172	2.2
<b>Total</b>	<b>876</b>	<b>3,145</b>	<b>3.6</b>

As a result the pool of potential young faculty recruitments is being drained, further heightening the competition for young scholars among business schools. In fact, in the United States at the present time, 16% of all standing faculty business school positions are unfilled.

Over the past three years, significant Wharton resources have gone into securing new endowments and bringing salaries, incentive programs, and other benefits closer to those of our major collegiate peers as well as to offers made to new Ph.D.s by private industry. As a result of these efforts, Wharton has been able to attract and retain a group of excellent junior faculty and to increase its cadre of world-class scholars. In this time period, Wharton has hired, mostly as replacements, more than 60 new faculty. This focus on recruiting will remain essential over the next several years.

## Elements of the Plan's Strategy

### I. Faculty Recruitment and Retention

The need to increase faculty salaries is ongoing. In FY 1983 Wharton was ranked 14th out of 15 leading business schools in salary levels. Since that time we have advanced in this ranking but it is clear that we still lag far behind our two leading competitors. These market pressures will continue. Consequently it is our objective to advance and maintain academic salaries at Wharton as close to those of our top competitors as is possible within our budgets. In order to accomplish this objective, a review and a policy initiative were conducted in 1984. Salary increases are now based on merit performance in order to reward excellence and productivity in research, teaching, and service activities. Also among other efforts, we will endeavor to establish on average at least two new chaired professorships each year for the next five years, targeting endowment growth. In the past three years we have successfully established fourteen new endowed chairs. This is a considerable achievement, but we still have less than half as many as the Harvard Business School.

There is a great need to provide more research time for our young faculty. Our primary competitors, most notably Harvard, Stanford, and Chicago provide extensive summer support and reduced teaching to their assistant professors for at least three to five years after the Ph.D. This provides two benefits for them: first, the offers they make to new Ph.D.s to join their faculties are very attractive, and they therefore are able to hire some of the best graduates; and second, they accelerate the research productivity of these young people early in their careers. We also must be competitive in both of these dimensions.

To accomplish this we have raised over \$2,000,000 and established a Young Faculty Development Program in 1984 to provide salary/research supplements. These supplements—of which there are over 40—are called

Term Professorships and awarded for terms up to five years. In addition to the term professorships, it is necessary to develop the research of the faculty already here, primarily the young untenured faculty. A research fund was established in 1984 to provide summer seed money for junior faculty research and proposal development. Based on an assessment of quality and productivity in 1984 and 1985 we have seen very promising results.

Wharton's performance in the area of minority and women faculty recruitment is comparable to that of our other peer schools of management. However, we as well as our competitors are handicapped in these targeted recruitment efforts by the long-term scarcity of qualified applicants graduating with doctoral degrees in business disciplines. Nationally, this historical trend is slowly changing with regard to women, but there is little increase in the number of minority candidates for faculty positions. In spite of this, this past year we have succeeded in attracting two new black assistant professors and two new black top-level administrators. We will continue to make strong efforts in these areas.

Within an early and ongoing planning effort to augment our standing faculty, certain curricular areas have been targeted for development. Wharton is increasing its capabilities in such major growth areas as management strategy and policy, corporate finance and investments, operations management, international management, decision support systems, government/business relations, marketing and human resources. Furthermore, we are moving to eliminate our weakness in the discipline of organizational behavior caused by the losses of several key faculty members at the beginning of this decade. Over the past two years we have greatly strengthened our Accounting Department with six

outstanding appointments; we will continue to strengthen this department. This year the Management Department will make a special effort to attract several outstanding faculty in strategy/policy, organizational behavior, and international management. These appointments will put this department well on the road to top ranking also. Of our eleven departments, six are ranked among the top three business school departments in their areas and the others are in the top ten. As a mechanism to maintain top rankings and to improve the others, we have recently instituted a five-year internal and external departmental review process. To date we have reviewed four departments and are now starting on the next two.

The recent modest expansion of the Wharton Executive MBA (WEMBA) and the institution of the Lauder MBA/MA program have required additional faculty. Also, the addition of a new joint real estate major in the Management and Finance Departments and the redevelopment of our international management major across departments will require further resources. Finally, there is substantial projected growth in the area of lifelong and executive education which will require an increase in standing faculty involvement. Participation in these non-degree education programs will not take place at the expense of traditional research commitments nor traditional teaching loads, nor will there be a separate faculty for these programs; all faculty will be encouraged to participate. This commitment to lifelong education will result in the overall need for several more standing faculty as the area grows.

#### Numbers of Students/Participants By Academic Program

	FY 1986	FY 1991
Wharton Undergraduate (Students)	2,000	2,000
Other Undergraduate (Credit units)	5,300	5,600
Wharton Evening (Students)	1,400	700
MBA Regular (Students)	1,400	1,400
MBA Lauder (Students)	100	100
WEMBA (Students)	140	200
Other Graduate (Credit units)	650	700
Executive Education (Course units)	2,900	4,600
Ph.D. (Students)	400	250
<b>Student FTE per faculty</b>	<b>26</b>	<b>22</b>

At Wharton, one faculty serves the undergraduate, graduate, doctoral, and executive education divisions. Wharton's various programmatic teaching needs have been assessed not only by curricular activities but also by student enrollment per course and the subsequent teaching load per faculty member. Currently, the School's teaching load by FTE student contact is extremely high relative to our competitors and also extremely high for leading private universities. It is also high relative to the other schools within the University of Pennsylvania. At present, with only 10% of the standing faculty, Wharton registers over 25% of all student credit units at Penn. The resulting 26:1 student to faculty ratio must be reduced while we simultaneously increase our faculty FTE to meet needs in emerging areas and executive education. At this time we project our need to be approximately 198 standing faculty by the year 1991. Financial resources and university commitments do not warrant a faster or further expansion in the next five years.

#### Standing Faculty Statistics FY 87—FY 91

Full Time Equivalent Standing Faculty Needs For Support of Academic Programs*	Projected Need				
	FY 87	88	89	90	91
Undergraduate	92	92	92	92	92
MBA	70	70	70	70	70
Ph.D.	14	13	13	12	11
WEMBA	5	6	7	8	8
Executive Education	8	10	12	14	17
<b>Total Standing Faculty</b>	<b>189</b>	<b>191</b>	<b>194</b>	<b>196</b>	<b>198</b>

\* The numbers shown above for the various teaching programs are approximations which represent an estimate of the FTE's to handle the workload of the programs. The actual faculty teaching in a program will vary from year to year and will be drawn from the total Wharton faculty.

## II. Academic Programs and Students

**Undergraduate Division**—The Wharton School Undergraduate Program is ranked as the best undergraduate business program in the nation. The quality of the Wharton undergraduate student remains excellent. A major challenge for the division is to maintain and improve this quality by establishing outreach recruiting programs to top students. This process could be aided by the new curriculum initiative now underway in the College of Arts and Sciences which will serve to strengthen our already well established core tenet that the best undergraduate business education combines liberal arts and business courses of the highest quality. The Undergraduate Division has also initiated a writing program; the goal is to expand the program so that the entire curriculum will be strengthened with students taking part in a variety of educational experiences involving communication skills, throughout their four years at Penn. These skills are critical in the rapidly changing business environment facing our graduates.

Administratively, the Undergraduate Division of the Wharton School has undergone considerable reorganization over the past two years. The evening school, the Community Wharton Education Program, and the regular undergraduate program have been merged into a single division. All division staff now work with both day and evening students. This consolidation of programs will continue under the leadership of the Vice Dean for Undergraduate Studies. Attention has also been focused on increased levels of communication between the division's staff and the University's admission and placement offices. As a result of this effort, statistics on admissions and placements have improved in the last year with applications for admissions up 21% and on-campus placement interviews for Wharton students up 25%. The number of women enrolling as Wharton School majors has grown steadily, reaching one-third of the total 1986-87 incoming class. The enrollment trend for minority groups has also been upward with minority students totaling 28% of this year's class.

In order to assure that our undergraduates receive consistent good advice the Undergraduate Division began implementing a new advising system this year based on plans designed to insure that every entering student will have advising contacts with both professional and peer advisors on a regular basis. An important element of advising will be the emphasis on liberal arts as essential in a quality undergraduate business education; over half of a Wharton undergraduate's program is outside of the business program. In advising students the division will also emphasize coordinated educational relationships such as relating political science and public policy, psychology and marketing, etc. Admission standards will remain high, and the division will continue to participate actively in the recruitment and admissions process for new students targeting top high-school students and LEAD participants for special attention. The division will work to further consolidate advising and other student services for day and evening students in its newly established single administrative unit.

The Undergraduate Curriculum Committee will conduct an in-depth review of the undergraduate curriculum beginning this year to make sure it is keeping pace with the current and future business environment. A second phase of the writing program will be implemented, and a new oral communication skills program based on a pilot program conducted last year will be initiated. The division will continue to work both through the placement office and through alumni and personal contacts to develop ongoing opportunities for students to work in substantive business settings during the summer. The division will also continue to strengthen its relationships with the Undergraduate Executive Board, composed of distinguished alumni and business leaders. With help from this group, it will work to strengthen the recruiting of top prospective students.

**Graduate Division**—The Graduate Division, administering the MBA and ten joint degree programs, has undergone significant change and development over the last three years. In an effort to attract even better students, the admissions office began new initiatives which brought improved admissions performance. In FY 1986 applications grew by 18%; this growth was considerably ahead of our two primary competitors, Stanford and Harvard. For the first time applications surpassed 4,100 for an entering class size of 665. This class together with the second year students is composed of students from 46 countries. The matriculant



yield for those admitted this year was approximately 70% which is a significant increase over the previous yield rates of 64%. Furthermore, we lost less than 70 jointly admitted students to our 2 leading competitors which is one-half the experience of the previous year. The financial aid process, in terms of resources, personnel, and administrative processes, has been revamped and a subsidized loan program has been instituted. However this area continues to be a major concern from both an overall University administration as well as a competitive package standpoint. We will continue our efforts to improve the quality of the entering MBA classes and the financial aid packages available for them.

Graduate placement has been restructured under Graduate Career Development and Placement, and MBA advising has been revamped. These activities were undertaken because, in order to attract the highest quality of student, it is essential to provide excellent placements after graduation. Over the past two years, the staff has been rebuilt and enhanced, including the addition of an international placement officer. Administratively, a new placement system has been installed including bidding, calendar, and a corporate data base for the Wharton School. A co-curricular course was offered for the first time last year to address issues of self assessment, market assessment, and techniques for job search, with 600 first year students registering. During the years 1980-1984, less than 50% of students reported back on job placement. In 1986, 86% of the first year students and close to 80% of second year students reported results to the office showing, from the students' perception, a significant increase in the office's effectiveness.

The Division's ten joint degree programs—with Penn's Schools of Law, Medicine, Dental Medicine, Nursing, Veterinary Medicine, Engineering, Social Work, with Wharton's Doctoral programs, with Arts and Science in the Lauder program and with John Hopkins—have been reviewed and updated. There were a total of 79 students entering joint degree programs in 1986. A curriculum review and evaluation has also been conducted in which the focus of the MBA program was sharpened and student flexibility enhanced. The international management courses initiated via the Lauder Program are being integrated into the curriculum of all MBA students. New international management courses will be developed as the knowledge base of international management research by our faculty builds.

Two years ago, the Wharton Executive MBA (WEMBA) was integrated into the Graduate Division with the regular MBA program. Budgets have been revamped and a new planning process, procedures, and program vision have been developed. The program has grown with a new thrust in which the corporate community becomes actively involved in the process of student identification and attraction. This program, called the Wharton Fellows, now includes some 22 firms and is responsible for over 40% of the WEMBA student body.

The MBA geographic profile, shown below, has been broadened in recent years in a way that is consonant with moves made by the University at the undergraduate level. The admissions office will conduct more aggressive recruiting efforts to increase demographic penetration both nationally and internationally in the applicant pool.

#### Geographic Profile of the Entering Class—1985

Northeast	33%
New England	17%
Central Atlantic	10%
South	5%
West Coast	9%
Midwest	9%
U.S. and non-U.S. citizens living overseas	17%

We plan to significantly increase our admissions from the South, West Coast, Midwest, and certain foreign countries. The Office of Career Development and Planning (CD&P) will move forward with refinement of assistance in the career development process and in its excellent placement opportunities for students. Nearly 13,000 interviews of MBA students were conducted in CD&P's facilities during the 1985-1986 recruiting season. Over 48% of reported accepted positions resulted from on-campus interviews and another 5.8% resulted from correspondence opportunities posted in CD&P's weekly newsletter. Within the Division's administrative services, improvement of registration continues with the

implementation of a computerized system allowing students continuous updates on the availability of course selections during the registration period.

**Doctoral Programs**—Wharton Doctoral Programs are administered through the Wharton Doctoral Programs Office, the faculty Doctoral Policy Committee, and the faculty Doctoral Admissions Committee. The Doctoral Programs Office is currently evaluating all recruiting, admissions, matriculation, and financial aspects of the programs and their corresponding administrative structure and procedures. In the area of admissions, new evaluation techniques will be introduced in order to identify predictors of academic and research performance. A study has also been undertaken to identify the determinants of an applicant's decision to attend Wharton once admitted. The Programs Office will be exploring new ways to attract high-quality students and new sources of outstanding domestic students. The Programs Office has also begun to introduce new information technology into its office in order to improve administrative effectiveness and efficiency in service to the doctoral programs and its students. Finally, a project has been implemented to determine the effect of financial aid on the admissions and acceptance decisions of doctoral students. This study is also designed to determine current resources for financial aid and to set up reasonable and equitable policies for ongoing students in the relationship of those policies to the rest of the University.

Evaluation of the doctoral programs by the faculty Doctoral Policy Committee will involve several aspects of a study to be completed over the next two years. The policy committee will review departmental programs to determine the mission and objectives of each and whether the stated purpose of each respective program is in fact being accomplished. A likely outcome is that the overall size of the doctoral programs will be reduced to fit our available resources and quality goals. Course offerings and new course developments across programs in the Wharton School and the University will be reviewed to remove unwarranted redundancy, consolidate class sizes, and enhance efficiency in and coherence of the Doctoral Programs structure. Finally, Ph.D. graduates will be surveyed to determine where our Ph.D.s are going upon completion of their degrees and to what extent Wharton has successfully prepared these graduates for career entry.

### III. Research Quality and Productivity

The Wharton School is an acknowledged leader among our peer institutions in both conceptual and practical research conducted either independently or sponsored by business, government, and the private non-profit sector. At \$5.7 million in FY 1986, Wharton has significantly more sponsored research than any other comparable business school. It is becoming increasingly difficult to maintain this funding level because of significant research cut-backs in federal research support. Most of these funds flow through the School's research centers so that building on the success of these centers and ascertaining that their research and educational activities are of scholarly quality is an important element in the School's plan. In order to assure the overall quality of research carried out in centers, a faculty Research Programs Policy Committee has been established. The committee has developed guidelines and initiated a five-year periodic review schedule for all research centers/programs. The reviews of several centers began in FY 1986.

To insure the continuing and growing strengths of departmental academic research programs, often unfunded by outside sources, guidelines for departmental sharing of overhead from research grants and contracts were adopted in 1985. New steps in faculty development have been initiated and continue to be an integral aspect in advancement of the School's research productivity including: targeting recruitment of world-class scholars to endowed chairs in key disciplinary areas of marketing, accounting, finance, and management; raising the salary levels of our standing faculty; establishing a development fund for new junior faculty; and providing a program of summer research support for junior faculty. These programs have begun to yield success in achieving our goal of attracting and retaining the best faculty. They will be maintained and strengthened over the next five years.

Wharton's research priorities also involve its commitment to the value



of multi-and inter-disciplinary activities. Within Wharton itself multi-disciplinary and new disciplinary approaches are being encouraged among faculty to promote creativity within both research and teaching. This encouragement is currently manifested in several ways: multi-and inter-disciplinary research in centers, integration of new disciplines within the faculty's research and the curricula, and the recruitment of faculty with multi-disciplinary and currently underrepresented disciplinary interests. Three multi-disciplinary research centers/programs closely affiliated with Wharton activities represent joint efforts with other schools: the Center for the Study of Organizational Innovation, the Leonard Davis Institute of Health Economics, and the Transportation Program. These joint programs are a source of strength for the School and for the University as a whole, and efforts to initiate and build collaborative research will continue to be supported. Another aspect of multi-disciplinary efforts in the School is the integration of information utilization via computing throughout the curriculum and across all disciplines. A third important activity aimed at broadening disciplinary viewpoints involves internationalization of many faculty members' research and curricular offerings. Several initiatives to support faculty development in this area are part of the agenda of the faculty's International Committee. These include support for faculty sabbaticals abroad, joint international study activities with overseas colleagues, and international conferences and exchanges of students and faculty. Finally, a multi-disciplinary approach to the role of ethics and social responsibilities of business has been developed across much of our core curricular offerings and in faculty research. Faculty with backgrounds in the various functional areas of business, ethics and philosophy, social psychology, history, and legal studies are working together to enhance this area of activity.

The School's motivation in all of these efforts arises from a clear understanding that as organizations and the larger society grow ever more complex, the need for varying perspectives and insights on management derived from a broadened multi-disciplinary, multinational viewpoint will increase as well. This perspective is primary in the School's search for world-class scholars; it has resulted in the recruitment of multi-disciplinary and policy oriented senior faculty in Entrepreneurial Management and in Corporate Strategy and Policy. It is critical to the present search for a chaired professor in International Management.

#### **IV. Lifelong Education and Career Development**

Since the inception of the five-year plan in 1983, major strategic initiatives have been undertaken in the two major areas of our Lifelong Education and Career Development Program (LECD). One major component of the program is to serve our alumni in furtherance of their careers and the other is to offer executive education to selected management professionals including alumni. Lifelong education and career development for our Wharton alumni is now being implemented with short-term courses in career planning and counseling, and improved placement and re-placement opportunity programs. The concept that the formal education and career development of Wharton alumni does not stop upon graduation is key to the contemporary problem of education for our students in the face of the greatly changing business, government, and societal environments they will encounter over the forty-plus years of their working lives. During visits with 15 Wharton Alumni Clubs this program generated great enthusiasm. We believe these new developments will be a significant factor in drawing both graduate and undergraduate students to the School in the future.

The new thrust in executive education, the second major area of LECD, has been taking shape over the past three years and is now well defined. Wharton will offer very high quality programs for middle-and senior-level executives, professionals, and alumni drawn from the United States and abroad. Open enrollment and contractual programs will ultimately be housed in an on-campus facility, under a single resource organization, and will be taught primarily by standing faculty. In FY 1984, sixteen weeks of open-enrollment seminars were offered, and this number was brought to 30 weeks in FY 1985 and 42 weeks by the close of FY 1986. Contractual programs have also prospered with 43 weeks of seminars in 1986. These programs are now conducted by eight of the eleven departments of the School. Evaluations and quality control

procedures have been rigorously implemented, with review and approval of all courses by a faculty LECD Policy and Curriculum Committee.

Participation in the LECD teaching programs is not to take place at the expense of traditional research commitments nor traditional teaching loads, and to that end a balanced set of activities is being worked out with each faculty member. As far as LECD is concerned, this process will result in a roster of courses taught by standing faculty and sufficient overall expansion of faculty to meet the increased teaching load. Also, new faculty conflict of interest guidelines were established in 1984. Faculty resource allocation will continue to be assessed as the program matures.

When LECD was identified as a priority of the School it was also established that a separate facility would be essential for the program to reach its full potential. Planning for such a facility began in 1983, fund raising has been successful and is ongoing, and construction is now in progress. Completion of the LECD conference center is scheduled for October 1987. The center will offer state-of-the-art classrooms and meeting rooms along with a 100-bed living facility and other services. Wharton has taken financial responsibility for the entire amount required for the project.

#### **V. Computing Activities and Instructional Technologies**

Prior to 1983 Wharton had spent significantly less for computing and communications per student than any of its leading competitors. At that time Wharton spent only \$193 per student in comparison to an average of \$358 for the comparison groups. Since then a substantial increase in revenues has been devoted to a computing budget for research and instructional use. Significant improvements have been made in personnel, technical facilities and laboratories, hardware investments and software support, access to shared data bases, and computer courseware development. With the award of a competitive \$2 million IBM grant the School continues the development of computerization and expansion of Management of Information Systems (MOIS) content within the School's curriculum. The grant also provides increased support for faculty research and computer facilities as well as serving as a nucleus for the School's 5-year, \$16 million plan for the development of Wharton's MOIS program.

The School's computing center, Wharton Computing and Instructional Technology (WCIT), provides support for computing and communications needs in classroom teaching, for research and for certain administrative functions as well. WCIT was established in 1984 as a reorganization of separate computing and instructional technologies activities to implement the massive integration of personal computers into the daily lives of Wharton's faculty, students, and staff. In addition, the center manages large facilities and networks for primary use in research and additional instructional applications. This past year WCIT has focused on the choice and pilot installation of a data communication network; a replacement of the current mainframe DEC-10 with a VAX 8600; provision of easier access to major data bases for faculty and students; installation of a new IBM student lab and network; and upgrading of support services in academic computing and video throughout the School.

A personal computer purchasing plan for all MBA students, as well as other students, faculty, and staff, was also implemented this past year. This program came about in recognition of the tremendous importance of computers in the MBA program and the fact that incoming MBA students should now own or have access to their own personal computers. Because we cannot hope to provide the number of computers now required in the MBA program, even with considerable resources available, we are urging our graduate students to invest in a personal computer for use as students and as professionals.

Current WCIT objectives include expansion of our mainframe computing capabilities and the design and implementation of an effective planning and policy development effort for all aspects of computing service and for the School's computing network. This will be accomplished within a School-wide context and in conjunction with the University. Comprehensive and well-coordinated development of state-of-the-art computing and communications facilities, systems, and support is and will be essential to the School's international standing in both teaching and research.

## VI. Capital Development and Operating Funds

Capital development is an essential element of the Plan for Preeminence. From the inception of the Plan, great emphasis has been placed on the School's relations with its external stakeholders. Alumni, corporate executives, friends of the School, international affiliates, and other interested individuals have become involved in a broad range of activities and are now taking active roles in support of the School's goals. These efforts in conjunction with aggressive fund-raising activities are coordinated by the University's Development Office and by Wharton's Office of External Affairs whose mission is to support the School's programs in teaching, research, and executive education and represent them to external stakeholders. Through the Office of External Affairs, objectives for capital development are established and achieved thereby producing support necessary to implement the School's priorities under the Plan.

External Affairs is responsible for overall fund-raising including targeted projects for endowed chairs, faculty support and development, computerization, the LECD conference center, financial aid, research and research centers, and educational programs. Working closely with the Dean's Office, University Development, and the many volunteers now involved, External Affairs reached its fund-raising goal of \$16 million for FY 1986. A total of over \$12 million was raised in FY 1985, and since the inception of the Plan, the School has seen better than a 400% annual increase in capital growth. This has been accomplished through well-designed efforts in annual giving from Wharton graduates, from partnership contributions through corporations, and from new gifts and subscriptions.

Over the five-year period from FY 1988 to FY 1992, the Wharton School anticipates fundraising needs of at least \$150 million. These funds will be allocated roughly for new curricular and developmental needs, endowment growth for endowed chairs, faculty support and student aid, technology and facilities support and maintenance, and new research ventures.

	FY 88	FY 89	FY 90	FY 91	FY 92	Total
Discretionary Funds:	\$ 2.5m	\$ 3.0m	\$ 3.5m	\$ 4.0m	\$ 5.0m	\$ 18.0m
General Program Support:	2.5m	3.0m	3.5m	4.0m	5.0m	18.0m
Endowed Chairs and Faculty Support:	5.0m	7.0m	9.0m	11.0m	13.0m	45.0m
Financial Aid and Student Support:	1.0m	2.0m	6.0m	9.0m	12.0m	30.0m
Computing & Instructional Technology:	3.0m	3.0m	4.0m	5.0m	5.0m	20.0m
Renovation and Deferred Maintenance:	0.5m	1.0m	1.5m	2.0m	3.0m	8.0m
Research Centers and Research Support:	1.0m	2.0m	2.0m	3.0m	3.0m	11.0m
	<b>\$15.5m</b>	<b>\$21.0m</b>	<b>\$29.5m</b>	<b>\$38.0m</b>	<b>\$46.0m</b>	<b>\$150.0m</b>

The five-year budget projections of the Wharton School build on FY 1986 actual amounts as well as FY 1987 budget. These projections are concerned with all fund groups, not only current unrestricted funds. A net positive increase in the School's fund balance is shown for each fiscal year. This amount includes estimated real assets and liabilities, as well as outstanding pledges. The fund balance contributes to further endowment growth, and the School plans to contribute to the University's subvention pool in support of general University goals. These contributions are very substantial particularly when other University charges are taken into consideration.

Undergraduate, graduate, and Ph.D. tuition revenues are slated to grow at the general university rate while executive education programs will generate considerably more revenue with the completion of the new building. Sponsored research, as defined by the Office of Research Administration, will remain essentially constant over the five-year period. Gifts, both restricted and unrestricted, have hit record highs for the School in recent years. This level of activity is conservatively projected to stay constant for the next five years with the excess building endowment. Investment yield will grow as our endowment funds increase. The financial resources to attract and maintain a faculty of the highest quality are incorporated into these projections. Standing faculty

must be recruited for FY 1988 to support demand for our existing programs. An increase to 191 in FY 1988 is the major growth factor. Other categories of employees are scheduled to remain constant.

Projected Revenue & Expense—All Fund Groups						
(In Millions of Dollars)						
	FY 86	FY 87	FY 88	FY 89	FY 90	FY 91
<b>Revenue:</b>						
Undergraduate	13.2	16.1	16.9	18.1	19.4	20.7
Graduate	14.4	15.7	16.8	18.0	19.2	20.6
Executive Education	3.5	4.2	11.0	11.8	12.6	13.5
Research	8.9	8.3	8.5	8.8	9.1	9.3
Gifts	16.1	15.0	15.0	15.0	15.0	15.0
Investment Yield	3.0	3.7	4.5	5.3	6.2	7.3
Sales, Fees, & Other	5.0	5.3	5.5	5.8	6.1	6.4
<b>Total</b>	<b>64.1</b>	<b>68.3</b>	<b>78.2</b>	<b>82.8</b>	<b>87.6</b>	<b>92.8</b>
<b>Expense:</b>						
Faculty	11.6	12.3	14.3	15.3	16.2	17.2
Administration	5.1	5.4	6.0	6.3	6.6	7.0
Clerical	2.5	2.6	3.6	3.7	3.9	4.1
Part-time Support	2.2	2.3	2.4	2.5	2.6	2.7
Stipends	1.9	2.0	2.1	2.1	2.2	2.3
Employee Benefits	5.7	6.2	7.2	7.7	8.1	8.6
Current Expense	14.1	15.2	17.7	18.5	19.4	20.2
Student Aid	7.0	8.1	8.7	9.3	9.9	10.6
<b>Subtotal</b>	<b>50.1</b>	<b>54.1</b>	<b>62.0</b>	<b>65.4</b>	<b>68.9</b>	<b>72.7</b>
Net Contribution to Subvention	5.7	6.2	7.6	8.3	8.9	9.6
<b>Total Expense</b>	<b>55.8</b>	<b>60.3</b>	<b>69.6</b>	<b>73.7</b>	<b>77.8</b>	<b>82.3</b>
<b>Net Change in Fund Balance</b>	<b>8.3</b>	<b>8.0</b>	<b>8.6</b>	<b>9.1</b>	<b>9.8</b>	<b>10.5</b>
Footnotes to Projected Revenues and Expenses:						
1. Net change in fund balance resides in the restricted fund groups, primarily in the Endowment fund group						
2. Gifts include outstanding pledges of \$4.0 M as well as actual payments						
3. The Executive Education Building impacts FY 1988 and beyond in terms of:						
a. Room rental fees						
b. Current Expense includes debt service and management fees						
c. Compensation for operating staff						
d. Allocated Costs includes utilities and other items						
4. Number of faculty needed to support demand in existing programs increases						
5. Number of administration and clerical personnel remains stable						
6. Evening school program is reduced to targeted level of approximately 700 students in FY 1988						
7. Only inflationary increases are anticipated for "current expense" after FY 1988						

## Summary

With the Five Year Plan, the Wharton School has defined its mission to be that of assuring that Wharton is the finest school of management in the world. The Plan builds on a foundation dedicated to scholarship, both in the education of future management leaders and in conceptual and empirical research. The Plan also promotes lifelong education and career development as an imperative for business education at the Wharton School. While performing the valuable service of clarifying the School's image and place in the field of management education, the planning process has also resulted in the formulation of a comprehensive, program-specific set of expectations, strategies and activities for achieving this vision.

The Wharton School finds itself within a competitive business school environment with programs in management education undergoing a strenuous test in competition for students and faculty of the highest quality. The few schools who survive in the very top tier will attract not only the best students and faculty but also highly competitive funding for research and teaching. The Wharton School is meeting this challenge with accomplishments gained under the Plan's goals over the past three years and with action plans for the next five years. Through the collective vision of its faculty, students, alumni, corporate friends, and staff, the Wharton School will continue its tradition with a renewed commitment to excellence and innovation in management education within the context of the overall goals of the University of Pennsylvania of which it is an integral part.





University of Pennsylvania  
The Wharton School  
1000 Steinberg Hall-Dietrich Hall  
Philadelphia, PA 19104-6364