

Johnson Graduate School
of Management

Cornell University
Announcements
1986-87





Contents

Graduate Management Education at Cornell ▶ 4

Placement ▶ 16

Doctoral Program and Research Activities ▶ 20

Roster of Faculty Members ▶ 24

Management Curriculum ▶ 33

Instructions for Applying to the Johnson School ▶ Center

Application for Admission, Part 1 ▶ Center

Student Life ▶ 44

Admission to the Johnson School ▶ 52

Costs and Financial Aid ▶ 60

Administration and Advisory Council ▶ 66

Further Information ▶ 68

Index of Courses ▶ 72



Johnson Graduate School of Management

A

n introduction to the Johnson School

This catalog contains most of the information you will need to make a decision about applying to Cornell University's Johnson Graduate School of Management (the Johnson School, JGSM). On the pages that follow are descriptions of our M.B.A. and Ph.D. programs, placement services, faculty members, and courses, and information about student life, application procedures, and financial aid.

We hope that after reading this publication you will also better understand the particular culture and personality of the Johnson School. Each educational institution has its own special character, shaped by its past, by its self-perception, and by the people associated with it. We are no different. For the nearly forty years that we've been in operation, our educational approach has emphasized a respect for the individual goals and aspirations of students, a commitment to excellence in teaching and research, and a strong sense of community among all involved with our enterprise—students, faculty and staff members, and alumni. Those values were among the attributes that led the Johnson family of Racine, Wisconsin, to make a \$20 million endowment gift to our school in 1984, the largest single gift ever made to a business school.

Our respect for individual career aspirations is best illustrated by our flexible, open curriculum. We are well aware that our students enter with diverse backgrounds and career objectives and different levels of preparation. The program we offer builds on that diversity, so that each student's Cornell M.B.A. experience is unique. A history major interested in consumer brand management, for example, will follow a different course of study here than will an electrical engineer who plans a career in manufacturing. Yet both may take advantage of our curriculum's flexibility to obtain the maximum return from each hour in the classroom, library, case-study group, and microcomputer laboratory.

Our commitment to the individual is also evident in our approach to job placement. Instead of channeling students into preordained career niches, we encourage them to work with their academic advisers and JGSM's career counselors to develop the educational and career strategies that suit them best. Those strategies

Graduate Management Education at Cornell



Above: Sarah Hammann '86 and Bob Andolina '86 at work in the André Meyer Computing Laboratory. Opposite: Addys Gonzalez '86 and Terry Murphy '86 in front of Malott Hall. The Johnson School's unique environment is characterized by students with diverse backgrounds interacting with one another. "It's high powered, energetic, and stimulating," says Addys.



encompass classroom training, summer internships, and the identification of first-job and long-term career opportunities.

Our hand-tailored approach to education produces graduates who not only succeed but also have a high level of job satisfaction. Some of our M.B.A.'s join Wall Street investment banking firms; others work for giant multinational corporations like IBM, Procter and Gamble, and American Express. Still others manage smaller firms, head public and not-for-profit organizations, launch their own entrepreneurial ventures, or combine their business training with technical training and go on to become highly specialized consultants.

A key element of the Johnson School's special environment is a faculty that excels both in research and in teaching and whose members are genuinely interested in students.

Virtually all of our professors conduct research in their fields of expertise and publish actively. Some have acquired international reputations through their work. Associate professor of finance Maureen O'Hara, for example, was recently chosen by the American Association of University Women as the most promising young scholar of 1986. She is the first recipient of the award in a business-related field. Professor Harold Bierman, Jr., whose course Financial Policy Decisions is one of the Johnson School's more-popular

offerings, recently received the prestigious Dow Jones Award from the American Assembly of Collegiate Schools of Business for his contribution to collegiate business education. Bierman's selection put him in the company of such respected authorities on management and administration as Peter Drucker, Herbert Simon, Frederick Herzberg, and William Sharp. L. Joseph Thomas, Nicholas H. Noyes Professor of Manufacturing, received the 1985 AACSB Exxon Award for his proposal to adapt a factory-simulation model developed by professor of information systems Richard W. Conway. The model has been adopted by Hewlett Packard and General Motors and will soon be marketed nationally. An educational version is currently being distributed to universities. Professor of economics, management, and public policy Robert C. Lind was one of the thousand most-cited living economists listed in the second revised edition of *Who's Who in Economics*. Thomas R. Dyckman, associate dean for academic affairs and Ann Whitney Olin Professor of Accounting, has twice been awarded the American Institute of Certified Public Accountants' annual prize for the most significant contribution to the literature of accounting.

In the classroom our faculty members exhibit unusual skill and expertise, covering material with coherence, artistry, and diligence and making complex topics comprehensible and interesting. Those skills are especially valuable to students during the crucial first-year core courses, most of which are team taught by senior faculty members.

Our faculty prides itself on an accessibility to, and a concern for, students that even the graduates of the nation's most student-oriented liberal arts colleges find exceptional. Each fall, first-year students are surprised to discover that some professors know them by name, even before classes begin. The open-door policy is a tradition that is taken seriously at the Johnson School. Some of our faculty members have their office doors always open to students; all are available during office hours.

That accessibility and genuine concern for students as individuals as well as future managers sets the tone for the strong sense of community that envelops our school. The Johnson School is an environment in which students can take the initiative to put together colloquiums that address

Dick Conway, professor of information systems

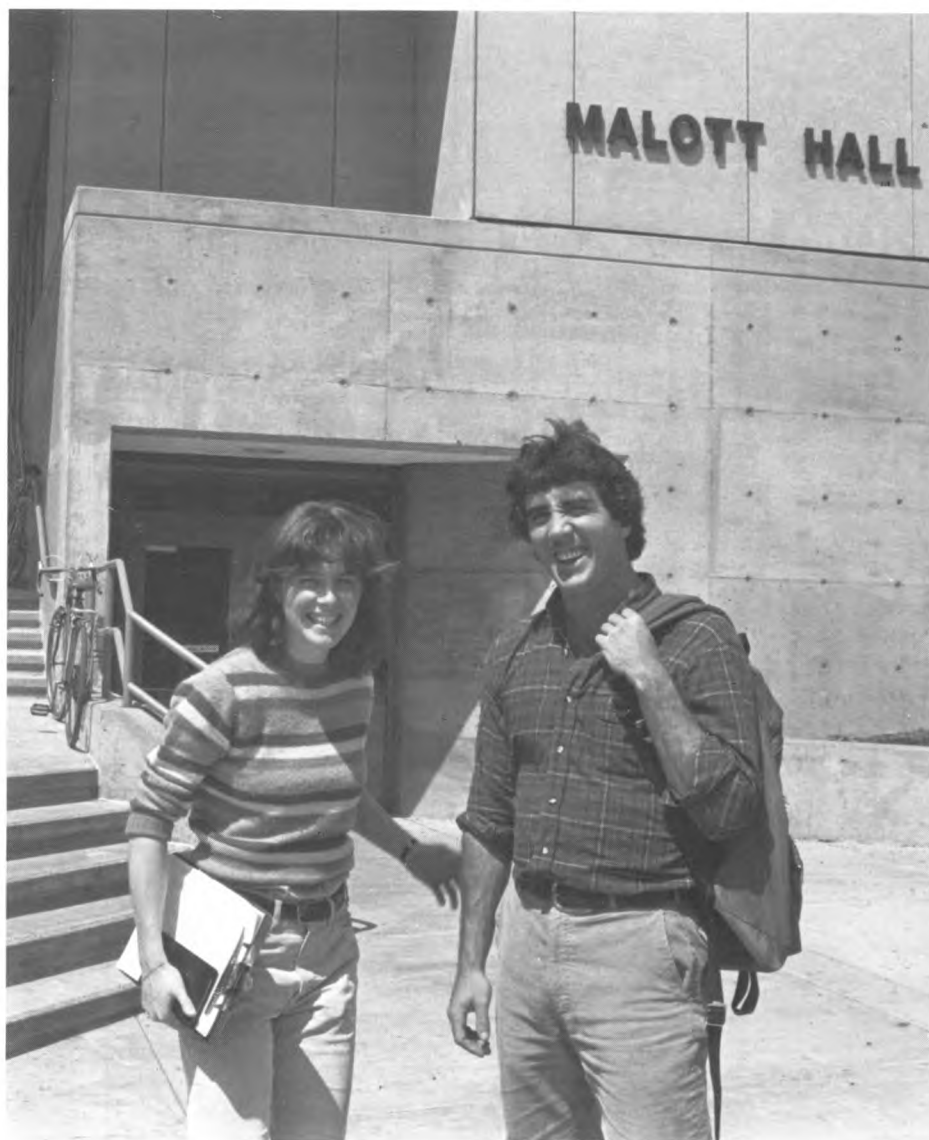


controversial issues. In 1986, for example, JGSM's Old Ezra Investment Club organized an informal question-and-answer session with former Citicorp chairman Walter Wriston in New York City. In 1985 a student group invited four faculty members with outspoken views to discuss the implications of investment in South Africa. Every seat in our largest auditorium was filled for that event, in spite of the inconvenience of the time—Friday afternoon—and the lure of the weather—a balmy spring day. The Johnson School is also an environment in which faculty members are not afraid to risk public humiliation in the ice-hockey rink in a challenge match with students or to take delight in showcasing their musical talents in our annual variety show. And it is an environment to which alumni return continually—to attend special events, to appear as guest lecturers, to recruit, or simply to visit with friends and former professors.

The sense of community at the Johnson School is perhaps best reflected in our low student drop-out rate and our high percentage of alumni who make financial contributions. Ninety-eight percent of our entering students go on to graduate. Many struggle from time to time during their two years at Malott Hall but are spurred by help, advice, and support from classmates and faculty and staff members. During the last decade the percentage of Cornell M.B.A. graduates making contributions to the Johnson School has consistently been among the very highest in the nation. We believe that that high percentage reflects in part at least the strong feelings that students develop for our school during their two years at Cornell.

The Core Courses

As a student, you will spend most of your first year building a foundation of knowledge for future, more-specialized study. The building blocks of that foundation are our core courses, listed below—courses that introduce you to a broad range of disciplines relevant to management. The demands of the core courses make the first year more intensive for most students than the second, but our graduates assure us that the skills and the knowledge they acquired during their first year at the Johnson School gave strength and substance to their M.B.A. degrees and accorded them a competitive edge in the marketplace.



► First-Year Core Courses

FIRST SEMESTER

NCC 500 Financial Accounting

NCC 501 Quantitative Methods for Management

NCC 502 Microeconomics for Management

NCC 503 Marketing Management

NCC 504 Organizational Theory and Behavior

SECOND SEMESTER

NCC 505 Macroeconomics and International Trade

NCC 506 Managerial Finance

NCC 507 Management Information Systems

NCC 508 Production and Operations Management

► Second-Year Core Courses

THIRD AND FOURTH SEMESTERS

NCC 510 Business-Government Interface

NCC 511 Business Strategy and Policy

NOTE: All students must complete the prescribed menu of courses listed above. You may take NCC 505 or NCC 508—but not both—in the third semester. Other than those, no first-year core courses may be postponed until the second year. You may take NCC 510 in the first year instead of in the second year, but you are *not* advised to do so. In the third semester NBA 564, Entrepreneurship and Enterprise, may be substituted for NCC 511. NBA 660, Strategy Implementation: Process and Politics; NBA 662, Power and Interpersonal Influence; NBA 663, Behavioral Decision Theory; or NBA 669, Organizational Theory, may be substituted for the core course NCC 504, Organizational Theory and Behavior.

The Electives

During your second year of M.B.A. studies, you design your own program of elective courses. You can make that program as broad or as narrow as you like. It may include courses from any of the Johnson School's areas—accounting, behavioral science, economics, finance, marketing, and operations management and management information systems. It may also include as many as five courses from other academic units at Cornell.

When you design your second-year program, you may choose, as many students do, to stay close to the traditional functional areas of management—accounting, finance, marketing, or operations management. For each of those areas, our faculty has developed subject-area maps to assist in course selection. There are no prescribed sequences, however. We recognize, for example, that although aspiring company controllers and investment bankers both concentrate in finance, their second-year course selections usually will be quite different.

You may choose broader areas of study—business policy, corporate planning, or general management, for example. That alternative, which is popular among more-experienced students and among those with strong technical skills, allows a sampling of the entire curriculum. It also permits you to strengthen areas of particular concern and to close gaps in your preparation.

You may design a program geared to a specific career. Such programs usually include elective courses from elsewhere in the university and demand a concrete notion of a career path. In recent years students who have chosen that route have designed programs in such areas as international agricultural development, business journalism, performing-arts management, and real-estate development.

► Accounting

Students who take courses in accounting learn how to use accounting information to make decisions and measure performance and incentives effectively. They also acquire the technical expertise necessary to prepare, analyze, and evaluate financial statements for users both within an organization and external to it.

Our accounting courses incorporate case studies and standard accounting problems. The case studies make extensive use of financial statements

that have actually been prepared and published by publicly held corporations. A typical program in accounting includes second-year courses in finance, managerial economics, and computer applications, as well as in intermediate, advanced, cost, and tax accounting.

Students who elect to concentrate in accounting usually are interested in careers in public accounting, consulting, finance, or general management. If you plan to pursue a career in professional accounting, you are advised to complete the requirements to sit for the certified public accountant (C.P.A.) examination. You can fulfill the academic requirements for the New York State C.P.A. certificate by completing the M.B.A. degree program and by meeting the following specific course and subject area requirements:

1. Finance requirement—complete nine credits in finance at the undergraduate or graduate level.
2. Economics requirement—complete nine credits in economic principles and analysis at the undergraduate or graduate level.
3. Business law requirement—complete four credits in business law from among the following courses:

NBA 560 Business Law

NBA 561 Advanced Business Law

NBA 562 An Introduction to Estate Planning

NBA 565 Law of Business Associations

4. Complete the following courses (or approved substitutes):

NBA 500 Intermediate Accounting

NBA 501 Advanced Accounting

NBA 502 Managerial Cost Accounting

NBA 504 Taxation Affecting Business and Personal Decision Making (NBA 507, Federal Income Tax, may be substituted)

NBA 505 Auditing

NBA 540 Financial Policy Decisions (NBA 506, Financial Information and Evaluation, may be substituted)



Maureen O'Hara, associate professor of finance and winner of the American Association of University Women's most-promising young scholar of 1986 award

You must plan your schedule carefully to meet C.P.A. course requirements. We urge you to seek help in doing so by consulting with members of the accounting faculty as soon as you enroll. If you elect to fulfill the academic requirements for the New York State C.P.A. certificate and have no prior work in accounting, you may be permitted to omit one core course, with the approval of the Academic Standards Committee.

► *Behavioral Science*

Corporations and other business firms are more than simply a collection of assets. Those that do well are often successful because of effective organization, which is, in turn, essential to good management. Students of behavioral science study how to manage and organize effectively by first learning how individuals and organizations behave. They address such issues as work performance and discover why it varies enormously among individuals, work groups, and entire organizations. Courses in behavioral science focus on how decisions are often influenced by conflicting motivations, limited access to information, and biases in information processing. Topics include how groups influence and constrain the behavior of individuals and how social pressures buffet individuals between loyalty to their own goals and loyalty to the goals of the group and the organization. Students also examine how organizations often create obstacles that interfere with employees' attempts to achieve organizational goals.

If behavioral science is your special interest, you may supplement JGSM courses in that area and in the related area of behavioral decision theory by choosing from a variety of courses in human-resource management offered by the School of Industrial and Labor Relations.

► *Economics*

Courses in economics prepare students for careers in economic analysis in a corporate or a public-management setting. Students are expected to develop a basic foundation in microeconomics and macroeconomics and then to develop an area of specialization. Typically that will involve taking economics courses and other related courses in the Johnson School and elsewhere in the university. For example, if you are interested in a career as an economist in a financial institution, you might combine courses

in macroeconomics, economic forecasting, and financial markets. If you are interested in production and pricing, you might combine courses on topics such as managerial economics, industrial organization (e.g., pricing and strategy), and operations management to develop a specialty in that area. If you are interested in public-policy analysis, you might develop the basic tools of economic analysis and then specialize in a policy area. Students considering focusing on economics should consult with members of the economics faculty to design a curriculum that suits their personal career objectives.

► *Finance*

If you are interested in finance, you can take several different educational routes at the Johnson School, all built on a basic knowledge of managerial finance and finance theory. If you plan to work with investments in banks, investment-banking firms, and insurance companies, you should consider taking courses in investment management, security analysis, options and commodities, financial markets, and bank management. If you are attracted to corporate finance, you may combine courses in accounting with courses in financial policy decisions, international finance, and capital budgeting.

Courses in finance give you a solid understanding of the entire field of finance. They show you the role of finance in administrative and decision-making processes and introduce you to the mechanisms and operations of the financial system and to the relationship between business and government. Our finance courses integrate the operational aspects of business and investment finance, the functions of financial institutions and capital markets, and the basic economic framework of financial organizations.

► *Marketing*

Marketing is an activity that permeates all levels of management. At a strategic level, marketing considerations help managers determine an appropriate mission for a firm. Operationally, marketing helps the firm determine the best mix of products and services to offer and shows how to identify and implement suitable combinations of marketing elements to attain the firm's objectives.

Students who take courses in marketing generally are interested in

managerial careers in consumer-goods, industrial-goods, or service-oriented firms. Our marketing courses emphasize concepts, theories, and frameworks, and tools appropriate to those elements. They show you how to formulate and carry out cohesive marketing strategies, identify new-product opportunities, predict market success, and determine pricing and advertising. They also teach you to analyze and interpret data collected for market research, develop methods and models to support marketing decisions, and apply psychological theories and concepts to the understanding of consumer behavior.

► *Operations Management and Management Information Systems*

The areas of operations management and management information systems are closely related and are currently undergoing large changes because of recent advances in computer technology that have introduced new techniques in both fields.

If you choose to study operations management, you will analyze the major economic problems of production and operations management in both the manufacturing and the service sector. You will learn how to improve productivity, establish quality control, manage production and distribution systems, and improve the return on inventory assets. The methods shown can be applied in many different settings, including small manufacturing corporations, large multilocation production and distribution systems, and service organizations such as banks and hospitals. Specific topics include project control, plant layout, warehouse and plant location, job-shop scheduling, multistage manufacturing control, and equipment selection. Students who focus on the area develop an understanding of the effectiveness and the limitations of analytical techniques in managerial decision making.

Courses in the second area, management information systems, are concerned with the effective management use of modern information systems, as well as the specification of their function. The topics emphasized include decision support systems, database management, systems analysis, distributed systems, and operational control systems. Students focusing on the area ordinarily have a significant background in the technical aspects of computing before entering the Johnson School.

Students in both areas benefit from JGSM's collaboration with the School of Operations Research and Industrial Engineering in Cornell's College of Engineering. Both schools are active in the Cornell Manufacturing Engineering and Productivity Program (COMEPP), described on page 13. If you concentrate your course work in one of the two areas, we encourage you to take courses in the other, in addition to the basic core course. We also advise you to enroll in a broad spectrum of general management courses, including electives in accounting, behavioral science, marketing, and finance, and courses offered by the Department of Computer Science and the School of Operations Research and Industrial Engineering.

Academic Requirements for the M.B.A. Degree

To earn an M.B.A. degree at Cornell, you must complete sixty credits of course work and have four semesters in residence. The only exceptions to that policy are made under the specific provisions for advanced standing, explained in this section.

To maintain satisfactory status, you must earn a grade point average of at least 2.7 each semester.

► Exemption from Core Courses

You may be exempted from taking any or all of the Johnson School's core courses by satisfactorily passing the special exemption examinations administered for those courses during registration, at the beginning of the first and second semesters.

All students admitted to the Johnson School are encouraged to take the exemption examinations for any core courses in which they feel they have sufficient competence. If you pass the examinations for the courses you want to exempt, the requirements for the courses will be waived; if you pass any of the examinations at a superior level, you will receive credit toward your degree.

If you pass an exemption examination, you may still elect to take the course for credit. If you do so, however, only a grade of *Satisfactory* or *Unsatisfactory* will be assigned.

The exemption from core courses, even with credit, does not reduce the Johnson School's four-semester residency requirement. Residency is defined as enrollment, each semester, for a minimum of twelve credits.

► Advanced Standing

As soon as you are enrolled in the Johnson School, you may qualify to receive advanced-standing credit toward a degree. You may not receive more than sixteen credits of advanced standing or one semester of residency unless you qualify under the provisions of graduate joint degree programs or the international exchange program.

The types of advanced standing and the methods for achieving it are as follows:

1. *For graduate work taken elsewhere*—In certain cases, you may receive advanced standing for graduate work satisfactorily completed elsewhere before enrollment in the Johnson School. Advanced standing may be awarded for work taken elsewhere if it is at the graduate level, that is, taken after the baccalaureate degree (or its equivalent in foreign countries), and if it is directly comparable to studies in the core courses required by the Johnson School. If you want to be considered for advanced standing, you should apply for such credit to the Office of Admissions and Student Affairs when your acceptance of admission is confirmed.
2. *For exemption examinations in core courses passed at a superior level*—Any core course may be waived by a student who passes the exemption examination for that course (see the preceding paragraphs on exemption from core courses). If you pass such an exemption examination at a level determined to be superior, you may be granted credit toward your degree in an amount equal to the credits of the course exempted. Such exemption is relatively uncommon.
3. *For courses in the Johnson School taken and passed before admission, independent of registration in joint degree programs*—You may be given advanced standing for courses that you took in the Johnson School while you were assigned special non-degree status or extramural status; you may also receive advanced standing if you were a Cornell undergraduate or graduate student enrolled in a degree program in another branch of the university.

You should resolve all questions about advanced standing before you register for the first semester.



Above: Jehan Sadat, former first lady of Egypt and the 1986 Frank Stanley Beveridge Foundation guest speaker. Opposite: Hal Bierman, Nicholas H. Noyes Professor of Business Administration and winner of the 1985 Dow Jones Award for outstanding contributions to management education.

Resources of the School

► *Eastwick Library*

Considered one of the nation's best business libraries, Malott Hall's Eastwick Library contains over 152,000 volumes and 400,000 microtexts, and subscribes to more than 1,000 periodicals. It is part of the university library system, which has combined holdings of nearly 5 million volumes. Under the leadership of the librarian, Betsy Ann Olive, Eastwick Library has built a collection that includes materials on business, accounting, behavioral decision theory, finance, marketing, operations management, information systems, economics, organizational behavior, general management, and public administration. An extensive collection of corporate annual reports provides excellent primary source material. In 1986, the library also began to provide corporate data in an optical-disk format. The library is open until midnight each day when classes are in session. A staff of eight assists students in organizing literature searches and solving bibliographic problems. In addition, the library offers a computer-assisted search service (COMPASS) to provide on-line access to bibliographic data bases, and helps students locate books in the university library system.

► *Computing Facilities*

Computing facilities at the Johnson School are excellent and are rapidly being expanded. They doubled in size in 1985. The André and Bella Meyer computing laboratories, established in 1985 and operated by the Johnson School's library, provide students with MS-DOS personal workstations. Nearly half of those workstations are new Hewlett Packard high-performance Vectras. The balance are IBM PCs. The workstations, which constitute the primary computing facility for our students, are connected to JGSM's VAX system. That complex provides access to extensive software libraries, including VAX/VMS, as well as to the MS-DOS repertoire. The Johnson School also has links with the university's central computer facility, which includes a national supercomputer center (one of only four in the nation).

► *Guest Speakers and Visitors*

Leaders in business and government play an active role at the Johnson School, helping to create a forum for ideas that invigorates our students'



educational experience. In recent years distinguished guest lecturers have included former first lady of Egypt Jehan Sadat; former chancellor of West Germany Helmut Schmidt; former secretary of state Henry Kissinger; former president of France Valéry Giscard d'Estaing; Mesa Petroleum chairman and president—and corporate raider—T. Boone Pickens; Capital Cities Communications/ABC chairman and chief executive officer Thomas S. Murphy; General Electric chairman and CEO John F. Welch, Jr.; former IBM chairman John Opel; and Du Pont chairman and CEO Edward G. Jefferson. Invited guest speakers whose talks have been a part of specific courses have included Corning Glass Works vice chairman Thomas MacAvoy and Emerson Electric chairman and CEO Charles F. Knight. J. Stanford Smith, former chairman of International Paper, and William Battle, former

chairman and CEO of Fieldcrest, were executives-in-residence.

► *Administrative Science Quarterly*

The Johnson School publishes *Administrative Science Quarterly* (ASQ), which is the premier journal in the field of organizational behavior and theory and is rated among the best journals in the areas of policy, public administration, and general management. Founded at our school in 1956, ASQ has grown to be an internationally respected scholarly journal, publishing articles on such topics as power, decision making, group dynamics, strategy, organizations and their environments, and the birth and death of organizational populations.

University Resources

Cornell University opened its doors in 1868 with a mission clearly enunciated by its founder, Ezra Cornell: "I would found an institution where any person can find instruction in any study." Ezra Cornell's commitment to educational access and diversity became his legacy to American higher education. Today that legacy is reflected in Cornell's truly amazing curricular breadth and intellectual scope. On its Ithaca campus the university has eleven schools and colleges. Its scholars and teachers work on the frontiers of knowledge in fields as diverse as biotechnology, computer graphics, quantum physics, industrial relations, and hotel management. To ensure that our students make full use of the university's vast academic resources, the Johnson School encourages interdisciplinary study and interacts with the university in a variety of ways.

► *Interdisciplinary Study*

Doctoral candidates at the Johnson School regularly take courses offered by other colleges and departments, and that opportunity is available to you as an M.B.A. student as well. You may take up to fifteen credits—about five of the twenty courses required for an M.B.A. degree—outside JGSM.

Advisers from the faculty, the Office of Career Services, and the Office of Admissions and Student Affairs are available to help you make the most of Cornell's academic resources or even create your own concentration or subconcentration with a mixture of courses taken both inside and outside the Johnson School. Every year adventuresome students sample an amazing variety of courses within the university curriculum—in agriculture, in law, in city and regional planning, and in the arts and sciences.

Some university course offerings hold special relevance for M.B.A. students. If you are interested in manufacturing, for example, you may choose to take advantage of Cornell's internationally recognized program in operations research and industrial engineering in the College of Engineering. If you are interested in human-resource management or industrial relations, you may enroll in courses in the School of Industrial and Labor Relations, just across the street from Malott Hall. That school boasts one of the nation's premier faculties in the fields of labor relations, personnel, and organizational behavior. If you are

interested in international management, you may take advantage of the fact that nearly all of Cornell's schools and colleges offer courses that pertain to international studies. Information on appropriate courses is available from the Center for International Studies, 170 Uris Hall, and the Johnson School's International Business Association. A brochure, *Cornell Resources in International Business and Management*, distributed by the Office of Admissions and Student Affairs, Johnson Graduate School of Management, Malott Hall, Ithaca, New York 14853-4201, is also available, as are the brochures *Cornell Programs and Resources in Manufacturing Management*, *Cornell Programs on Japanese Business*, and *Sloan Program in Health Services Administration at Cornell*.

Three other fields at Cornell that feature courses of interest to M.B.A. students are health-services administration, real estate, and agribusiness. In the College of Human Ecology, graduate-level courses in health administration are offered by the Department of Human Service Studies. JGSM also offers several courses in health administration: NBA 684, Health-Services Organization and Financing, and NBA 685, Health and Welfare Policy Analysis. Specialized courses in real estate are offered by the College of Architecture, Art, and Planning, the School of Hotel Administration, and the Law School. The College of Agriculture and Life Sciences offers courses relevant to M.B.A. students interested in the latest issues in agribusiness. The Johnson School's registrar can provide a listing of courses in all of those areas as well as informal student evaluations of their relevance to management studies.

► *Johnson Distinguished Lecture Series*

Each year six of Cornell's most notable teachers and scholars participate in the Johnson Distinguished Lecture Series, a program designed to expose M.B.A. students to the intellectual richness of the university. In the series Cornell's internationally known experts discuss the future developments in their fields that will affect the managerial careers of Johnson School students. The speakers for 1985-86 included professor of astronomy Carl Sagan, on the planetary perspective; professor of psychology James B. Maas, on the psychology of leadership and mind control; professor of electrical



Above: Valéry Giscard d'Estaing, former president of France and the 1985 Frank Stanley Beveridge Foundation guest speaker. Opposite: John Elliott, associate professor of accounting, speaks out at a doctoral seminar.

engineering Edward D. Wolf, on submicron research; professor of history Michael Kammen, on the cultural history of American business; provost Robert Barker, on future developments in biotechnology; and professor of human development and family studies Urie Bronfenbrenner, on the future of the family.

► *Adjunct Cornell Faculty Members*

During the past few years the Johnson School has enriched its curriculum beyond the basic management sciences by inviting noted professors from Cornell's other schools and departments to design and offer courses for M.B.A. students. Such courses have included Business in Japan, taught by professor of government T. J. Pempel, former director of Cornell's China-Japan Program; and Law of Mergers and Acquisitions, taught by associate professor of law Dale A. Oesterle.

► *Cornell Manufacturing Engineering and Productivity Program*

The Cornell Manufacturing Engineering and Productivity Program (COMEPP) is a cooperative program of Cornell's College of Engineering and the Johnson School that focuses attention on manufacturing and productivity issues. COMEPP makes use of the teaching and research talents of the faculty in both units and is considered one of the strongest programs of its kind in the nation. Of the Johnson School faculty, Dean Curtis W. Tarr and Professors Richard W. Conway, L. Joseph Thomas, John O. McClain, and Elliott N. Weiss are members of the program. Students who concentrate in manufacturing management work with those professors to combine management and engineering electives.

► *Program on Science, Technology, and Society*

The Program on Science, Technology, and Society (STS) addresses how science, technology, and political and social institutions interact. Courses in the program draw on resources throughout the university, and the views of various academic disciplines are synthesized and contrasted with one another. Topics of special concern include science, technology, and public policy; biology and society; citizen participation in technical decision making; arms control and national defense policies; environmental policy

and ethics; biomedical ethics; practices and operations of research universities in the United States; toxicology and public policy; and comparative public law.

STS does not accept students for advanced degrees. Rather, the program cooperates with the Johnson School and other units at Cornell to develop courses and promote research on science, technology, and social policy. Faculty members affiliated with STS are also members of such graduate fields of study as city and regional planning, ecology, engineering, government, philosophy, sociology, and toxicology. Students may undertake research and course work in the area of science, technology, and society within those and other fields. Further information may be obtained from the Program on Science, Technology, and Society, Cornell University, 632 Clark Hall, Ithaca, New York 14853-2501.

► *Programs on Japanese Business*

Recognizing Japan's increasing importance to the United States, both as a trading partner and as a competitor in business, the Johnson School offers two programs to help future international managers develop Japanese language skills. In the first, qualified students obtain both an M.B.A. degree and an M.A. degree in Asian studies; that three-year option includes participation in intensive Japanese

language courses—part of Cornell's renowned FALCON (Full-Year Asian Language Concentration) program—and a summer internship in Japan. In the second, students complete a two-year M.B.A. program with a concentration in Japanese business; a summer of FALCON courses in Japanese, Japanese language courses throughout the year, and a summer internship in Japan are integrated into the M.B.A. curriculum. Cornell M.B.A. students in the program have worked in Tokyo with the Industrial Bank of Japan, Nippon Telegraph and Telephone, Mobil Sekiyu Kabushiki Gaisha, Nippon Steel, and the Chase Manhattan Bank.

Both programs are funded by the Japan–United States Friendship Commission, and special financial aid is available for students enrolled in either program. Further information on the programs is available from the Office of Admissions and Student Affairs, Johnson Graduate School of Management, Cornell University, 314 Malott Hall, Ithaca, New York 14853-4201, and the Department of Asian Studies, Cornell University, 388 Rockefeller Hall, Ithaca, New York 14853-2502.



► *Graduate Joint Degree Programs*

The Johnson School, in conjunction with other Cornell academic units, offers three additional joint degree programs at the graduate level:

1. *Joint Law/M.B.A. Program*—The Johnson School offers a combined program with the Law School in legal and administrative studies, in which students may obtain an M.B.A. degree together with a Doctor of Law degree in four years instead of the five that would be required if each were taken separately. That combination generally interests students preparing for careers in such areas as tax accounting and law, corporation law, or legal practice in government.

You may begin the program in either school; the first year's work is taken entirely within one school and the second year's entirely within the other. In the third year, the work typically is divided between the two schools, and in the fourth year it is taken entirely within the Law School. Typically you would complete the requirements for the master's degree at the end of the third year and the requirements for the law degree at the end of the fourth.

To enter the full combined program, you usually must apply to both schools for admission and must be accepted by each school's admission committee. If you decide to apply for the program after

starting your studies at the Johnson School, you should discuss your plans with both schools as soon as possible; until you are accepted by both schools, we cannot guarantee that you will be permitted to undertake the combined program.

2. *Joint M.Eng./M.B.A. Program*—The Johnson School offers a five-semester joint degree program with the College of Engineering. To obtain an M.Eng. degree and an M.B.A. degree, you must complete three semesters at the Johnson School and two at the College of Engineering, but you may take either course of study first. You also must complete all core-course requirements and earn at least fifteen credits in electives at the Johnson School. To qualify for the program you must apply for admission to both the Johnson School and the College of Engineering and must be accepted by both schools independently. Once admitted, you are assigned two advisers, one from the Johnson School and one from the College of Engineering, to assist you in assembling an appropriate course of study.
3. *Individual Joint Program*—An individual program combining study for an M.B.A. degree at the Johnson School with study for an additional graduate degree in a field other than management can be arranged in consultation with advisers from the Johnson School. You are free to take graduate-level courses in any unit of the university. Furthermore, since most of the courses taken during your second year at the Johnson School are electives, there is ample opportunity for study in other areas. To pursue a master's-degree program in management in combination with study in another field, you must apply to both the Johnson School and the unit that administers the other graduate degree. You must be accepted in each program independently and be registered in each division. Credit for courses taken in one school while you are registered in another, however, may be applicable toward both degrees. In that way, the time required to complete two advanced-degree programs can be reduced. Students have recently designed such individualized programs to earn a second degree in city and regional planning, hotel administration, and international development.

► *Undergraduate Joint Degree Programs*

If you are a Cornell undergraduate interested in combining your undergraduate studies with an M.B.A. program, you may want to enroll in one of the two programs listed below.

1. *Five-Year Bachelor's/M.B.A. Program*—Highly qualified Cornell undergraduates may combine their undergraduate program with graduate study at the Johnson School. Students in such a joint degree program generally receive a bachelor's degree after four years of study and a master's degree from the Johnson School after the fifth year of study, rather than after the sixth year. To be admitted to a joint degree program, you must be a particularly promising candidate. Once admitted, you must plan your course schedule carefully to integrate the two degree programs successfully. Cornellians interested in applying for admission to the program are advised to discuss their plans with a staff member of the Johnson School's Office of Admissions and Student Affairs and to apply formally during the winter of their junior year.
2. *Six-Year B.S./M.Eng./M.B.A. Program*—The Johnson School offers a combined program for undergraduates in the College of Engineering. The program provides Cornell students an opportunity to obtain Bachelor of Science and Master of Engineering degrees in five years and to complete the M.B.A. program in one additional year. To be admitted to the full joint degree program, you must meet the admission requirements of both the College of Engineering and the Johnson School. You should apply to both units during your junior year, and you must be accepted by each before you may enter the program.

Opportunities for Overseas Experience

Over the last several years, the Johnson School's faculty has become increasingly committed to providing opportunities for overseas experience to students interested in international management. In addition to the programs on Japanese business described on page 13, JGSM participates in two formal student exchange programs—one with universities in Belgium and one with a school in England—and with the help



of the Center for International Studies, arranges summer internships abroad for M.B.A. students.

► *Exchange Program
with Belgian Universities*

The Johnson School exchange program with two universities in Louvain, Belgium, was inaugurated in 1969. Each year nine JGSM students may study for either a Licence or a Maitrice degree at the Institut d'Administration et de Gestion at the Université catholique de Louvain or study for an M.B.A. degree in the Department of Applied Economics in the Katholieke Universiteit te Leuven, a course of study offered in English. Similarly, graduate students from both Belgian universities may come to the Johnson School for master's work. Participating Belgian degree candidates are called Deneffe scholars, in memory of Paul Deneffe of Louvain, who taught at Cornell in 1968. The Université catholique de Louvain pays the tuition and fees and offers a stipend for two JGSM students, and our school similarly sponsors two of its students; Katholieke Universiteit te Leuven pays the tuition and fees and offers a stipend for one Johnson School student, and our school similarly sponsors one of its students.

The Belgian exchange program is open to all Johnson School students. Most applicants choose to enroll because they are interested in international business or international development. You may take the one-year program either after completing your master's-degree program or, more typically, after completing your first year of studies at the Johnson School. In the latter case, you return to JGSM for one additional term of study after the year abroad. Before beginning work at either Belgian university, you are urged to take an intensive French course in Europe during the summer. Candidate selection for the program is based on motivation for studying and living abroad, academic standing, and language ability.

► *Exchange Program
with London Business School*

In 1982 the Johnson School initiated a one-semester exchange program with the London Business School. If you enroll in the program, you spend the fall semester of your second year in London and graduate from the Johnson School the following spring. Students participating in the program pay Cornell tuition. Selection for the program is competitive.

► *International Internships*

The Johnson School's Office of Career Services, our International Business Association, and the university's Center for International Studies all provide networks for first-year students who want to spend a summer working overseas. In recent years those contacts have produced rewarding internship experiences in Venezuela, South Korea, Switzerland, Australia, West Germany, England, Belgium, France, and the Netherlands.

Student Entrepreneurial Ventures

Each year, there are Johnson School students who, in addition to their studies, start and manage their own successful entrepreneurial ventures. Those ventures provide them with skills and experience that often have proved invaluable later in their careers. The ventures have ranged from the predictable—designing and marketing Johnson School ties, mugs, and sweatshirts—to the unusual—for example, running a summer clamming operation. One student supplemented her income by operating her own graphic-design business. Another took a semester off to launch a word-processing business that she continued to manage after returning to school.

Student Agencies—a student-run organization associated with Cornell—provides start-up capital to small student-owned businesses. The organization and the Johnson School jointly award a fellowship every three

years to an incoming JGSM student. The student to whom the fellowship is awarded earns an M.B.A. degree in three, rather than two, years and manages the Student Agencies' venture fund part-time during those years.

The JGSM course NBA 565, Entrepreneurship and Enterprise, is now taken by nearly half of the Johnson School's students. A prominent entrepreneur and Cornell alumnus, Christopher B. Hemmeter, recently established an annual prize of \$5,000 for the best business plan presented by students enrolled in the course.

The following is a list of some of the entrepreneurial ventures our students have been involved in in recent years:

- Wordservice (word processing and duplication), Cortland, New York
- Custom Designs Construction (renovation and landscaping), Ithaca, New York
- Commercial Clammer (clamming operation), Beach Haven, New Jersey
- Compusoft (software and hardware peripherals marketing), Endwell, New York
- Computer Architects (microcomputer and related peripherals), Ithaca, New York
- RLS '85 (sportswear designing and marketing), Ithaca, New York
- HRM (human-resource-management consulting for small businesses), Ithaca, New York



A

n Overview of Career Services at JGSM

The Johnson School's Office of Career Services provides you with the tools and opportunities you'll need to obtain the right employment—positions in which you'll really put to use your skills, experience, and education. In terms of placement services, you should view your two years at the Johnson School as four distinct semesters, each with its own objective.

During your first semester, the Office of Career Services offers workshops on résumé writing and interview skills. You'll have the opportunity to hear corporate recruiters in fields such as investment banking and consulting discuss job-search strategies and interview techniques.

Your second semester is your opportunity to explore summer employment possibilities in your chosen field. In 1986, the office arranged for over 130 summer internships for JGSM students. Because summer jobs are pivotal for students making career shifts, the office is committed to increasing the number and diversity of summer employment opportunities.

You can begin interviewing for full-time positions during your third semester. The office tries to ensure that companies making offers in the fall allow you until the end of March in your final semester to make your job choice. That enables you to interview with all the companies recruiting during the spring.

In your final semester, you may want to schedule interviews on campus with additional firms. The office also provides individual counseling to assist you in fine-tuning your job search and in deciding which offer to accept.

In addition, throughout the academic year senior speakers from diverse companies will address career choices in finance, marketing, operations, consulting, and international business, as part of JGSM's revamped Management Forum, described on page 51. Combined with company presentations, those talks will give you insight into functional disciplines and career choices.

The Office of Career Services also sponsors a series of job fairs in New York City and Boston and on the West Coast. Over a hundred firms are represented at those fairs. Many firms that do not interview on campus use the fairs as a way to meet with students and select them for additional job opportunities.

Placement



Above: Neal Shear '78, a principal with Morgan Stanley and Company, on the trading floor. **Opposite:** Emily Scott '83, vice president—international with Shearson Lehman Brothers. Emily, who hopes her ambitions will take her to the top, recalls struggling with core courses as a student but acknowledges, "I really learned something."

FRIDAY, MARCH 10, 1985
SHARES ALREADY OWNED BY THE PURCHASER
REPRESENTS 65.7 PC OF THE 5,219,119
OUTSTANDING SHARES OF CHICAGO PNEUMATIC
-0- 8 54 AM EST 3-21-85

WIDE-LEAD NEWS JET



Summer Internships

Each summer students who have completed their first year at the Johnson School take jobs in areas related to their interests. Our goal is to ensure employment for everyone who desires it.

To assist students with their search for summer work, the Johnson School has developed a major outreach program. The program makes use of the support of individual alumni and JGSM clubs in various cities to locate summer positions for JGSM students.

Additionally, each spring the Office of Career Services obtains commitments to support summer internships from a large and growing number of firms.

Of particular pride is JGSM's growing portfolio of international job opportunities. During the summer of 1985, one student developed a risk-evaluation model for capital expenditures for Westrail in Australia. Another student, working for Citicorp in Zurich, Switzerland, helped develop staffing and coordination for financial control among ten countries. In Korea, a student working for Lucky-Goldstar Group was involved with export marketing and production planning and control. And in Saltillo, Mexico, a student working for CIFUNSA—Mexico completed a financial analysis for the organization's operating groups.

Those internships and others like them have given our students head starts in their careers. They also have

helped students test potential areas of interest and sometimes change their career plans as a result.

The following is a selected list of firms that provided summer internships in 1985 and 1986:

MARKETING

American Express Company
Apple Computer
BBDO Promotions
Exxon Corporation
General Foods Corporation
H. J. Heinz Company
Hewlett Packard Company
Johnson and Johnson
Baby Products
S. C. Johnson and Son
Lehn and Fink
Nabisco Brands
Pet
Procter and Gamble Company
Richardson-Vicks
3M Corporation
Time

INVESTMENT BANKING/VENTURE CAPITAL

Donaldson, Lufkin and
Jenrette
Drexel Burnham and
Lambert
First Boston
General Atlantic
Horsley, Keogh and
Associates
Lord, Abbett and
Company
Mentor Financial Group
Merrill Lynch and
Company
Prudential-Bache
Securities
Salomon Brothers
Travelers Corporation

COMMERCIAL BANKING

Bank of New York
Bankers Trust Company
Chase Manhattan Bank,
N.A.
Chemical Bank
Citibank, N.A.
First National Bank of
Chicago
Manufacturers Hanover
Marine Midland
Morgan Guaranty Trust
Company
Toronto Dominion Bank

FINANCE AND ACCOUNTING

Aetna Life and Casualty
Air Products and
Chemicals
American Airlines
AT and T
Communications
Bristol-Myers Company
CBS
Coopers and Lybrand
Cushman and Wakefield
Data General
Emerson Electric
Company
IBM Corporation
Eli Lilly and Company
NCR Corporation
Paine Webber Group
Peat Marwick
Price-Waterhouse and
Company
Xerox Corporation

INTERNATIONAL

Apple de Mexico
Chase Manhattan—Japan
CIFUNSA—Mexico
Cigarrera la Moderna—
Mexico
Citicorp—London
Citicorp—Switzerland
Exxon Benelux
Organization—
Netherlands
Hospitaux au Ministre des
Affaires locales—
France
Lazard Brothers and
Company—England

Lucky-Goldstar Group—

Korea
Nippon Steel—Japan
Nippon Telegraph and
Telephone—Japan
Parmeko PLC—United
Kingdom
Raychem—England
Standard Chartered
Bank—Belgium
Transport and
International Pool—
Netherlands
Westrail—Australia

Second-Year Placement

About 150 organizations interview JGSM students on the Cornell campus each year. They include *Fortune* 500 companies, major banks, consulting firms, and investment banks.

About 80 percent of the job offers that students receive begin with on-campus interviews. Because of the large numbers of recruiters, interviews take place during both the third and the final semester; most activity occurs in the final semester. The Johnson School's priority bidding system ensures that all students have the opportunity to interview with the organizations that most interest them. The average number of interviews for each graduating student in 1986 was eighteen.

The Office of Career Services works closely with student clubs to arrange for career-oriented panels, colloquiums, talks, and presentations. It also invites

Class of 1986 Statistics

PLACEMENT SUMMARY

	1985	1986
Number of students	240	210
Mean salary accepted	\$36,434	\$39,460
Increase over previous year	6.0%	8.3%
Minimum salary accepted (in U.S.)	\$24,500	\$24,000
Maximum salary accepted (in U.S.)	\$65,000	\$60,000
Companies conducting on-campus interviews	140	140
Average interviews per person	14.9	18.4
Average offers per person	2.6	3.4

PREVIOUS WORK EXPERIENCE

Number of Years	Percentage of Respondents	Mean	Range
Less than two years	36.5	\$39,389	\$24,500—\$55,000
Two to four years	45.2	39,410	24,000— 55,000
More than four years	18.3	39,725	27,500— 60,000

UNDERGRADUATE DEGREES

Degree	Percentage of Respondents	Mean	Range
Business	25.0	\$40,750	\$24,500—\$55,000
Economics	14.4	37,666	30,000— 50,000
Engineering	24.0	39,678	33,000— 47,000
Humanities	9.6	38,950	24,000— 54,000
Physical sciences and mathematics	8.7	38,311	34,000— 42,000
Social sciences (excluding economics)	7.7	41,972	29,000— 60,000
Other	10.6	39,922	35,000— 53,000

SALARIES BY GEOGRAPHIC LOCATION

Location	Percentage of Respondents	Mean	Range
Midwest	8.1	\$39,500	\$37,000—\$41,000
Northeast	70.7	41,041	28,000— 60,000
South-Southwest	7.1	36,700	33,000— 39,000
West and Rocky Mountains	14.1	34,250	24,000— 40,000

alumni and other business executives to come to the Johnson School and provide students with additional career insights and contacts. You will find that particularly helpful if your interests lie slightly off the beaten track. The office maintains a special list for students of alumni who have volunteered to help with career counseling. The alumni network helps you locate jobs in diverse geographic locations and in small and large businesses.

Placement statistics for the class of 1986, based on a survey with a 60 percent response rate, are given in the table below. Each graduate had an average of three job offers. The highest salary awarded to a graduate of the class of 1986 was \$60,000. Many of the students stated that they valued job satisfaction more than a high salary and did not accept their highest offer. Among the most-popular fields in which they *did* accept jobs were commercial banking, consulting, and investment banking. The top functional areas were marketing (19%), consulting (11.5%), investment banking and investment management (11.5%), and commercial banking (9.8%).

A more-complete placement statistics summary for the 1986 class will be mailed on request if you write to Office of Career Services, Johnson Graduate School of Management, Cornell University, Malott Hall, Ithaca, New York 14853-4201.

The following is a selected list of the firms that interview at the Johnson School:

Aetna Life and Casualty
Air Products and Chemicals
Allied Corporation
American Airlines
American Can Company
American Cyanamid
American Express Company
American Management Systems
Analog Devices
Arthur Andersen and Company
Elizabeth Arden
J. Aron and Company
AT and T Communications
Bank of America
Bank of New York
Bank of Nova Scotia
Bankers Trust Company
Beecham Products
Benton and Bowles
Best Foods (CPC International)
Bristol-Myers Company
Campbell Soup Company
Chase Manhattan Bank, N.A.
Chemical Bank
Chevron
Citibank, N.A.
Connecticut Mutual Life Insurance
Connecticut National Bank
Container Corporation of America
Continental Grain Corporation
Coopers and Lybrand
Cornell University Auditor's Office
Cornell University Endowed Accounting Department

Corning Glass Works
Cresap, McCormick and Paget
Data General
Senn Delaney Management Consultants
Deloitte Haskins and Sells
Digital Equipment Corporation
Donaldson, Lufkin and Jenrette
Drexel Burnham Lambert
Dun and Bradstreet Corporation
Eastern Savings and Loan Association
Emerson Electric Company
Ernst and Whinney
Exxon Corporation
Fidelity Management and Research
First National Bank of Chicago
Ford Motor Company
R. T. French
Frito-Lay
GenCorp
General Atlantic
General Electric Company
General Foods Corporation
General Instrument Corporation
General Mills
Glenbrook Laboratories
Goldman, Sachs and Company
Grey Advertising
GTE Service Corporation
John Hancock Companies
Hewitt Associates
Hewlett Packard
IBM Corporation
Irving Trust Company
S. C. Johnson and Son

Johnson Camping
Lehn and Fink
Eli Lilly and Company
T. J. Lipton
Liquid Air Corporation
Lord, Abbett and Company
Lutron Electronics
McKinsey and Company
M and T Bank
Manufacturers Hanover
Marine Midland
Massachusetts Mutual Life Insurance Company
Mead Johnson and Company
Mellon Bank
Merck and Company
Merrill Lynch and Company
Metropolitan Life Insurance Company
Mobil Oil Corporation
Morgan Guaranty Trust Company
Nabisco Brands
NCR Corporation
New York Telephone
Northwestern Mutual
Occidental Chemical
P. A. Computers
Peat Marwick
Pepsi-Cola Company
Perkin-Elmer Corporation
Pet
Peterson and Company
Pfizer
Port Authority of New York and New Jersey
Price Waterhouse and Company
Procter and Gamble Company
Prudential-Bache Securities
Prudential Insurance Company of America
Prudential Realty Group
Paul Revere Insurance Company
Richardson-Vicks

Rochester Telephone
Rogers Corporation
Salomon Brothers
Schlumberger
Scott Paper Company
Joseph E. Seagrams and Sons
Shearson Lehman Brothers
Smith Barney, Harris Upham
Soabar
Sony Corporation of America
Sparkomatic Corporation
Sun Company
Supermarkets General
Swiss Bank
Teachers Insurance and Annuity Association
Techint
Texaco
Texas Instruments
Timken Company
Toronto Dominion Bank
Towers, Perrin, Forster and Crosby
Travelers Corporation
TRW
United Health Systems
United Research
United States Environmental Protection Agency
United States General Accounting Office
Vartyper
Weiss, Peck and Greer
Westvaco
Kurt J. Wittek Associates
World Bank
Xerox Corporation
Arthur Young and Company

SALARIES BY INDUSTRY

Industry	Percentage of Respondents	Mean	Range
Nonmanufacturing			
Advertising	3.6	\$38,000	\$32,000–\$44,000
Commercial banking	23.6	42,653	35,000– 55,000
Communications	3.6	36,700	36,000– 37,400
Insurance	3.6	39,750	38,000– 41,500
Investment banking	23.6	47,808	40,000– 60,000
Management consulting	16.4	40,199	33,000– 55,000
Public accounting	10.9	28,583	24,000– 33,000
Real estate	5.4	39,333	35,000– 45,000
Other	9.3	43,500	33,000– 54,000
Manufacturing			
Chemicals, pharmaceuticals	12.5	39,667	37,000– 42,000
Electronics	27.1	38,144	33,000– 42,000
Energy	8.3	38,725	35,300– 42,600
Food products	18.8	39,222	34,000– 43,000
Household products	14.6	39,843	37,400– 42,500
Industrial products	8.3	39,500	38,000– 42,000
Machinery	2.1	—	60,000
Other	8.3	37,438	37,000– 38,750

SALARIES BY JOB FUNCTION

Function	Percentage of Respondents	Mean	Range
Accounting	10.6	\$30,164	\$24,000–\$39,000
Commercial banking	9.8	43,063	35,000– 55,000
Consulting	11.5	41,770	25,500– 55,000
General management	9.6	39,200	30,000– 60,000
Human resources	1.9	38,500	35,000– 42,000
Investment banking	4.8	48,500	40,000– 60,000
Investment management	6.7	41,643	38,000– 50,000
Marketing	19.2	39,115	33,000– 44,000
Operations/production	6.7	40,014	38,000– 42,600
Real-estate management	3.1	43,333	38,000– 47,000
Sales and trading	6.7	49,214	45,000– 55,000
Other	7.5	41,147	36,000– 54,000

Doctoral Program and Research Activities



Above: Dick Wittink, professor of marketing and quantitative methods and director of the doctoral program. Opposite: Betsy Ann Olive, librarian, and Don Schnedeker, associate librarian. "One of the accomplishments I'm proudest of," says Betsy Ann, "is helping to create what is now one of the nation's best business libraries."

D

Doctoral Program

Our doctoral program in management provides education and training for students who want to pursue academic careers in research and teaching. The program is tailored to individual needs, interests, and backgrounds. Doctoral students select a major field of interest and two minor subjects from related areas. They must obtain substantial knowledge of at least one discipline that is central to their major field of interest.

Because the program prepares students for careers that require intensive research activities, students commonly are assigned to faculty members to assist with, and to learn about, ongoing research projects. Participating in joint research projects with faculty members and with other doctoral candidates benefits students in several ways: it fosters close interaction between students and faculty members, and it allows students to evaluate critically the theoretical and empirical foundations of the field of management and to help build new foundations.

► Requirements

When you enroll in the doctoral program, the director of the program assembles for you a temporary committee of faculty members. Those faculty members have interests similar to your expressed interests, which aids them in helping you plan an effective program of study. Ultimately, usually during the second year of study, you assemble your own Special Committee of at least three faculty members, who direct the dissertation research and help you plan the course work for the remainder of the program.

A comprehensive examination is given on the major and minor subject areas after you have had adequate preparation, ordinarily after you have completed four terms of residence if you have a master's degree and six terms if you have a bachelor's degree. The comprehensive examination is always given in two parts, one written and one oral. A thesis is required, and you prepare it under the direction of the chairperson of the Special Committee. After your manuscript has been approved in substance by the Special Committee, you are given an oral thesis examination.

The thesis typically takes one full year of work. Hence, if you have a master's degree, you should expect to complete the doctoral degree program in three years, and if you have a bachelor's degree, you should expect to complete the program in four years.



The requirements for the Ph.D. degree are established and administered by the Graduate School of Cornell University. For more information you should obtain the *Announcement of the Graduate School* by writing to Graduate School, Cornell University, Sage Graduate Center, Ithaca, New York 14853-6201. You may also want to look at *Doctoral Program in Management*, a separate booklet containing information on the Johnson School's doctoral program. It is available from the director of the doctoral program, Johnson Graduate School of Management, Cornell University, Malott Hall, Ithaca, New York 14853-4201.

► Major and Minor Subjects

Doctoral study in the Field of Management emphasizes applied areas of research. Solving applied problems requires a strong background in a disciplinary field. Doctoral graduates who have such a background are able to engage in scholarly research throughout their careers. To help you acquire a strong background in a discipline and in an applied area, fields of study are segregated into two groups: *Group I—disciplinary areas* relevant to managerial problems, and *Group II—areas of application*.

You must select your major field from the subject areas in Group I or Group II, listed below. Usually the first minor must be selected from the group not used for the major. For example, if you

select a major subject in Group II, you may want to take a first minor in a basic discipline offered in another field of the Graduate School. That is permitted whenever the proposed minor is a basic discipline related to your major subject. Also, if you select a major subject from Group I, you may want to take your first minor in an applied subject offered in another field. That is also permitted if you can demonstrate that the choice is relevant to your career objectives. The director of the doctoral program must approve all substitutions for the areas in Group I and II, however.

The first minor must be relatively extensive and must demand a level of competence equivalent to that demanded by majors. The second minor may be selected from the subjects listed below or from another field. If the first minor is taken at the Johnson School, you may take the second minor outside our school, provided that the second minor is relevant to the program.

If you are pursuing an advanced degree and choose to major in a field other than management, you may minor in the Field of Management, provided that you have sufficient preparation to do the graduate work involved. At least fifteen credits for course work are usually required of students who minor in the field, depending on whether they are candidates for a master's degree or a Ph.D. degree, and depending on the extent of their prior preparation.

A short description of the major subjects in the Field of Management follows:

GROUP I *Behavioral science* uses methods from the social and behavioral sciences to study human activity in organizational settings. Systematic observation, theoretical analysis, and empirical investigation are stressed. If you choose to study in this area, you may specialize in either behavioral decision theory or organizational behavior; you should already have had a fundamental grounding in at least one of the basic behavioral disciplines. Some of the course work is taken in the Departments of Psychology, Sociology, and Rural Sociology, and the School of Industrial and Labor Relations.

Managerial economics concentrates on economic analysis for decision making in management. You may study the problems of a total economy, of industries, or of a firm. You may concentrate on such topics as international economics, economic development, competitive strategy, econometrics, or business-government

relations. If you choose this area, you should have a thorough grasp of relevant economic theory and institutions and a basic understanding of both qualitative and quantitative analysis. Some of the course work in the area is normally taken in the Departments of Economics and Agricultural Economics.

Quantitative analysis for administration shows how to use mathematical and statistical tools and computer technology to resolve managerial problems. A high level of mathematical competence is an essential requirement for study in this area. Some of the course work is taken in the School of Operations Research and Industrial Engineering (College of Engineering) and the Departments of Economic and Social Statistics (School of Industrial and Labor Relations), Computer Science (College of Engineering), and Economics and Mathematics (College of Arts and Sciences).

GROUP II *Accounting* shows how to use financial data to enable management to control and plan the development of the enterprise and to enable others to appraise its condition.

Business and public policy involves the study of the relationship among individuals, business firms, and government in the United States and abroad. If you choose this area, you should have a substantial knowledge of the political and economic background of public policy.

Finance includes theoretical and empirical studies of the financial functions that are present in modern economies. Among the subjects studied are the methods that corporations and others use to allocate capital among projects and to raise funds from financial institutions or financial markets, and the operations of those institutions and markets. Included are the behavior of investment bankers and market makers; the operational and informational efficiency of financial markets; the pricing of debt, stock, options, futures, and other financial instruments; and the effects of financial decisions and structure on the value of corporations. Some prior training in economic theory, mathematics, or statistics is helpful, as those disciplines are used extensively.

Marketing is concerned with the effective and efficient matching of demand and supply. It provides the tools to assess market demand for existing



and new products and services and to match the appropriate products with well-defined target markets. Areas of study range from work at the individual-consumer level to analysis and modeling of the effects of market actions at various levels of aggregation.

Production and operations management and management information systems emphasize the study of quantitative methods of analysis, including the use of the computer, in solving major economic decision problems involved in the operation of large organizations. Typical problems are scheduling production, managing complex distribution systems, choosing locations for production facilities, and maintaining the quality of physical goods and services. Some of the course work may be taken in the College of Engineering's School of Operations Research and Industrial Engineering.

► *Placement of Graduates*

Recent graduates of the doctoral program have accepted teaching positions at major colleges and universities, including the University of Alberta; the University of British Columbia; the University of California, Berkeley; Carnegie-Mellon University; the University of Chicago; City University of New York; Duke University; Harvard University; the University of Illinois; Indiana University; Northwestern University; Ohio State University; the University of Oregon; the University of Texas; the University of Toronto; the University of Washington; and the University of Wisconsin.

► *Application, Admission, and Financial Assistance*

Application for admission to the doctoral program should be made on the forms of the Graduate School of Cornell University and submitted to the Graduate School, Cornell University, Sage Graduate Center, Ithaca, New York 14853-6201. If you intend to major in the Field of Management, you should indicate that on your application.

Eligibility for admission is determined by your academic record, the suitability of prior work for the intended program, career objectives, test scores, and the opinions expressed in the letters of recommendation that you present. Many applicants to the doctoral program have master's degrees, but a previous master's degree is not required. If you are trained in disciplines other than management—

physics, mathematics, engineering, economics, or psychology, for example—we especially encourage you to apply.

All applicants, whether from the United States or abroad, are required to take either the Graduate Record Examinations (aptitude test) or the Graduate Management Admission Test. In addition, if your native language is not English, you must take the Test of English as a Foreign Language unless you have completed at least one year of full-time study at an American university at the time you apply. Those tests are given several times a year in the United States and abroad. For information about the examinations, write to the Educational Testing Service, Princeton, New Jersey 08540.

The Johnson School has funds available to support doctoral students through fellowships and assistantships. They are awarded on a competitive basis to both new and continuing students; renewals are based on performance. Support will continue for three to four years based on satisfactory progress, as evaluated by your Special Committee. Typically, students with master's degrees are supported for three years, and students with undergraduate degrees for four years. Support is also available for students pursuing their degrees during the summer. In addition to the fellowships and assistantships offered by the Johnson School, a few university fellowships and scholarships are available and are awarded in a general competition that closes on January 15. Applicants interested in fellowships should apply by that time.

Research Activities

Our faculty members conduct theoretical and empirical studies of private and public organizations. Through their theoretical research they aim to develop new theories or broaden existing theories of managerial and economic behavior and decision making. Through their empirical research they abstract management problems and develop analytical or behavioral models to describe or solve the problems. They also test and validate models in relation to empirical data. That approach not only breaks new ground in management research but also provides a foundation for research theory.

Past projects at the Johnson School included a large-scale analysis of how accounting information affects stock

prices and decision making; a study of the effects of inflation on the behavior of security prices; an experimental and financial evaluation of alternative pricing systems on the use of electric energy; a study of the price-quality relationship; an inquiry into the processes of subjective evaluation of multi-attributed decision alternatives; and an analysis of methods of dealing with multi-item, multi-echelon, and multi-location production-distribution systems.

Currently our faculty members are involved in the following research topics: the development of capital budgeting in both business and government; the economic impact of pension accounting; the factors influencing direct foreign investments; economic and behavioral analysis of the effects of advertising; alternative approaches to market segmentation; the use of Universal Product Code scanner data to determine marketing programs; efficient capital markets; the economics of the energy industry; strategic-entry deterrents; the determinants of new-firm start-ups; organizational structure; the development of interactive graphical computer systems for the design and operation of manufacturing facilities; and the integration and use of findings from the behavioral sciences in organizational activity.

Our school maintains close associations with Cornell offices and departments concerned with social and organizational research. We encourage doctoral students to take advantage of courses offered through other departments and schools, particularly the Departments of Psychology, Economics, Agricultural Economics, and Mathematics, and the Schools of Operations Research and Industrial Engineering, and Industrial and Labor Relations.



ur faculty members received their doctoral training at some of the most-prestigious business schools in the country—for example, at Stanford, the University of Chicago, Yale, the Wharton School, Carnegie-Mellon, Massachusetts Institute of Technology, the University of Rochester, Northwestern University, the University of Michigan, and the Johnson School. Excellent teachers as well as researchers, they keep abreast of current research concerns in each other's fields of interest through weekly workshops and through joint projects. They also stay in touch with managerial concerns through consulting assignments with *Fortune* 500 companies, entrepreneurial firms, and federal and state government agencies and through classroom exchanges with executives in our school's Executive Development Program. Their doors are open to students, and they are often a resource for sound career advice as well as expertise on managerial issues. A faculty roster with biographical sketches follows.

► Full-Time Faculty

Mitchel Y. Abolafia, Ph.D. (State University of New York at Stony Brook), Assistant Professor of Organizational Behavior

Professor Abolafia's teaching interests are in organizational theory and strategy and interorganizational relations. Recently his research has focused on self-regulation in the financial and scientific communities and behavioral models of market crises. Other research areas include intergovernmental coordination and the social correlates of seismic hazards.

Philip C. Anderson, Ph.D. (Columbia), Assistant Professor of Organizational Behavior

Professor Anderson's interests are in organizational theory and strategy, management of innovation, and entrepreneurial behavior. His research focuses on patterns of technological change, organizational and industrial evolution, and strategic adaptation to changing environments. Other research areas include measurement of birth and death phenomena, timing of innovations, and turnover in top management teams.

Roger M. Battistella, Ph.D. (Michigan), Professor of Health Policy and Management

Professor Battistella is principally interested in public-policy issues involving the organization, financing,

Roster of Faculty Members



Above: Sy Smidt, Nicholas H. Noyes Professor of Economics and Finance, teaches students how to evaluate capital-investment projects. **Opposite: Tom Dyckman, Ann Whitney Olin Professor of Accounting and associate dean for academic affairs**: "At the Johnson School there is a tremendous respect for individuals. Students are important people and are treated as such."



Journal of Acco



In Recognition of the
Contribution

of
Thomas R. Dyckman

an
Distinguished Visiting Faculty

with
American Accounting Association

Doctoral Consortium

Frederic, Ontario

August 1984

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Thomas
Dyckman

Financial Accounting and Reporting:
A Systems Approach

THOMAS
DYCKMAN

ACCOUNTING II

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and delivery of health and welfare services in the United States and other highly developed countries. He has written about health affairs, regional and comprehensive health planning, and medical sociology. He is a seminar chairman in the university's Health Executive Development Program and is active as a consultant to the federal department of Health and Human Services, to state and local government bodies, and to the World Bank. Professor Battistella will be on sabbatical leave during the 1986 spring semester.

Barry L. Bayus, Ph.D. (Wharton School, Pennsylvania), Assistant Professor of Marketing

Professor Bayus's teaching and research interests are in the areas of market research, advertising, and the dynamic modeling of marketing phenomena. His research has focused on measuring and evaluating the impacts of marketing resources, investigating the power of word-of-mouth advertising, modeling the effect of corporate communications on reputations, and examining the link between marketing and manufacturing. He has consulted for several government and commercial organizations and was a member of the corporate operations research group at RCA.

David BenDaniel, Ph.D.

(Massachusetts Institute of Technology), Don and Margi Berens Professor of Entrepreneurship
Professor BenDaniel holds degrees in physics and engineering. He has been a visiting fellow at Harvard's Graduate School of Business Administration. In addition to his teaching and research, he is active in investing venture capital. He held a senior vice presidency in Textron Corporation's American research and development division and a group vice presidency in Exxon Enterprises' advanced energy and technology components division. He started and managed General Electric's technical ventures operation. Recently he was cited by *Physics Today* magazine as a nationally known physicist-entrepreneur. He has also been featured in articles in *Fortune*, *Business Week*, and other magazines for his entrepreneurial activities.

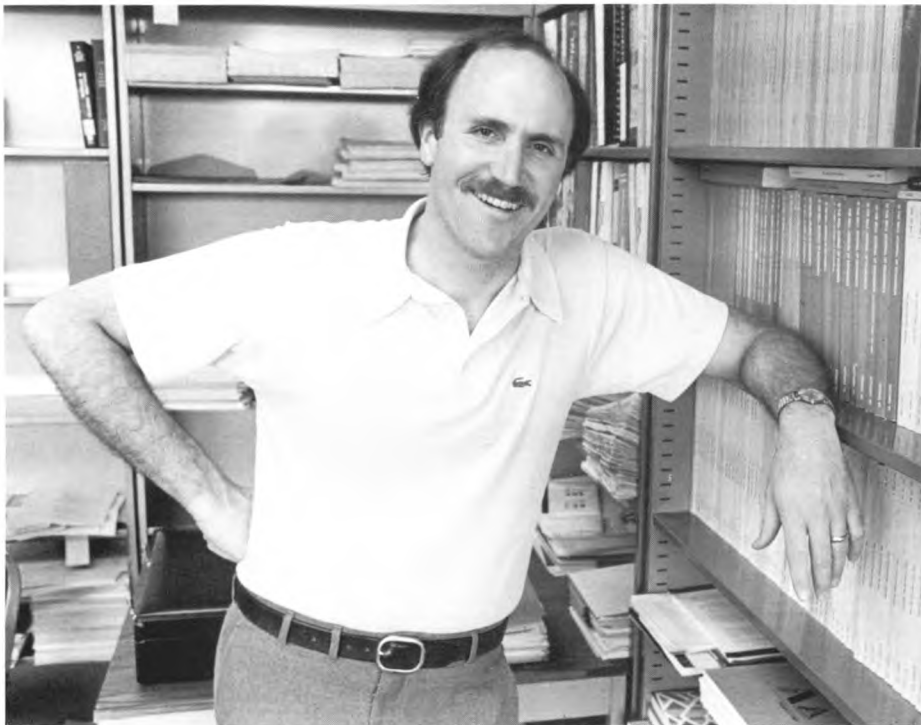
Fredrick T. Bent, Ph.D. (Chicago),

Associate Professor of Public Management, Coordinator of International Programs
Professor Bent's chief interest is international comparative administration. He has taught at the American University of Beirut and at Middle East Technical University in Ankara. He has served as acting editor of *Administrative Science Quarterly*, associate director of Cornell's Center for International Studies, and an adviser to the governments of Bahrain, Lebanon, and Kuwait. Professor Bent will be on sabbatical leave during the 1987 spring semester.

Harold Bierman, Jr., Ph.D.

(Michigan), Nicholas H. Noyes Professor of Business Administration
Professor Bierman's interests are in corporate investment, financial policy decisions, and business strategy. He has consulted for public organizations and industrial firms and is the author of more than one hundred books and articles in the fields of accounting, finance, investment taxation, and quantitative analysis. He is the market-planning and strategy-formulation coordinator of the Johnson School's Executive Development Program. In 1985 he was named the winner of the American Assembly of Collegiate Schools of Business's prestigious Dow Jones Award, for his outstanding contributions to collegiate management education.

Ron Hilton, associate professor of accounting



Joseph B. Bugliari, J.D. (Cornell), Professor of Agricultural and Business Law

Professor Bugliari has been an associate with a law firm in New York City, an assistant to an associate justice of the Appellate Division of the New York State Supreme Court, and director of legal services for Cornell University. He is interested in the law pertaining to farming operations, business associations, taxation, estate planning, and the hospital care area. He is currently serving as dean of the University Faculty.

Louis Kuo Chi Chan, Ph.D. (Rochester), Assistant Professor of Finance

Fields included in Professor Chan's research interests are capital market and portfolio theory and macroeconomics. Other interests include applications of econometrics and time-series analysis to economics and finance. He has taught courses in economics, finance, and applied statistics.

Richard W. Conway, Ph.D. (Cornell), Professor of Information Systems
Professor Conway is concerned with computer use in planning, communication, and control. His research includes work in the mathematical theory of scheduling, the methodology of simulation, and the development of programming environments, English-language database systems, and office workstations. He is the originator of the XCELL Factory Modelling System. He has been the project director of the Cornell PL/I Project (PL/C, PL/CT), used in more than 250 universities, and has been responsible for the design and implementation of industrial systems for scheduling, factory design, inventory control, order processing, and medical billing, and for communication and personal-filing systems for office principals. He has served as chairman of the university's Department of Computer Science and as director of Cornell Computer Services and has done extensive consulting on information systems and operations-research problems in industry.

Patrick DeGraba, Ph.D. (Wharton School, Pennsylvania), Assistant Professor of Economics
Professor DeGraba's teaching interests are in industrial organization and microeconomic theory. He has

conducted research on the effects of price restrictions on competition between local and national firms and on oligopolistic market behavior. He has taught both microeconomics and macroeconomics at the Wharton School, University of Pennsylvania. He is a recipient of the GEICO Achievement Award in economics and has consulted for Econsult Corporation, in Philadelphia. His research interests include collusive behavior and game theory, predatory behavior, and models of product differentiation.

Thomas R. Dyckman, Ph.D. (Michigan), Ann Whitney Olin Professor of Accounting, Associate Dean for Academic Affairs

Accounting, statistics, and quantitative approaches to decision making are Professor Dyckman's fields of interest. His publications have dealt with such topics as econometric models of the automobile industry, accounting theory, the investment decision, the effects of alternative accounting techniques on management decisions, the behavioral effects of accounting reports, the economic consequences of accounting policy decisions, statistical cost-control techniques, bond refunding, capital markets, utility theory, and statistical techniques. He is currently engaged in research on issues associated with normative and descriptive decision making in accounting.

John A. Elliott, Ph.D. (Cornell), C.P.A., Associate Professor of Accounting

Professor Elliott teaches the core accounting course, auditing, and federal income tax policy and procedures. His published research has focused on audit opinions and security price behavior, insider trading and information events, and the effects of SFAS2. He is currently investigating what determines an organization's choice of accounting methods.

Edward S. Flash, Jr., Ph.D. (Cornell), Associate Professor of Public Management

Professor Flash's teaching and research focus on urban government and on the development and implementation of public policy at national, state, and local levels. He has written on the knowledge-power relationship between the president and the Council of Economic Advisers and is currently preparing a public administration text. He has conducted research on political and administrative aspects of British water

resources reorganization, intergovernmental strategies, and decision making. Professor Flash is an experienced public servant, having served and consulted with a number of federal and local government agencies.

John Freeman, Ph.D. (North Carolina at Chapel Hill), Professor of Organizational Behavior, Editor of *Administrative Science Quarterly*

Professor Freeman's interests are in organizational behavior, organizational theory, methodology, population ecology, and military sociology. He came to the Johnson School from the University of California, Berkeley, where he was a professor in the School of Business Administration. He served for several years on the editorial board of the Johnson School's *Administrative Science Quarterly*, the premier journal in the field of organizational behavior, before being named editor, in September 1985. He is perhaps best known for developing a population-ecology model of organizations that has had a major influence on the field of organizational behavior. *Organizational Ecology*, a book he wrote with Michael Hannan, is being published by Harvard University Press.

Jerome E. Hass, Ph.D. (Carnegie-Mellon), Professor of Managerial Economics and Finance

Professor Hass's fields of interest are energy economics, finance, and the economics of regulation. His publications have dealt with such topics as transfer pricing, capital budgeting, the pricing of natural gas and electricity, financing the energy industry, natural-resource allocation, and the theory of merger and acquisition decisions. He was chief of the Division of Economic Studies at the Federal Power Commission in 1976-77 and has been a consultant to a number of organizations, including the Executive Office of the President, the Department of Energy, the New York State Public Service Commission, the Environmental Protection Agency, the Brookings Institution, the American Enterprise Institute, the United States Congressional Office of Technology Assessment, and numerous corporations. He is a special consultant for National Economic Research Associates.

Richard A. Highfield, Ph.D. (Chicago), Assistant Professor of Economics

Professor Highfield was director of management studies at the University of San Francisco before pursuing his doctoral degree in economics at the University of Chicago, where he also was a lecturer in economics. A member of the American Statistical Association and the Econometric Society, he has been a financial analyst for Stanford University and a marketing representative for the Burroughs Corporation. His doctoral dissertation was on developing methods for improving forecasts through economic theory.

Ronald W. Hilton, Ph.D. (Ohio State), Associate Professor of Accounting

Professor Hilton's interests are in financial and managerial accounting and in quantitative methods. His current research focuses on issues in the economic theory of information and incentive systems.



Above: George Oldfield, professor of economics and finance.

Opposite, top: Fred Bent, associate professor of public management and JGSM's coordinator of international programs. Opposite, bottom: David BenDaniel, Don and Margi Berens Professor of Entrepreneurship.

Robert A. Jarrow, Ph.D. (Massachusetts Institute of Technology), Associate Professor of Economics and Finance

Professor Jarrow's teaching and research interests involve the study of economic theory under uncertainty. He is interested in capital-market theory, general equilibrium theory, and game theory. He is currently engaged in theoretical research relating to the pricing of securities in the capital markets. He is a graduate faculty representative in two fields, management and applied mathematics.

David M. Krackhardt, Ph.D. (California, Irvine), Assistant Professor of Organizational Behavior

Professor Krackhardt's interests lie in studying social networks in organizations. His research has focused on the effect of such networks on employees' attitudes and behavior, on the power they accrue, and on the functioning of the organization as a whole. Other research areas include employee turnover, decision theory, and the development of descriptive nonparametric statistics.

Robert C. Lind, Ph.D. (Stanford), Professor of Economics, Management, and Public Policy

Professor Lind's major interests are the analysis of public investment and economic policy decisions. He also has a major interest in the relationship between government and business and

its implications for corporate strategy. His publications range from theoretical papers dealing with the social rate of discount, uncertainty in public-sector decision making, and the theory of rents, to policy-oriented papers on energy, natural resources, criminal justice, and land use. His current research is on national economic policy and on how business, government, and public policy influence one another. Professor Lind has consulted widely for both public and private organizations. He was recently named in *Who's Who in Economics* as one of the thousand most-cited living economists.

Alan K. McAdams, Ph.D. (Stanford), Associate Professor of Managerial Economics

Professor McAdams's interests and publications are in managerial economics and in business-government relations. He has served as a senior staff economist with the president's Council of Economic Advisers and as a consultant and expert witness for the government in *United States v. I.B.M.* He has been a consultant to industry and the Ford Foundation.

John O. McClain, Ph.D. (Yale), Professor of Quantitative Analysis
Professor McClain is studying the application of quantitative methods to managerial problems. His interests are in applying operations-research techniques to the design and operation of health-care delivery systems and in resolving operational problems in production and inventory control.

Dale Morse, Ph.D. (Stanford), Associate Professor of Accounting
Professor Morse's primary interests are in financial accounting, finance, and information economics. He is currently working on the topic of private information in a market setting. His research findings have been published in the *Rand Journal of Economics*, the *Accounting Review*, and other scholarly journals in his field.

Maureen O'Hara, Ph.D. (Northwestern), Associate Professor of Finance

Professor O'Hara's research and teaching interests are financial institutions and monetary economics, particularly the structure of the securities market. She is currently examining the role of the block trader in the process of price adjustment. Professor O'Hara has also consulted for the Federal Savings and Loan Insurance Corporation on default-prevention

National Bureau of Standards. His research centers on decision making and decision aiding for managers and consumers. His published work has dealt with advertising, consumer-information aids, decision strategies, memory for events, methodology, and product knowledge. Currently he is working on a book on the behavioral aspects of decision making. He was an associate professor at the University of Chicago and taught at the University of California, San Diego.

Wayne H. Shaw, Ph.D. (Texas at Austin), C.P.A., Assistant Professor of Accounting

Professor Shaw's primary research and teaching interests are in financial accounting and federal income taxation. He is currently examining the impact of changes in corporate tax law on the security-market valuation of firms. He was a tax-law specialist for A. M. Pullen and Company as well as for the Internal Revenue Service and taught taxation and financial accounting at the University of Texas at Austin. He has received numerous fellowships and awards, including the Ernst and Whinney Doctoral Dissertation Fellowship and several awards for outstanding teaching.

Seymour Smidt, Ph.D. (Chicago), Nicholas H. Noyes Professor of Economics and Finance

Professor Smidt's main interests are in the areas of finance and managerial

economics. He has written books on capital budgeting and statistical decision theory. He has also conducted research on the stock market, on commodity futures markets, and on electric-rate regulation. He has served as director of the Johnson School's research program on agricultural industries, as chief of party to the Johnson School's project at Middle East Technical University in Ankara, and as associate director of the Securities and Exchange Commission's Institutional Investor Study. He was mayor of the Village of Lansing, New York, for six years.

Robert H. Smiley, Ph.D. (Stanford), Professor of Economics and Policy

Professor Smiley's research and teaching interests are in the fields of microeconomics, energy economics, industrial organization, and public-policy analysis. His current research projects include competitive strategy, energy economics, and the economics of regulation.

Curtis W. Tarr, Ph.D. (Stanford), Dean of the Johnson Graduate School of Management, Professor of Management

Curtis W. Tarr assumed the deanship at the Johnson School in July 1984. Throughout his career Dean Tarr has held positions of managerial leadership in higher education, government, and business. He holds an A.B. degree in economics and a Ph.D. degree in American history from Stanford University, as well as an M.B.A. degree from Harvard University, where he also taught briefly. He was president of Lawrence University in Appleton, Wisconsin, from 1963 to 1969. Following that, he served as assistant secretary of the air force, director of selective service, and under secretary of state, in Washington, D.C. In 1973 Tarr left government service for Deere and Company, the Moline, Illinois, farm and construction equipment manufacturing firm. During his ten years with Deere he was vice president for overseas development, vice president for parts distribution and materials management, and vice president for management development. He is the author of numerous publications on such diverse topics as economic history, foreign and military affairs, production management, and agriculture. He holds honorary degrees from five colleges and universities and has been a director of many business, civic, and educational organizations and a member of high-level government commissions.

Below: Dean Curtis Tarr teaching his course, *The Professional Manager at Work*. Opposite, top: Ned Flash, associate professor of public management. Opposite, bottom: Levent Orman, associate professor of information systems.



Richard H. Thaler, Ph.D. (Rochester), Professor of Economics and Behavioral Science

Professor Thaler's research is on the border between microeconomics and cognitive psychology. He has developed descriptive models of the decision-making process in which the usual economic assumption of complete rationality is relaxed. Those models have been used to study various applied problems, including saving behavior and optimal pricing of consumer products, and such public-policy questions as the value of saving lives. His courses combine economics and psychology. In the recent past he has taught the core course on microeconomics, courses on pricing and strategy and behavioral decision theory, and a doctoral seminar on psychology and economics. Before joining JGSM, Professor Thaler taught at the University of Rochester's Graduate School of Management.

L. Joseph Thomas, Ph.D. (Yale), Nicholas H. Noyes Professor of Manufacturing, Director of the Executive Development Program
Professor Thomas specializes in operations research. His teaching interests are production, inventory, distribution management, and quantitative analysis. His publications have dealt with inventory management, forecasting, material-requirements planning systems, and the effect of marketing decisions on production planning. He has consulted for, and been involved in management education programs for, several companies. His current research interests involve mathematical models for managing complex production-distribution systems.

Elliott N. Weiss, Ph.D. (Wharton School, Pennsylvania), Assistant Professor of Operations Management
Professor Weiss's research interests are in applying the methodology and techniques of operations research in the public and private sectors. His recent research has been on the solution of large-scale production scheduling and inventory-planning problems. Professor Weiss has also done work in the areas of health planning and hospital-capacity analysis. Other interests include project scheduling with resource constraints.

James B. Wiggins, Ph.D. (Sloan School of Management, Massachusetts Institute of Technology), Assistant Professor of Finance

Professor Wiggins has research interests in the areas of options pricing, financial markets and institutions, and monetary and banking theory. He is concerned with the determination of expected returns and with market rationality. He was a teaching assistant in Professor Modigliani's course on capital markets and financial institutions at M.I.T.'s Alfred P. Sloan School of Management and taught courses in options and futures markets and applied macroeconomics and microeconomics at that institution. He served on the California Air Resources Board and taught at the University of California, Davis. He was the recipient of the William H. Martin Award for Excellence in Economics in 1979.

Dick R. Wittink, Ph.D. (Purdue), Professor of Marketing and Quantitative Methods, Director of the Doctoral Program

Professor Wittink's teaching interests are in marketing management, new products, marketing research, applied statistics, and econometrics. His research interests include preference and choice models; measurement and analysis issues in marketing research; market segmentation; and econometric model building. Currently he is using grocery-store scanner data to study the effects of marketing programs on brand sales.



► *Adjunct, Visiting, and Part-time Faculty*

Dale A. Grossman, J.D. (American University), Lecturer in Tax and Business Law

As the judicial administrator for Cornell University from 1977 to 1980, Ms. Grossman was responsible for the day-to-day operation of the campus judicial system, as well as policy implementation in that area. Currently a lecturer with the College of Agriculture and Life Sciences and the Johnson Graduate School of Management, she teaches courses in agricultural law, communication law, taxation, personal financial management, and business law. A member of the bar of the state of New York, she has served on numerous university and professional judicial committees.

Josef Lakonishok, Ph.D. (Cornell), Visiting Professor of Finance
Professor Lakonishok is on leave from Tel Aviv University, where he is a professor of management. His research interests are in capital markets, financial policy decisions, and accounting information and security price behavior. His publications have dealt with such topics as financial analysts' forecasts of earnings; taxation and dividends; determinants of trading volume; and anomalies in the stock market. He has consulted for various corporations, both financial and nonfinancial, and has been an expert witness in a number of cases.



T. J. Pempel, professor of government and adjunct professor at the Johnson School

Dale A. Oesterle, J. D. (Michigan), Associate Professor of Law
Professor Oesterle's interests include enterprise organization, negotiation, and unfair trade practices and remedies for those practices. He is a member of the Virginia bar and has been a law clerk for Robert R. Merhige, Jr., of the United States District Court for the Eastern District of Virginia.

T. J. Pempel, Ph.D. (Columbia), Professor of Government
Professor Pempel was director of the China-Japan Program from 1980 to 1985. He is interested in comparative public policy abroad, focusing on public policy making in Japan. He is currently editing a series of seven books on comparative public policy, which are being published by Temple University Press, and he is the author of five books on comparative public policy, including *Policy and Politics in Japan: Creative Conservatism* (Temple

University Press, 1982). He has been the recipient of numerous fellowships and research grants, including a Herbert A. Lehman fellowship from 1967 to 1970 and Fulbright-Hays fellowships in Japan in 1970-71 and 1975-76. His most recent book, co-written with Thomas Ilgen, is *Trading Technology: Europe and Japan in the Middle East* (Praeger, New York City, 1986).

Dianne Thaler, Ed.M. (Rochester), Lecturer in Communication
Ms. Thaler is an expert in management writing, business communications, public speaking, and reading and study skills. She was a member of the faculty of Tompkins Cortland Community College, Dryden, New York, and of the Bryant and Stratton Business Institute, Rochester, New York.

► *Executive-in-Residence*

John F. Burlingame
Mr. Burlingame is the former vice chairman of the board and executive officer of General Electric Company. He received a B.S. degree in physics from Tufts University in 1942. After service in the United States Navy, he joined General Electric Company in 1946. In 1973 he was named senior vice president and sector executive of General Electric's international sector. He held his most-recent position from 1979 until his retirement, in January 1985. He is a director of Alcan Aluminium of Canada, Eastman Kodak Company, Hershey Foods Corporation, and Merrill Lynch and is listed in *Who's Who in America* and the *International Who's Who*.

► *Professors Emeriti*

Earl Brooks, M.S., Professor of Administration Emeritus
Frank F. Gilmore, S.M., Professor of Business Administration Emeritus
Albert M. Hillhouse, J.D., Ph.D., Professor of Public Finance Emeritus
John G. B. Hutchins, Ph.D., Professor of Business History and Transportation Emeritus
John M. Rathmell, Ph.D., Professor of Marketing Emeritus
David A. Thomas, Ph.D., Professor of Accounting Emeritus, Dean Emeritus of the Johnson Graduate School of Management

The courses offered by the Johnson Graduate School of Management, including those offered jointly with other schools and colleges on the Cornell campus, are described in this section. Core courses are listed first, followed by electives under the categories of accounting, behavioral science, economics, finance, general management, international management, management information systems, marketing, operations management, public management, and research and advanced studies. For the most-current course information, we suggest that you consult the course schedules published by the Johnson School's Office of the Registrar.

There are many courses in other units of the university—including the Departments of Economics, Government, Psychology, and Sociology in the College of Arts and Sciences; the College of Human Ecology; the School of Industrial and Labor Relations; the School of Operations Research and Industrial Engineering in the College of Engineering; and the Department of Agricultural Economics in the College of Agriculture and Life Sciences—that may be of interest. For information on the content of those, consult the Cornell publication *Courses of Study* as well as the following brochures: *The Sloan Program in Health Services Administration at Cornell*, *Cornell Resources in International Business and Management*, *Cornell Programs and Resources in Manufacturing Management*, and *Cornell Programs on Japanese Business*. *Courses of Study* is available from the Undergraduate Admissions Office, Cornell University, 410 Thurston Avenue, Ithaca, New York 14850-2488. The Sloan Program brochure is available from the Department of Human Service Studies, College of Human Ecology, Cornell University, N132 Martha Van Rensselaer Hall, Ithaca, New York 14853-4401. The three other brochures are available from the Office of Admissions and Student Affairs, Johnson Graduate School of Management, Cornell University, Malott Hall, Ithaca, New York 14853-4201.

NOTE: Brackets surrounding a course description indicate that the course will not be taught in the academic year 1986–87. Some courses mentioned, but not described, in this publication are described in *Courses of Study*.

A view of Malott Hall

Management Curriculum



Core Courses

► First Year

NCC 500

Financial Accounting Fall; Elliott. Three credits.

The course covers a broad spectrum of topics in financial accounting at an introductory level. The topics include transactions analysis, the accounting cycle, financial-statement preparation and use, revenue recognition and cost measurement, present value, problems in financial-accounting disclosure, financial-statement analysis, and price-level accounting. The entire course focuses on accounting information for users external to the organization.

NCC 501

Quantitative Methods for Management Fall; Wittink, Thomas. Three credits.

The course deals with basic elements of decision making under conditions of uncertainty. Topics discussed include descriptive statistics, probability theory, classical statistics (including an introduction to regression analysis), and statistical (Bayesian) decision theory. Although the course is taught at an introductory level, the student is required to have a limited knowledge of calculus.

NOTE: For those students who have had little or no mathematics, the Johnson School conducts an intensive preparatory course in algebra and calculus in late August each year. For more information about the course, send for the brochure *Pre-enrollment Mathematics Review Course*, available from the Office of Admissions and Student Affairs, Johnson Graduate School of Management, Cornell University, Malott Hall, Ithaca, New York 14853-4201.

NCC 502

Microeconomics for Management Fall; Smiley, DeGraba. Three credits.

The fundamental concepts and principles of microeconomic theory are introduced and

developed in the context of applications that are relevant for managers. The course covers the basic elements of consumer demand, production and supply, and the operation of markets.

NCC 503

Marketing Management Fall; Bayus, Rao, Russo. Three credits.

The course is designed to introduce concepts, perspectives, and problems of marketing management of a multiproduct firm operating in a contemporary environment. Decision aspects of product planning, communication, pricing, distribution, and competitive strategy are discussed. Emphasis is placed on the marketing decisions facing a manager and the uncontrollable variables that relate to those decisions. Relevant quantitative and behavioral concepts are applied to marketing decision making.

NCC 504

Organizational Theory and Behavior Fall; Abolafia, Freeman, Krackhardt. Three credits.

Theories and empirical research on human behavior in organizations are studied; special attention is given to their implications for management. Problems of internal structure are examined, such as specialization and division of labor, hierarchy and authority, informal organization, and structural variations in organization. Dynamics of organizational behavior are also treated under such topics as leadership and supervision, motivation, stress management, and communication processes. The course is presented through readings and discussion of theory and empirical research. Cases and exercises are used.

NCC 505

Macroeconomics and International Trade Fall; Highfield. Spring; Lind. Three credits.

Basic macroeconomic theory is developed and integrated with basic concepts of international trade and finance. The first nine weeks of the course are devoted to the development of macroeconomic theory, emphasizing its application to the analysis of such major modern

Alan Pike, lecturer in management communication, focuses a video camera on a student presentation during a class on oral communication.



economic issues as inflation, unemployment, economic growth, and productivity. During the last five weeks, the influence of those issues on international trade is addressed. Among the topics covered are the theory of comparative advantage and the terms of trade, the foreign-exchange market, the balance of payments, and alternative international monetary systems. The goal of the course is to teach students to be informed observers of national and international economic policy and critical users of economic analyses and forecasts. NOTE: Students may take either NCC 505 or NCC 508, but not both, in the third semester.

NCC 506

Managerial Finance Fall; Wiggins. Spring; Bierman, Hass. Three credits.

The student is introduced to the principles and practices of business finance by developing theory and analyzing practices and cases that apply that theory. The first section of the course deals with the capital-budgeting decision, modern portfolio theory, and the capital-asset pricing model. The second section considers the cost of different long-term financing instruments and the effect of the mix of those securities employed on the entity's cost of capital. The interaction between the financing and investment decisions is then explored. Other topics covered are dividend policy and the management and financing of short-term assets. *Prerequisites:* Previous completion of, or concurrent registration in, NCC 500 and NCC 501, or permission of the instructor. Only graduate students may take the course. Non-JGSM graduate students are encouraged to do so during the fall semester.

NCC 507

Management Information Systems First nine weeks of spring semester; Conway. Two credits.

The course is an introduction to the basic concepts of contemporary information systems, including systems for transaction processing, financial reporting, operational control, decision support, and general communication. It assesses state-of-the-art developments and weighs prospects for the future. It covers an introduction to the relational and entity-relationship models of data and involves some use of a data-base management system on a personal computer.

NCC 508

Production and Operations Management Fall; McClain. Spring; Robinson, Weiss. Three credits.

The course introduces major economic-decision problems of production and operations management that occur in various settings, including manufacturing, health services, and other service areas. Among the decisions considered are the following: aggregate production and work-force scheduling; multiplant allocation of product; large-scale project control (PERT); materials management; production and inventory control; demand forecasting; quality assurance; and capacity planning. The course examines methods for managing operations to obtain high levels of productivity and quality by employing new technology, effective coordination, and work-force commitment. Emphasis is placed on the effectiveness, and the limitations, of quantitative techniques in the decision-making process. The interaction of production with other functional areas is also considered.

Prerequisites: NCC 501 and NCC 507 or the equivalent. NCC 507 can be taken concurrently with NCC 508. NOTE: Students may take either NCC 505 or NCC 508, but not both, in the third semester.

► *Second Year*

NCC 510

Business-Government Interface First five weeks of spring semester; McAdams. One credit.

The course explores the economic foundations for government interaction with business. The characteristics of existing economic and political institutions are examined. Other points investigated are how institutional interactions and social concerns shape or constrain choices, and how current changes in attitudes, values, and institutions may affect the future environment for administrative decision making. NOTE: The following courses may be substituted for NCC 510: NBA 521, Regulation, Deregulation, and Antitrust—Government Regulation of Business; NBA 577, The External Environment of Business; NBA 580, Industrial Policy: Lessons for the United States from Japan and Europe; NBA 683, Managing Governmental Systems.

NCC 511

Business Strategy and Policy Fall; Burlingame, Hass. Three credits.

The course is designed to draw on the various disciplines taught at JGSM. It focuses on the development and implementation of a comprehensive strategy for a business, including such considerations as product-service innovation, global competition, corporate culture, incentive systems, and planning-control processes. The course incorporates Harvard and Cornell case studies, guest lectures by visiting business executives, and a computerized strategic-planning exercise. Only second-year students registered in the Johnson School may take the course. *Prerequisites:* NCC 503, 506, and 508. NCC 508 can be taken concurrently with NCC 511. NOTE: For 1986–87 graduates, NBA 564, Entrepreneurship and Enterprise, or NBA 524, Competitive Industry Analysis, may be substituted for NCC 511 to meet the core-course requirement.



Elective Courses

► Accounting

NBA 500

Intermediate Accounting Fall; Dyckman. Spring; Shaw. Three credits.

The course is intended to motivate and facilitate students' learning the concepts and terminologies that are essential to an understanding of financial accounting and financial statements. Relatively brief cases drawn from, or based on, actual corporate financial reports are used to enhance students' understanding of how accounting information is collected, adjusted, or modified and presented to investors and others; their understanding of, and ability to critically evaluate, published financial statements; and their obtaining a practical working mastery of those concepts and terminologies. *Prerequisite:* NCC 500 or the equivalent.

NBA 501

Advanced Accounting Spring; Morse. Three credits.

The course, a continuation of NBA 500, deals with advanced topics of financial accounting. Among the specialized situations covered are consolidated statements, multinational operations, fund accounting, and bankruptcy. The student learns to cope with a variety of situations requiring evaluation and reporting of financial results. *Prerequisite:* NBA 500 or permission of the instructor.

NBA 502

Managerial Cost Accounting Fall and spring; Hilton. Three credits.

The course concentrates on the controller's function in the decision-making process. The course is specifically designed for those who either will be responsible for the cost records of an organization or will use the data for decision making. Topics discussed include the budgeting process, accumulating costs for product costing, standard costs, the analysis of cost variances, cost estimation and prediction, cost-price-volume decisions, performance measurement, nonmanufacturing cost analysis, cost allocation, and transfer pricing. *Prerequisites:* NCC 500, NCC 501, and NCC 502, or the equivalent.

NBA 504

Taxation Affecting Business and Personal Decision Making Spring; Grossman. Three credits.

The course deals with federal taxation and its impact on business and personal decision making. After a brief discussion of tax policy, an in-depth examination is conducted of federal income and estate and gift taxes affecting individuals and businesses. Both tax management and tax reporting are stressed. *Prerequisite:* one course in accounting.

NBA 505

Auditing Spring; staff. Three credits.

The course is designed for the student who is interested in a career in public accounting or who wants to fulfill the New York State requirements for certified public accountancy. The focus is on the auditing profession, the audit process, and audit reports. *Prerequisites:* NBA 500 and NBA 501 or permission of the instructor.

NBA 506

Financial Information and Evaluation Fall and spring; Morse. Three credits.

The course focuses on the evaluation of accounting information; special emphasis is placed on the use of financial statements by decision makers outside the firm. The

implications of recent research in finance and accounting for external reporting issues are explored. The usefulness of financial-statement data is also discussed in several decision contexts, such as solvency determination, value of the firm, security returns, security risk, and dividend policy. *Prerequisites:* NCC 506 and concurrent enrollment in NBA 500 or permission of the instructor.

NBA 507

Federal Income Tax Fall; Shaw. Three credits.

Federal taxation of both personal and corporate income is examined. The intent is to develop an understanding of the essential provisions affecting tax liability and thus taxpayer decision making and planning. Illustrative tax provisions are traced to the Internal Revenue Code and Tax Court decisions. Consideration is given to the structuring of business activity to minimize income tax liability. Current legislation is used to illustrate the legislative process. The Internal Revenue Code is viewed as a tool of economic and social policy as well as a source of revenue. *Prerequisite:* NCC 500 or the equivalent.

► Behavioral Science

NBA 660

Strategy Implementation: Process and Politics Fall; Abolafia. Three credits.

The course focuses on the implementation of rationally derived corporate and business strategies. It examines the behavioral barriers to the successful implementation of change within an organization. It emphasizes relations between organizations in a competitive economy and discusses strategies for managing competition, conflict, and cooperation between organizations. Class sessions consist of case analyses of a variety of situations, as well as conceptual and empirical readings from several social-science disciplines.

[NBA 661

Strategic Management and Behavioral Science One and one-half credits. Not offered in 1986-87.

The course makes use of case studies to examine the economic, political, and psychological assumptions underlying policy formation. It begins with the assumption that rational plans are easier to devise than they are to implement. Barriers to rationality, such as cognitive overload, group conflict, and resistance to change, are discussed. Students learn to recognize the behavioral constraints that structure policy. Each student is responsible for applying concepts from the course to researching and completing a case study of a strategic failure.]

NBA 662

Power and Interpersonal Influence Fall and spring; Krackhardt. Three credits.

The course examines the process and applications of power and influence in organizations. Discussion of readings is supplemented with experiential exercises during class time. In addition to examining conventional views of power (e.g., leadership, authority, expertise), informal and nontraditional forms (e.g., organizational politics, the power of networks) are discussed. The implications of power at the organization, group, and individual level are explored. Emphasis is placed on how the practicing manager can better identify and understand the sources and uses of power in an organizational setting.



Joe Thomas, Nicholas H. Noyes Professor of Manufacturing and director of JGSM's Executive Development Program



Johnson Graduate School of Management

Instructions for Applying

We are pleased that you are interested in the Johnson School. Our admission application is in two parts. Part 1 of the application is on the following pages. To apply for admission to the M.B.A. program, fill it out and mail it in the envelope supplied, along with payment of the application processing fee, to Office of Admissions and Student Affairs, Johnson Graduate School of Management, Cornell University, Malott Hall, Ithaca, New York 14853-4201. Once we receive those materials, we will start a file for you and send you Part 2 of the application, which includes requests for an essay, transcripts, and letters of evaluation. You may find it helpful to make a copy of Part 1, as you will need some of the information contained in it to complete Part 2. If you have questions, please do not hesitate to call our toll-free number: 800/847-2082, extension 1. Please *do not* submit the following application if you are a doctoral candidate. You can obtain the appropriate application for the doctoral program by writing to Professor Dick Wittink, Johnson Graduate School of Management, Cornell University, 506 Malott Hall, Ithaca, New York 14853-4201.

PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY.

Deadlines

March 1 is the deadline for Part 1 and the fee payment. April 1 is the deadline for Part 2. Admission decisions are made on a rolling basis; the earlier you mail Parts 1 and 2 and the fee payment to us, the earlier you will receive a decision. We recommend that you submit Part 1 as soon as possible, so that you can obtain, complete, and submit Part 2 before the April 1 deadline.

Interview

See the section entitled "Interview" on page 56 of this catalog for information about the interviewing of applicants.

Mailing Address

Enter the address to which you want all correspondence sent, including the decision letter.

United States Social Security Number

Where a social security number is requested on the application, enter your United States social security number. If you do not have one, leave that space

blank. If you obtain a United States social security number after you submit Part 1 of the application, please give that number as soon as possible to the Office of Admissions and Student Affairs.

CEEB Code Number

Please refer to the *GMAT Bulletin of Information* for the CEEB code number. The codes for colleges are listed under Appendix A in the back of the bulletin. You can obtain the bulletin by writing to Graduate Management Admission Test, Educational Testing Service, CN 6103, Princeton, New Jersey 08541-6103, or by calling 609/771-7330.

Areas of Interest and Program

Please refer to pages 7–10 and 14 in this catalog for an explanation of the electives and joint programs we offer.

GMAT and TOEFL Test Information

Be sure to have the Educational Testing Service submit your test results to us. Our code number is 2098.

We strongly recommend that you take the GMAT and the TOEFL no later than on the January test dates. We must receive your *official* scores before we will process your application.

Race and Ethnic Background Information

Cornell tries to enroll a diverse student group. Although providing us with information on your race or ethnic background in the application is optional, obtaining that information will help us assist the university in achieving its objective.

Financial Aid

If you are applying for financial aid, be sure to submit the Graduate and Professional School Financial Aid Service (GAPSFAS) form on or before February 15. You can obtain the form from our office, from a financial-aid office at any college or university, or from GAPSFAS, Educational Testing Service, Princeton, New Jersey 08541-6660. After you complete the form, submit it to GAPSFAS, Educational Testing Service, at the above address. Our college code to be used on the GAPSFAS form is 2168. The form can *only* be submitted to us through GAPSFAS. You must also submit to our office a copy of your most-recent tax returns—and if you do not meet federal guidelines for financial independence, a copy of your parents' most-recent tax returns—by February 15.

Johnson Graduate School of Management

Do not file this application if you are applying for the doctoral program. For instructions on how to apply to that program, contact Professor Dick Wittink, Johnson Graduate School of Management, Cornell University, 506 Malott Hall, Ithaca, New York 14853-4201.

Please read the instructions on the preceding page carefully before completing this form. Type or print clearly in black ink. Attach payment of the **nonrefundable** application fee and return it as soon as possible to the Office of Admissions and Student Affairs, Johnson Graduate School of Management, Cornell University, Malott Hall, Ithaca, New York 14853-4201. Part 2 will be forwarded upon receipt of Part 1 and the fee payment.

PART 1

1987 M.B.A. Application for Admission

Deadline: March 1

APPLICATION FEE (NONREFUNDABLE)

United States citizens: \$50

Foreign students: \$80 (United States currency)

Reactivation: \$20

Payable to Cornell University

GENERAL INFORMATION

Name: _____
last first middle

suffix nickname

Mailing address: _____
number and street

city state

zip or postal code country

Home telephone: _____
area code/number

Business telephone: _____
area code/number

Final date I can be reached at the above address: _____
mo./day/yr.

Permanent address (if different from above):

number and street

city state zip or postal code

_____ Telephone: _____
country area code/number

Date of birth: _____
mo./day/yr.

Sex: ☐ Male ☐ Female

United States social security number: _____

Have you applied to the Johnson School before? ☐ Yes ☐ No

If yes, for which year: _____ (Attach \$20 fee payment.)

Note: If more than two years have passed since you last applied to JGSM, a full application and payment of the \$50 fee must be submitted.

EDUCATION

Colleges or universities previously attended: _____

CEEB CODE NUMBER of colleges or universities attended: _____

Degrees received, month/year received, and majors: _____

Check the areas that best describe your undergraduate academic program:

- | | | |
|-----------------------------------------|--------------------------------------------|-----------------------------------|
| <input type="checkbox"/> 1. Business | <input type="checkbox"/> 4. Humanities | <input type="checkbox"/> 7. Other |
| <input type="checkbox"/> 2. Economics | <input type="checkbox"/> 5. Mathematics | |
| <input type="checkbox"/> 3. Engineering | <input type="checkbox"/> 6. Social science | |

AREA OF INTEREST

Check the **one** area on which you expect to focus in the M.B.A. degree program:

- | | | |
|------------------------------------------------|------------------------------------------------------------|---------------------------------------------------|
| <input type="checkbox"/> 1. Accounting | <input type="checkbox"/> 4. Finance | <input type="checkbox"/> 7. Marketing |
| <input type="checkbox"/> 2. Behavioral science | <input type="checkbox"/> 5. International business | <input type="checkbox"/> 8. Operations management |
| <input type="checkbox"/> 3. Economics | <input type="checkbox"/> 6. Management information systems | |

WORK EXPERIENCE

Check the amount of **full-time work experience** you will have had between your graduation from college and your anticipated enrollment in JGSM:

- | | | |
|--------------------------------------------|---------------------------------------|---------------------------------------------|
| <input type="checkbox"/> 1. None | <input type="checkbox"/> 5. 2-3 yrs. | <input type="checkbox"/> 9. 10 or more yrs. |
| <input type="checkbox"/> 2. 6 mos. or less | <input type="checkbox"/> 6. 3-5 yrs. | <input type="checkbox"/> 10. Other: _____ |
| <input type="checkbox"/> 3. 6 mos.-1 yr. | <input type="checkbox"/> 7. 5-7 yrs. | |
| <input type="checkbox"/> 4. 1-2 yrs. | <input type="checkbox"/> 8. 7-10 yrs. | |

INTENDED PROGRAM

Intended joint degree program (if any):

- ☐ Joint Law/M.B.A. Program
(application must also be made to the Cornell Law School)
- ☐ Joint M.Eng./M.B.A. Program
(application must also be made to the College of Engineering)
- ☐ Joint M.A./M.B.A. Program
(application must also be made to Department of Asian Studies)
- ☐ Six-Year B.S./M.Eng./M.B.A. Program
(applicants must be Cornell juniors majoring in engineering)
- ☐ Five-Year Bachelor's/M.B.A. Program
(applicants must be Cornell juniors) with _____
Cornell college, school,
or department

TEST INFORMATION

When did you, or will you, take the GMAT?

mo./day/yr.

What was your total score? _____

If English is not your primary language, and you do not have two or more years of college-level education in the United States, when did you, or will you, take the TOEFL?

mo./day/yr.

What was your total score? _____

Cumulative grade point average on a 4.0 scale at the end of your last term in college:

CITIZENSHIP

Country of citizenship: _____

If you are not a United States citizen, do you hold a permanent United States resident visa?

☐ Yes ☐ No

If not, state the type of United States visa you hold:

Have you had more than two years of education in the United States?

☐ Yes ☐ No

OPTIONAL (to aid with issuing I-20 forms to accepted foreign applicants)

Are you married? ☐ Yes ☐ No

RACE AND ETHNIC BACKGROUND

Submission of the following information about your racial-ethnic group is voluntary:

- ☐ American Indian or Alaskan Native ☐ Puerto Rican
- ☐ Asian or Pacific Islander ☐ Mexican American
- ☐ Black, not of Hispanic origin ☐ Other Hispanic
- ☐ Caucasian, not of Hispanic origin

FINANCIAL AID

Are you applying for financial aid?

☐ Yes ☐ No

Have you filed a GAPSFAS form?

☐ Yes ☐ No

Have you submitted a copy of your most-recent tax returns to JGSM's Office of Financial Aid?

☐ Yes ☐ No

The following is to be filled in by all applicants:

My signature below indicates that all the information contained in my application is factually correct and honestly presented.

Signature: _____

Date: _____

NBA 663

Behavioral Decision Theory Fall; Russo, Thaler. Three credits.

Most decision problems are too ill structured to develop a quantitative model. The course deals with decision behavior in such situations. It exposes and analyzes the difficulties that occur when researchers, working with such problems, attempt to create models from them. The difficulties are caused by information-processing limitations, the nature of human memory, and heuristics that reduce effort. The goal of the course is to provide an understanding of concepts deep enough for students to perceive and execute applications in professional environments.

NBA 669

Organizational Theory Fall; Freeman. Three credits.

The course considers the design of organizations. Design varies along three fundamental dimensions: the division of labor (who does what), subordination or superordination (who tells whom what to do), and staffing (who works for the organization). Differing ways of organizing tend to be better or worse under varying environmental and technological conditions. Understanding those relationships allows students to predict what they are likely to experience as managers.

► *Economics***NBA 520**

Pricing and Strategy Spring; DeGraba, Smiley. Three credits.

The course examines pricing and other strategy issues, using articles and cases, from the perspective of economics and marketing. It analyzes economically optimal pricing; strategic pricing; price discrimination; estimation of price elasticities of demand; tie-in sales; legal restrictions on pricing behavior; transfer pricing; oligopolistic pricing models; coupons, sales, and other types of price promotions; and other economic and marketing models of pricing behavior. Also considered are first-mover advantages, research and development strategy, and advertising. *Prerequisite:* NCC 502.

NBA 521

Regulation, Deregulation, and Antitrust: Government Regulation of Business Fall; McAdams. Three credits.

The course deals with the interaction between business and government in a mixed economy. Cases and problems are discussed from the viewpoint of the business manager. The major topics are government policies in markets in which competitive structure is feasible (antitrust); public policies in markets in which monopoly structure is the most-efficient means of producing goods or services (natural monopolies such as public utilities); and public policies in areas in which government intervention is required for efficient resource allocation (e.g., environmental and work-place regulation, subsidies for research and development). Emphasis is given to the business opportunities that result from waves of deregulation in the broad sectors of the economy.

NBA 522

Managerial Economics Fall; McAdams. Three credits.

The course is designed to assist the student in developing analytic capabilities for dealing with economic choices. After a review of applied microeconomics, the student is encouraged to use that, and prior economic training, to seek solutions to actual problems that require

managerial decisions. The class focuses on several problems, cases, and research projects from various sectors of the economy. Individual and group papers—especially short-decision memorandums on particular topics—are assigned. Students are occasionally asked to submit papers in draft form, for critique and revision. Oral presentations of analyses and recommendations are also assigned. Classes are generally conducted using a discussion format.

NBA 523

Business and Economic Forecasting Spring; Highfield. Three credits.

The course develops modern techniques for forecasting in a business setting. The objective is to provide a toolbox of useful, proven forecasting methods and to develop the ability to choose the appropriate tool for the business situation at hand. Topics include a survey of qualitative and quantitative forecasting methods, the relationship of forecasting to decision making, the evaluation of forecasting methods, and the optimal combination of forecasts derived from different sources. *Prerequisite:* NCC 501 or the equivalent.

NBA 524

Competitive Industry Analysis Fall; Smiley. Three credits.

The course uses economic and financial principles to analyze the behavior of firms in American industries. The focus is on formulating strategies and predicting responses to strategic moves. Topics covered include industry structure and evolution, barriers to entry, pricing models, vertical integration, international competition, and preemption strategies such as research and development.

NOTE: Students interested in managerial economics should also consider the following courses offered by the Johnson School:

NBA 543

Financial Markets and Institutions

NBA 580

Industrial Policy: Lessons from the United States from Japan and Europe

NBA 582

International Trade and Finance

NOTE: Students interested in the broader aspects of economics should also consider courses in economics offered by other units of the university, such as those listed below.

DEPARTMENT OF ECONOMICS

561

International Trade Theory

641

Labor Economics (I&LR 744)

651

Industrial Organization and Regulation

661

International Economics

684-1

Seminar in Applied Economics

DEPARTMENT OF AGRICULTURAL ECONOMICS

450

Evaluating Resource Investment

710

Econometrics I

711

Econometrics II



Jerry Hass, professor of managerial economics and finance

► Finance

NBA 540

Financial Policy Decisions Fall; Bierman. Three credits.

The course deals with basic and advanced decision models for different types of corporate financing methods, starting with leases and bonds and proceeding to preferred stock and convertible securities. Other topics likely to be covered include common stock, capital structure decisions and cost of capital, dividend policy, mergers, and acquisitions. The decision models are developed from the point of view of the issuing firm, but consideration is also given to the investor's viewpoint. A combination of lectures, discussions, and cases is used. *Prerequisite:* Open only to second-year students who have taken the core courses.

NBA 541

Economic Evaluation of Capital Investment Projects Spring; Smidt. Three credits.

Students prepare an economic analysis of a capital-investment project that is under consideration by a business or nonprofit organization. Cash flows and strategic factors are taken into consideration. Enrollment is limited. Students who have identified an actual project will be given preference. *Prerequisite:* NCC 506 or permission of the instructor.

NBA 542

Investment Management and Security Analysis Spring; Lakonishok. Three credits.

The course is about investment management, and all the important topics in that area will be covered. Those include portfolio management; valuation of various securities such as stocks, bonds, options, and futures; review of market anomalies; tax considerations in investment; and measuring portfolio performance. *Prerequisite:* NCC 506.

NBA 543

Financial Markets and Institutions Fall; O'Hara. Three credits.

The course develops a unified framework for understanding financial intermediation. The objectives are to analyze the sources, uses, and pricing of funds in the economy; to develop the theory of commercial banking; to investigate the similarities between commercial banks and other financial intermediaries; to analyze how central bank operations affect commercial banks; to develop an understanding of the money market and its role in the flow of funds through the economy; and to understand the role of the financial futures market. The use of quantitative techniques for modeling economic theory is stressed. *Prerequisite:* NCC 505.

[NBA 544]

Seminar in Bank Management Three credits. Not offered in 1986–87.

The course provides an in-depth treatment of management issues in commercial banking. Topics covered include risk management, credit decisions and pricing, capital structure, holding-company activities, and strategic planning. Students integrate concepts learned through case studies and participation in a bank-simulation exercise. *Prerequisite:* NBA 543.]

NBA 545

Finance Theory Fall; Lakonishok. Three credits.

The course is designed to provide in-depth coverage of some of the major topics in finance. Those include the market for corporate control—for example, mergers, tender offers, stock repurchases; dividend policy; capital-structure

policy; and market efficiency. The readings are from journal articles. *Prerequisite:* NCC 506.

NBA 546

Options, Bonds, and Commodities Fall; Jarrow. Spring; Wiggins. Three credits.

The main emphasis in the course is on understanding the pricing of puts and calls. Consideration is given to hedging versus diversification, arbitrage conditions, and the derivation of exact pricing formulas. The effect of market imperfections, the results of empirical investigations, and the nature of institutional constraints are also studied. There is a brief introduction to the pricing of bond and commodity futures, using the above techniques. *Prerequisite:* NCC 506.

[NBA 547]

Investment Banking Three credits. Not offered in 1986–87.

The course develops the analytic basis for investment banking. The first half of the course concerns auctions, market making, and syndication, and the second half is about advanced topics in corporate finance that pertain to investment bankers. Guest speakers and case studies give institutional applications for the material developed in the course. *Prerequisite:* NCC 506.]

NBA 548

Trading Fall; Jarrow, Smidt. Three credits.

Modern financial markets are increasingly characterized by the trading of financial instruments. The course concentrates on the economics of the trading process. Theoretical, empirical, and descriptive studies of trading and traders are reviewed. A few representative institutional settings, such as stock exchanges, futures exchanges, or foreign-exchange markets, are considered in detail. Among the topics covered are who trades, how trading occurs, what is traded, trading costs and volumes, and the regulation of trading. Special attention is given to the role of trading in forming and changing prices and disseminating information in a dynamic context. *Prerequisite:* second-year status or permission of the instructor.

NBA 549

Strategic Decision Making Spring; Jarrow. Three credits.

The course is designed to develop the student's ability to think logically and strategically in competitive situations. The course is quantitative, using topics from statistical decision theory, noncooperative game theory, and cooperative game theory. Those topics are applied to problems in finance, economics, politics, and industrial organization. Roughly half of the semester is devoted to studying theory, and half is spent applying theory to specific situations. *Prerequisite:* NCC 501.

NOTE: Students interested in the broader aspects of finance should also consider the following courses in the Johnson School:

NBA 560

Business Law

NBA 562

An Introduction to Estate Planning

NBA 582

International Trade and Finance

► General Management

NBA 560

Business Law Fall; Bugliari, Grossman. Three credits.

The course is an introduction to the basic purposes and logic of the law as they apply to business enterprises and their operations. The fields of personal property, contracts, agency, real property, and landlord-tenant concerns are emphasized. A combination of text and case study is used. All students in professional accounting are required to take the course, and it is strongly recommended for students whose area of specialization is finance.

NBA 561

Advanced Business Law Spring; Bugliari. Three credits.

The course examines principles of commercial law affecting the operation of business enterprises. Particular attention is given to the law pertaining to bailments, sales, secured transactions, bankruptcy, and commercial paper. Text and case materials are employed. *Prerequisite:* NBA 560 or permission of the instructor.

NBA 562

An Introduction to Estate Planning Fall; Bugliari. One credit.

The course consists of fourteen sessions on the various aspects of estate-planning techniques. The law and use of trusts, the law of wills, federal and New York estate and gift taxes, and probate procedures are covered.

[NBA 563]

Strategic Business Policy Issues Two to three credits. Not offered in 1986–87.

The course deals with major strategy and policy issues currently confronting top-level business managers and likely to be confronting them in the future. The emphasis is on broad issues and decisions facing managers, rather than specific functional decisions. The method of instruction is cases, supplemented by talks from senior corporate managers and by discussions of major issues.]

NBA 564

Entrepreneurship and Enterprise Fall and spring; BenDaniel. Three credits.

The course provides a disciplined look at the entrepreneur and enterprises. It deals with the formation of a new enterprise and the acquisition of existing enterprises from the viewpoint of the prospective principal owners; examines the characteristics of entrepreneurs; and studies methods of identifying, evaluating, and profiting from new enterprises. It also reviews legal and tax aspects, valuation techniques, organization forms, venture capital sources at various levels of activity, and planning techniques necessary to a successful venture. Emphasis in the fall term is on starting businesses and in the spring term on corporate entrepreneurship. Case method is the basis of study. Guest lecturers such as venture capitalists, lawyers, entrepreneurs, and bankers bring specific practical talents to the course. Students are required to submit written analyses of assigned cases and to join in teams to prepare business plans for new ventures. NOTE: The course may be substituted for NCC 511, Business Strategy and Policy, in the third semester.

NBA 565

Law of Business Associations Spring; Bugliari. Three credits.

The first portion of the course examines the formation and operation of business enterprises, particularly partnerships and corporations. The

second portion reviews government regulation and control of business organizations. Special attention is given to antitrust laws, consumer protection legislation, and environmental protection legislation. Although there is no prerequisite, some prior exposure to business law is recommended.

NBA 567

Management Writing Fall and spring; Pike, Rosen. Seven weeks. One and one-half credits. The aim of the course is to teach students to write clearly and concisely. The assignments cover a variety of representative forms and focus on audience analysis, organization, style, and editing, to achieve the objective of the piece.

NBA 568

Oral Communication Fall and spring; Pike, Rosen. Seven weeks. One and one-half credits. The aim of the course is to help students develop the skills, sensitivity, and confidence to speak effectively in a variety of situations. Assignments include impromptu and extemporaneous speaking, preparing for interviews, presenting graphics, participating in question-and-answer periods, and speaking in a large auditorium. Speeches are videotaped.

NBA 569

Effective Management Consulting Spring; Flash. Three credits.

The course constitutes a practical and intellectual introduction to management consulting. It enables participants to apply substantive knowledge and analytical abilities developed through previous experience and course work to solving policy and managerial issues faced by local private- and public-sector decision makers. Students gain problem-solving experience, understanding of the relationship between consultants and managers, and appreciation of the consulting profession. Participants undertake consulting assignments in the Ithaca area (for about two-thirds of the course). They also examine, through class discussions and presentations by visiting consultants, the concepts and realities of effective management consulting (for about one-third of the course). Enrollment is limited; priority is given to second-year students.

[NBA 570]

Negotiations for Managers Two credits. Not offered in 1986-87.

Students engage in five rounds of negotiations that are designed to simulate various bargaining contexts. Two rounds are videotaped, and three rounds consist of intricate problems. Classes focus on the results of the mock negotiations and on the ethics and methods of negotiation in general.]

NBA 571

Business and American Society, 1800-1986 Spring; Schmotter. Three credits.

The course provides students with a broad, interdisciplinary context in which to view current business issues and their own managerial careers. Through discussions of historical events, issues, and figures, it examines the changing relationship between American business and the society that frequently nourished, and sometimes starved, it. Topics covered include the creation of the modern industrial work force, American railroads and the development of the bureaucratic corporation, the Horatio Alger myth, the "robber barons" of the Gilded Age and their critics, the legacies of Henry Ford and Alfred P. Sloan, the evolution of modern advertising, the changing nature of work in America, the stock-market crash of 1929 and the Great Depression, and historical role models for managers of the 1980s.

NBA 572

Law of Mergers and Acquisitions Fall; Oesterle. Three credits.

The course studies how current law affects a corporation's choice, first, whether to purchase an independent company, and second, how to consummate the transaction. Considered are tax law, federal securities law, state corporate codes, and antitrust law, as well as accounting chicanery and finance theory. Statutory mergers and combinations, share-exchange mergers, privately negotiated cash sales, public-tender offers, and asset acquisitions are discussed.

NBA 573

The Professional Manager at Work Spring; Tarr. One credit.

The course involves discussions of topics relevant to the management of businesses. After a brief introduction to the work of a manager, the course covers planning and organizing, as well as encouraging cooperation. Recruiting, management, development, incentive systems, delegation, restraint and control, authority, measuring progress, and integrating the activities of a business are all addressed.

NBA 575

The Ethics of Managerial Power Spring; Flash. Three credits.

The ethics of managerial power are threads of morality woven through the fabric of analysis, decision, and action. They constitute the rationale of principled behavior that underlies the application of knowledge, of technical skills, and of operating abilities. They fuel the adherence to standards and the resolution of dilemmas that shape the relationships between family, job, and self; between peers, superiors, and subordinates; between contractor, customer, and community. Accordingly, the course explores managerial ethics as they apply to the following stages of an M.B.A. graduate's career: establishing professional competence, assuming managerial responsibilities for internal operations, and fulfilling executive leadership responsibilities to organizations and society. Cases and discussions

focusing on each of the three stages are complemented by the review of relevant literature and—where appropriate and feasible—by presentations by visiting executives and other authorities.

NBA 577

The External Environment of Business Spring; Smiley, others. Three credits.

In the course, leading scholars from throughout the university discuss their specialties and examine a variety of factors that impinge on business. Topics include the economic and social regulation of business, the regulation of toxic wastes, the economics and law of product liability, the role of labor unions, the effect of the changes in the United States presidency on American firms, personal and corporate ethics, and the international climate of business, including segments on the Soviet Union, Western Europe, and Japan.

NOTE: Students interested in the broader aspects of general management should also consider the following courses in the Johnson School:

NBA 520

Pricing and Strategy

NBA 580

Industrial Policy: Lessons for the United States from Japan and Europe

NBA 660

Strategy Implementation: Process and Politics

NBA 661

Strategic Management and Behavioral Science

NBA 684

Health Services Organization and Financing



► International Management

NBA 580

Industrial Policy: Lessons for the United States from Japan and Europe Spring; McAdams. Three credits.

The course explores the industrial policies of private-market industrialized nations—Japan, France, Germany, Italy, and the United Kingdom—to determine the degree to which there are lessons for the United States, either positive or negative, from their experiences. The current international competitive position of the United States is explored. Special emphasis is given to the computer and electronics industries and their likely role in the economic future of the United States. Recommendations are then developed for United States government policy toward industry.

NBA 582

International Trade and Finance Fall and spring; Chan. Three credits.

The course is about international trade, growth, and development. The first part examines the real basis for trade, the determinants of investment, and the influence of tariffs. Several cases on different countries' trade and growth experiences are examined next. International financial arrangements are covered in the second part of the course. *Prerequisite:* NCC 505.

[NBA 583]

International Business in the Middle East Three credits. Not offered in 1986–87.

The course examines the investment climate for international business in Israel and in the Arab Middle East. The political, social, and economic policies of four countries—Israel, Egypt, Saudi Arabia, and Kuwait—are given specific attention. The focus is on why those countries have welcomed direct foreign investment; on what kinds of central government control have been imposed on investors; and on how such control has been influenced by historical experience, changes in the rate of economic growth, domestic political influences, and growing sophistication in national economic planning. The course

incorporates discussions led by guest lecturers with expertise on specific countries. NOTE: NBA 583 is open to seniors, with permission of the instructor.]

NBA 584

International Management Fall; Bent. Three credits.

The course is an introduction to the multinational business firm. It surveys the various administrative, political, and economic consequences of American firms' operations in Europe, in Japan, and in the third world. Among the specific topics discussed are the following: administrative and bureaucratic characteristics of American overseas businesses and how they compare with the multinational firms of other countries; personnel policy and labor relations; the impact of United States domestic legislation on direct foreign investment, including tax and antitrust policies; and the interaction of American businesses with host governments. *Prerequisite:* graduate standing or permission of the instructor.

[NBA 585]

Comparative International Management Three credits. Not offered in 1986–87.

The course studies the management systems in England, Japan, Eastern-bloc nations, and the third world. The focus is on managerial theories and practices. The influence of the wider social environment on those theories and practices, including the impact that the public sector has on the management of business institutions, is also considered.]

NBA 589

Business in Japan First seven weeks of spring semester; Pempel. Two credits.

The course examines the central aspects of business in Japan, including problems in the structure and managerial practices of individual firms, government-business relations, industrial policies, domestic and international strategies, and the experiences of non-Japanese multinational corporations within Japan. About a third of the course is devoted to specific case analyses.

NOTE: Students interested in the broader aspects of international management should also consider courses in the international area offered by other units of the university. Those courses are described in the brochures *Cornell Resources in International Business and Management* and *Cornell Programs on Japanese Business*, available from the Office of Admissions and Student Affairs, Johnson Graduate School of Management, Cornell University, Malott Hall, Ithaca, New York 14853-4201.

► Management Information Systems

NBA 600

Data-Base Management Fall; Orman. Three credits.

The course provides an introduction to the design, use, and management of computerized data bases. Topics include physical and logical data structures; design considerations, including efficiency and consistency; retrieval problems, including data-base languages and search techniques; maintenance considerations such as security and integrity; and the duties of a data-base administrator. Projects involving the design, creation, and use of data bases are assigned.

NBA 601

Information Systems in Manufacturing Fall; Conway. Three credits.

The course is concerned with computing and communication systems that integrate product and process design with the operational control of manufacturing and distribution. The course includes critical evaluation of current commercial systems and examines the prospects for computer-integrated manufacturing systems. *Prerequisite:* NBA 640 or permission of the instructor.

NBA 603

Systems Analysis Spring; Orman. Three credits.

The information-system development process is examined. Techniques used in the analysis, design, and implementation phases of system development are studied in detail. The system life cycle is simulated, using cases and projects. *Prerequisites:* NCC 507 and NBA 600.

NOTE: Students interested in the broader aspects of management information systems should also consider courses offered by other units of the university, such as those listed below.

DEPARTMENT OF COMPUTER SCIENCE

310

Data Structures

411

Programming Languages and Logics

412

Introduction to Compilers and Translators

414

Systems Programming and Operating Systems

432

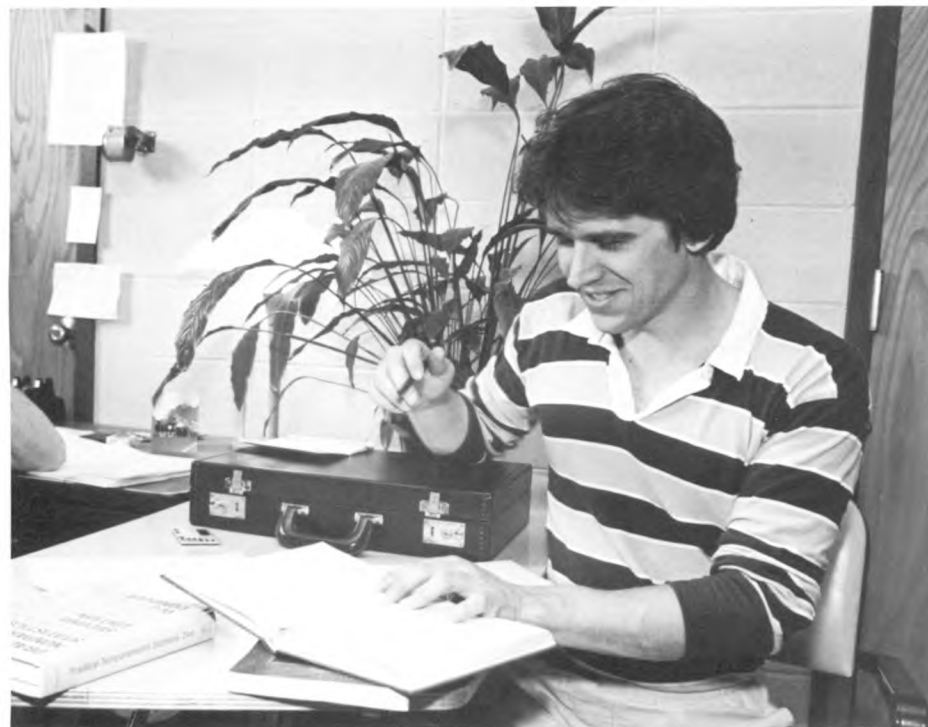
Introduction to Data-Base Systems

632

Data-Base Systems

643

Design and Analysis of Computer Networks



NBA 620**Marketing Research** Fall; Rao. Three credits.

Marketing research is concerned with the identification of needs for information for marketing decisions and the subsequent data collection, analysis, and reporting techniques appropriate for various areas of application. Techniques include sampling, questionnaire design, experimentation, scaling, conjoint measurement, and multivariate data analysis. As part of the course requirements, groups of students conduct empirical studies on typical marketing research problems. The discussion balances the viewpoint of researchers with that of managers who commission research and apply its results to making decisions. *Prerequisites:* NCC 501 and NCC 503 or the equivalent.

[NBA 621]**Advertising Management** Three credits. Not offered in 1986–87.

The purpose of the course is to examine the role of advertising as an important and visible element in the marketing mix. Emphasis is placed on the management of the advertising function in a competitive environment. Topics include consumers' perception of advertising messages; advertising budget decisions; advertising positioning; message development and format; copy evaluation; media planning; advertising regulation; and the societal and economic effects of advertising. Whenever possible, recent empirical research on those issues is discussed.]

NBA 622**Marketing Strategy** First nine weeks of the spring semester; Rao. Two credits.

The course provides a balance between theoretical and practical approaches to the development and evaluation of marketing strategies in a multiproduct firm in light of various environmental opportunities and constraints. It relates recent research to the resolution of such issues as product-market boundary definition, allocation of resources, product portfolio decisions, and appropriate strategies for different stages of product life cycles. Cases are extensively used to enable students to develop skills in strategy analysis. Guest speakers from industry provide a view of operational aspects of marketing strategy.

NBA 623

Models and Methods for New Products First nine weeks of fall semester; Wittink. Two credits. The successful introduction of new products—an increasingly important activity for modern firms—requires careful planning and systematic screening and testing. In the course, procedures, methods, and models that can be used in the various stages of the development process are discussed. *Prerequisites:* NCC 501 and NCC 503.

NBA 624**Marketing Decision Analysis** Spring; Bayus. Three credits.

The course is an advanced offering for students with knowledge of marketing and quantitative methods (regression analysis, probability, statistics, optimization). It provides an overview of implementable models in the areas of marketing decision making, and training in using models; the emphasis is on data analysis.

NBA 626**Consumer Behavior** Fall; staff. Three credits.

The course applies methods, concepts, and models from the behavioral sciences to explain and predict the behavior of consumers. The properties and limitations of perception, memory, attitude formation, and decision making are discussed. The ways in which marketing actions influence consumers are explored.

[NBA 628]**Marketing Planning** Three credits. Not offered in 1986–87.

The course is designed to provide an in-depth understanding of marketing planning. Its underlying philosophy is that planning skills are better acquired by doing than by reading or listening. The course covers such areas as the collection, analysis, and interpretation of information required to assess market opportunity and competitive threats; the development of marketing objectives and programs; assessment of profit potentials; and the development of appropriate standards and methods of evaluation.]

NBA 630**Marketing Research Project** Fall; Rao. One-and-one-half credits.

The course provides firsthand experience for students in the design and implementation of a marketing research project aimed at tackling a theoretical or applied marketing problem. It also enables students to gain an understanding of the technical details of selected methods or models of marketing research while implementing them on a computer.

NBA 631**Marketing Science** Spring; Rao. Three credits.

The course considers selected theoretical and empirical research in the emerging area of marketing science. The material is drawn primarily from articles in the journals of *Marketing Science* and *Management Science*, and includes such topics as theories of consumer choice, competitive strategies, sales-force compensation, theory of channel cooperation and conflict, product positioning, and determination of product line and pricing. The discussions emphasize theory and generalization, and the topics are related to ways in which a firm can implement research results. The course is open to advanced M.B.A. students and doctoral students in JGSM and to master's and doctoral students in operations research, computer science, economics, psychology, consumer economics, agricultural economics, and statistics.

NOTE: Students interested in the broader aspects of marketing should also consider the following courses in the Johnson School:

NBA 660**Strategy Implementation: Process and Politics****NBA 663****Behavioral Decision Theory**

Vithala Rao, professor of marketing and quantitative methods

► Operations Management

NBA 640

Production Management Fall; Robinson. Three credits.

The course examines some of the problems encountered in the management of production systems. Areas covered include the use of various forecasting techniques, inventory management for known and probabilistic demands, production scheduling, and quality control. Cases are used throughout to illustrate the issues surrounding the application of those quantitative techniques to more-realistic problems. Mathematical programming models, as well as other management-science techniques, are drawn on as needed. *Prerequisite:* NCC 508 or permission of the instructor.

NBA 641

Business Logistics Management Spring; Thomas. Three credits.

Business logistics management deals with moving materials to a productive facility, controlling the transformation of the materials into products, and distributing the products to customers. Topics include plant and warehouse location, selection of channels of distribution and modes of transportation, management of overall material flow, management of large-scale inventory systems, and organizational structure. Case studies constitute about one-third of the class sessions; cases are selected to represent different industries, situations, and use (or nonuse) of quantitative methods. Emphasis is placed on oral and written communication in the class; each participant has several chances to present an analysis of managerial problems. *Prerequisite:* NCC 508 or permission of the instructor.

NOTE: Students interested in manufacturing should also consider the engineering courses described in the brochure *Cornell Programs and Resources in Manufacturing Management*, available from the Office of Admissions and Student Affairs, Johnson Graduate School of Management, Cornell

University, Malott Hall, Ithaca, New York 14853-4201.

NBA 642

Applied Econometrics Spring; Wittink. Three credits.

Regression analysis is one of the most widely used (and misused) techniques in management. Proper use requires a sound understanding of the substantive problem and a knowledge of regression. The first part of the course includes a review of the basic linear model and the assumptions. Heavy emphasis is placed on how to diagnose violations of the assumptions and on the implications of such violations. Topics include multicollinearity, dummy variables, autocorrelation, heteroscedasticity, aggregation, lagged dependent variables, and simultaneity. The second part of the course consists of a critical evaluation of applications in numerous areas of interest. *Prerequisite:* NCC 501 or the equivalent.

NBA 643

Management Science Fall; Weiss. Three credits.

The course develops mathematical and computer techniques commonly used in analyzing management problems. Several techniques are covered, including linear programming and extensions, nonlinear programming, integer programming, and stochastic models of operating systems. The application of those and other management-science techniques is discussed at length. Case studies are used to simulate applications of the textbook techniques. *Prerequisites:* NCC 501 and NCC 508.

NOTE: Students who are interested in the broader aspects of operations management should also consider courses in operations management offered by other units of the university, such as those listed below.



622
Operations Research I
623
Operations Research II
660
Applied Probability

► *Public Management*

NBA 683
Managing Governmental Systems Fall; Flash. Three credits.

The course creates for future business executives an understanding of how governmental systems function. Such an understanding is essential to success in management. Primarily within the context of the federal government, the course examines the functioning of public-program systems relevant to the private sector (i.e., those systems concerning regulation, procurement, service, and protection). It focuses on the interactions of policy, politics, analysis, and administration that mark the decision-making relationships between legislators, political executives, bureaucrats, and judges. Through readings, case studies, and class discussions, students examine the different program systems, and, by presentation and written analysis, focus on program systems of particular interest and of career significance. Students gain an in-depth grasp of governmental decision making.

NBA 684
Health-Services Organization and Financing Fall; Battistella. Three credits.

Health services are described and analyzed in the context of recent political, social, and economic developments. The roles and responsibilities of various institutions and professional groups are examined; emphasis is placed on the hospital as the central institution in the provision of community health-care services. Current concepts and issues in planning, regulation, and marketing are surveyed. Particular attention is given to the role of private capital in promoting multihospital systems and delivery systems that are vertically and horizontally integrated. The capacity of current health-services systems to respond to pressures generated by changing disease patterns, rising expectations, and economic imperatives of medical technology is evaluated, and alternative methods of financing health-care services are reviewed.

NBA 685
Health and Welfare Policy Analysis Fall; Battistella. Three credits.

The evolving public-private partnership for payroll financing of social-security and welfare benefits is described. The social responsibility of business is examined against changes in the externalities of production and public opinion accompanying economic progress. The transition from entrepreneurial capitalism to managerial and postindustrial capitalism provides a framework for analysis. Health and related human services are assessed in terms of their impact on economic productivity. The course features an interdisciplinary approach and addresses ideology as a force in shaping health and welfare policy. NOTE: NBA 685 is open to juniors and seniors.

► *Research and Advanced Studies*

NMI 500–502
Directed Reading and Research Fall and spring. One, two, or three credits.
Research of special interest to the student is carried on under the supervision of school staff members. Registration is limited to students who have the approval of their advisers and of the faculty members involved.

NRE 502
Marketing Workshop Fall and spring; staff. No credit.

The workshop reviews and appraises selected trends in current research in marketing. Topics may vary from year to year but generally include stochastic models of choice behavior, advances in behavioral theories of marketing, public-policy-oriented marketing research, advances in methods of analysis of marketing data, and multidimensional scaling and measurement. The workshop is specifically for faculty members and interested doctoral students.

NRE 503
Doctoral Seminar in Economics Fall; Wiggins. Three credits.

The subject matter will be announced at the beginning of the fall semester.

[NRE 504]
Doctoral Seminar in Accounting Three credits. Not offered in 1986–87.
The seminar is designed to provide a rigorous and integrative exposure to those aspects of the literature in accounting and finance that are related to questions of accounting theory, research, and policy. Topics are chosen from the areas of competitive equilibrium, information choice, information economics, human information processing, empirical accounting research, and the economic theory of incentive systems.]

NRE 505
Finance Workshop Fall and spring; staff. No credit.

The workshop is devoted to critical analyses of unpublished theoretical and empirical research papers. Discussions are usually held at 4:00 p.m. on Wednesday. The workshop is specifically for faculty members and interested doctoral students.

[NRE 506]
Doctoral Seminar in Banking and Financial Markets Three credits. Not offered in 1986–87.]

[NRE 507]
Doctoral Seminar in Corporate-Finance Theory Three credits. Not offered in 1986–87.
The course covers the most-recent advances in corporate-finance theory. Topics include mergers, dividend policy, debt-equity policy, and unanimity. Special emphasis is given to information asymmetries and their role in corporate finance. Student presentations are an integral part of the course.]

NRE 508
Doctoral Seminar in Operations Management Fall; Weiss. Three credits.

The seminar is designed for faculty members, doctoral students, and advanced M.B.A. students. It covers mathematical programming, stochastic modeling, and simulation modeling of problems in operations management. Recent unpublished papers are discussed, and important recently published articles are examined in detail. Students taking the course for credit are required to write a paper concerning a significant application of operations-management techniques or a research topic of their choice.

[NRE 509]
Doctoral Seminar in Organizational Behavior Three credits. Not offered in 1986–87.
The seminar reviews and critiques current research in the field of organizational behavior. Faculty members and students present work in progress, in a spirit of free exchange. Topics include, but are not limited to, networks, behavior of floor traders in financial markets, turnover, strategies of trade associations, and market manipulation. Limited to Ph.D. students and faculty members.]

NRE 510
Applied Economics Workshop Fall and spring; Lind. No credit.

The workshop offers doctoral students and faculty members the opportunity to discuss applied research in economics. It focuses on topics in industrial organization as applied to antitrust issues, regulation, and general public-policy issues.

NRE 512
Accounting Workshop Fall and spring; Elliott. No credit.

The workshop offers doctoral students and faculty members an opportunity to present and discuss unpublished research papers in accounting. Those papers include working papers of doctoral students and faculty members at the Johnson School and papers of researchers from business schools at universities other than Cornell. The workshop usually meets at 4:30 p.m. on Monday.

NRE 513
Doctoral Seminar in Finance Fall; Wiggins. Three credits.

The seminar covers advanced topics in financial economic theory and applications. Recent published and unpublished research papers are discussed and evaluated. Students are encouraged to suggest topics of interest and to present their own preliminary research papers to the group.

NRE 514
Doctoral Seminar in Decision Aiding Spring; Russo. Three credits.

Current techniques for decision aiding are surveyed. Included are multiattribute utility analysis, knowledge-based (expert) systems, linear models for judgment, and several less-known techniques. The first goal of the course is to convey an understanding of the normative status of those techniques, the decision environments to which they may be applied, their acceptance by users, and their efficacy. The second goal is to enable participants to use the techniques to aid in making decisions in applied settings.

The Johnson School, housed in Malott Hall, is centrally located on Cornell's magnificent campus. Few other campuses can compare with it for sheer scenic beauty. Flanked on the north and south by splendid gorges, and overlooking Cayuga Lake, the campus is further distinguished by long quadrangles lined with oak and maple shade trees, carefully tended gardens, rambling paths and walkways, brooks, an apple orchard, and an arboretum. And there are countless other places to discover and explore.

The Ithaca campus has a total student population of around 17,500 and offers a scope of activities wide enough to suit everyone's tastes. There are concerts given by classical performers like Mstislav Rostropovich, Itzhak Perlman, and Ruth Laredo, and by rock, reggae, and jazz musicians and other popular performers; folk-music and dance concerts; and a yearly gospel-music festival. There are theatrical performances staged by internationally known directors; Shakespearean plays performed *alfresco* in the summer; excellent films, both old and new, screened on campus; and lectures by Nobel and Pulitzer Prize-winning researchers and authors. There are exciting art collections on display at the Herbert F. Johnson Museum of Art, housed in a building designed by renowned architect I. M. Pei that has received several prestigious architectural awards.

There are also sporting events to watch or to participate in year round. Cornell's hockey team attracts crowds when it plays in Lynah Rink. Cornell's basketball team has recently been a contender for the Ivy League title. Sports fans also attend lively lacrosse matches, football games, heptagonal track meets, and numerous other competitive sporting events.

For fitness enthusiasts, there are gymnasiums for working out, two large pools for swimming, outdoor and indoor tracks, a fitness center, saunas, numerous tennis courts, riding stables, and squash and basketball courts. There are also bicycling, boating, and sailing clubs that take advantage of the terrain and of nearby Cayuga Lake.

Cornell is located in Ithaca, New York, a small city of character and vitality that has been greatly influenced by its close ties to the university. Ithaca offers to residents and visitors a broad range of community activities and cultural events throughout the year. Some of

Student Life



Above: *Relaxing on Malott Hall's southwest wall. Opposite:* *A quiet moment under one of Cornell's large shade trees. Few other campuses can compare to ours for sheer scenic beauty.*



the features that make Ithaca special are farmers' markets and a food cooperative that feature local produce; a pedestrian commons in the heart of the city, designed by a Cornell professor of landscape architecture, that has received awards for its innovative design; two experimental theater companies; eleven cinemas; three dance companies; a rich variety of concerts and club performances; a yearly community festival; and an international video festival.

Ithaca is part of the Finger Lakes region of New York State, a beautiful area of rolling hills, deep valleys, clear lakes, open countryside, state parks, and year-round recreational facilities. Excellent sailing, swimming, skiing—both cross-country and downhill—hiking, and other outdoor activities are available. There are vineyards in nearby Hammondsport and Penn Yan and the Corning Glass Works Museum in Corning to visit.

Ithaca, which is serviced by USAir and Piedmont airlines, is one hour by plane and five hours by car from New York City, and other major metropolitan areas—Boston, Pittsburgh, Washington, D.C., Chicago—are easily accessible by air. For more information on getting to Ithaca, see pages 68–71.

University-owned Housing for Single Students

Coeducational graduate housing is available in Sage Hall, Schuyler House,

112 Edgemoor Lane, and Thurston Court Apartments. Sage Hall, situated in the center of the campus, houses 151 students and has dining facilities. Schuyler House, situated near campus in the Collegetown area, houses 151 students. One twelve Edgemoor Lane, situated on lower West Campus, houses 20 students. Thurston Court Apartments, situated on Thurston Avenue in the North Campus area, has eighteen units, which range from one to three rooms. The apartments are usually rented to continuing graduate students.

For students seeking an international living experience, the Jerome H. Holland International Living Center, on North Campus, provides housing for graduate and undergraduate students. About half of the residents are from foreign countries. Graduate students may also apply to the following residential program houses: Ecology House, Risley Residential College for the Creative and Performing Arts, Language House, and Ujamaa Residential College.

Detailed information on those residence units is provided in the booklets *Living on Campus: Housing for Single Students* and *Residential Program Houses*. Both are available from the Housing Assignment Office, Department of Residence Life, Cornell University, 1142 North Balch Hall, Ithaca, New York 14853-1401. When requesting either booklet, mention the name of the graduate program in which you are enrolled and ask for a housing application. For additional information about the programs and activities sponsored by the Jerome H. Holland International Living Center, write to Resident Director, Jerome H. Holland International Living Center, Cornell University, North Campus House 8, Ithaca, New York 14853-6006.

University-owned Housing for Families

The university maintains three family-housing complexes of unfurnished apartments: Cornell Quarters, Pleasant Grove Apartments, and Hasbrouck Apartments. One- and two-bedroom units are provided for 421 families. All units are moderately priced, comfortable, and situated near the campus. To be eligible for an apartment, you must be currently registered at, or admitted to, Cornell as a candidate for either an undergraduate or a graduate degree. In addition, you must meet at least one of the following criteria:



(1) be married and living with your spouse; (2) be married and living with your spouse and one or two legally dependent children; (3) be single and living with one, two, or three legally dependent children. Detailed information about the apartments can be obtained from Family Housing Office, Cornell University, Building 40, Hasbrouck Apartments, Pleasant Grove Road, Ithaca, New York 14850-2662, 607/255-5333.

Off-Campus Housing

Off-campus housing varies greatly in quality, cost, and desirability. We urge you to search for housing as soon as possible. A good first step is to obtain the brochure *Guide to Off-Campus Housing* from Off-Campus Housing, Dean of Students Office, Cornell University, 103 Barnes Hall, Ithaca, New York 14853-1601.

It is only through personal inspection that you can compare and evaluate housing. We therefore suggest that you visit Ithaca no later than the end of July for that purpose.

Listings of available housing are posted in the Off-Campus Housing office. Because the notices are constantly changing, it is not possible to mail listings or to maintain a waiting list of people seeking accommodations.

Rental prices of off-campus rooms range, on the average, from \$175 to \$250 a month for single rooms and from \$295 to \$395 a month for small efficiency quarters to more than \$500 a month for larger apartments accommodating families or groups of students.

Food Services

The university operates a wide variety of food services on campus, which are conveniently located near university housing and Malott Hall. Cornell Dining offers a range of meal plans designed to be economical without sacrificing quality or abundance (call 607/255-8581 for information). Food is served at the following locations: Willard Straight Hall, Robert Purcell Union, Noyes Center, Balch Halls, Sage Hall, Noyes Lodge, Risley Hall, the Big Red Barn, Hughes Hall, Stocking Hall, Martha Van Rensselaer Hall, the Veterinary Research Tower, and Warren Hall. Those facilities are open to all students on a cash or credit basis, whether or not they live in university residence halls or subscribe to a specific dining plan. There are also several grocery and sundry stores on campus and food-vending machines in all major buildings.



Health Services

The Department of University Health Services provides facilities for comprehensive medical care for students and their spouses. All regularly registered graduate students and their spouses are eligible. The cost for most services for students is included in university charges; the cost for spouses is on a fee-for-service or prepaid basis.

The following services are available at Gannett Health Center to all full-time students and spouses who have paid Cornell University tuition or the prepaid fee and who are in Ithaca:

1. unlimited visits to Gannett Health Center;
2. overnight care at Gannett Health Center;
3. ordinary laboratory work, X-ray examinations, and physical therapy services ordered by health services staff members that are performed on site;
4. counseling at the center by health services clinicians, by the Psychological Service staff, and by the sex counselor;
5. physical therapy.

The following health services are not available from the university:

1. hospital charges and fees for surgical procedures;
2. visits to physicians or health-care facilities other than those of the Department of University Health Services (consultations with specialists authorized by department physicians are covered by the elective health insurance plan discussed below);
3. prenatal or obstetrical care;
4. expenses of illness or injury occurring (a) outside of Ithaca while in transit to and from the university or on weekend trips and vacations, or (b) during the summer unless enrolled as a summer student.

► Gannett Health Center

Outpatient care and emergency after-hours care are provided at Gannett Health Center, 10 Central Avenue. The center's medical staff includes attending physicians, health associates, nurses, laboratory and radiology technologists, and physical therapists.

Medical care is available through the center twenty-four hours a day, 365 days a year. Regular hours for patient visits are 8:30 to 11:30 a.m. and 1:00 to 4:30 p.m. Monday through Friday, and 8:30 a.m. to noon Saturday (fall and

spring semesters only). Except for urgent problems, appointments are required for health services; they can be made by the staff at the main desk (telephone: 255-4082). Outside normal working hours and on holidays, a clinician either is at the center or can be reached by telephone. A student who has an urgent health problem should call either the health center (255-5155) or the Department of Public Safety (255-1111) to arrange to see a clinician.

► Elective Accident and Sickness Insurance

An elective health insurance plan for registered students and their spouses and dependents is available to cover hospitalization, consultations, sickness, accidents, and most services not provided by the Department of University Health Services. Students are automatically enrolled every year. Dependents must reenroll annually. Information about the insurance is available at Gannett Health Center, where a representative of the elective insurance company has an office. Students may also call 255-6363.

Employment for Students and Spouses

Although students enrolled in the Johnson School do find part-time employment as a means of earning needed funds, we advise you not to accept outside employment during your first semester, because of the heavy demands of the first-year courses. Our director of admissions, student adviser, and director of placement are all available to provide counseling and guidance to second-year students seeking employment at the university and in the Ithaca area.

As in many other university communities with unusually high numbers of well-educated men and women, finding employment in the Ithaca area can be difficult. Competition is very keen, and highly skilled people often accept work in semiskilled jobs outside their professions.

The key to finding employment in Ithaca is to apply in person during the summer. Since most students leave Ithaca at the beginning or end of the summer, the majority of job openings occur at those times. To learn about jobs offered by the university, students may inquire at the Student Employment Office, 203A Day Hall. Positions open to students during the academic year and summer are posted on job boards in the corridor adjacent to the Student



Bob Smiley, professor of economics and policy

Employment Office in Day Hall. They are also listed on CUINFO, which is accessible from any public computer-terminal facility on campus. Spouses may obtain employment applications at Staffing Services, 160 Day Hall, or at the Staffing Services Office, East Hill Plaza, Judd Falls Road. Opportunities for spouses include full-time, part-time, and temporary positions. The Office of Admissions and Student Affairs and the Office of Career Services of the Johnson School provide assistance whenever possible.

Student Enterprises and Associations

Black and Hispanic Graduate Business Students Association—The Black and Hispanic Graduate Business Students Association promotes activities and sponsors programs that enhance the academic, social, and professional welfare of Black and Hispanic students in the Johnson School. It serves as a liaison between minority students and the administration, the faculty, the alumni, and other students. Some of its activities include sponsoring guest speakers and round-table discussions of economic events that affect the minority community, and recruiting minority students for incoming classes.

Business Computing Group—The members of the Business Computing Group are students who are interested both personally and professionally in management information systems (MIS). They see the increasing role that computers are playing in business today as an opportunity for advancement. The group provides a chance for its members to explore career directions in MIS-related fields by sponsoring speakers from high-technology and MIS consulting industries. It also provides instruction and support for its members in computer-related areas. For example, it offers tutorials on the MIS applications of core-course material like Lotus 1-2-3, the spread-sheet program; dBase, the data-base management program; Minitab, the regression-analysis program; and Lindo, the linear programming package. Furthermore, the group has established a public-domain software lending library within the JGSM library in Malott Hall.

Consulting Club—Now in its second year, the Consulting Club is the third-largest club at the Johnson School. Its chief objective is to promote understanding of the management-consulting industry. To achieve that goal, the club sponsors presentations by company representatives, issues a newsletter, and assembles for students an extensive contact network of consulting firms. Club members meet annually in New York City with alumni involved in consulting to discuss the field and the unique aspects of those firms represented. The club also sponsored presentations at the Johnson School by McKinsey and Company; Arthur D. Little; Towers, Perrin, Forster, and Crosby; Cambridge Associates; and Cresap, McCormick, and Paget.

Cornell Associate Real Estate Council—The Cornell Associate Real Estate Council is a JGSM-sponsored club that aims to promote contact between alumni of the university and students interested in a career in real estate. It sponsors symposia, guest lectures, career counseling, and other activities that promote an interest in the real estate profession. It is linked with the Cornell Real Estate Council, a nationwide organization of Cornell alumni and friends involved in the field of real estate.

Cornell Business Women's Association—The Cornell Business Women's Association, whose

membership includes both men and women, seeks to inform Johnson School students about the opportunities and problems confronting women in the workplace. It achieves that goal in two ways: by providing members with opportunities to form friendships and professional relationships, and by sponsoring a dynamic program of colloquiums, lectures, and brown-bag seminars and discussions. In recent years the association has sponsored colloquiums on two-career couples and on women in the workplace, seminars on comparable worth and on the experiences of female international students in their native countries, and presentations on personal financial planning.

Doctoral Students Association—The Doctoral Students Association provides numerous services to Johnson School Ph.D. students. For example, members supply information to prospective students about the Johnson School's doctoral program, sponsor orientation programs for incoming students, and provide support services for continuing students. The association holds an annual faculty-student reception in the fall and other commemorative celebrations throughout the year. All Johnson School doctoral students are eligible to join.

Entrepreneurs Association—One of the Johnson School's most-popular clubs—last year there were sixty-five



members—the Entrepreneurs Association seeks to expose would-be entrepreneurs to the ideas of successful entrepreneurs, to teach them how businesses are launched. Accordingly, the association sponsors talks by guest speakers from such diverse fields as food services, trading, banking, venture capital, communications, and law. The speakers candidly share their entrepreneurial experiences with students and often provide them with role models for success. Through the association, students also undertake consulting and new-venture projects. In recent years they have commissioned, and successfully marketed, Johnson School silk ties and coffee mugs, have consulted for local businesses, and have been active in the Johnson School's Entrepreneur of the Year Program. They also have assisted the Don and Margi Berens Professor of Entrepreneurship in sponsoring guest lecturers.

Frozen Assets—The Frozen Assets is the JGSM women's hockey team. The team's assets range from the talents of ex-varsity hockey players to those of players still wobbly on ice skates. The team competes in intramural games against other Cornell graduate-student teams and also plays against the JGSM faculty team and the Puck Bunnies—the JGSM men's (very) amateur team. It also participates in an annual Ivy League business-school tournament.

International Business

Association—The International Business Association (IBA) is one of the largest of the Johnson School's professional associations. Its members, who come from all over the world, share an interest in international management and world affairs. IBA encourages all first-year students to plan and organize a wide range of events. Last year the association sponsored an international-marketing symposium with leading multinational corporations; speakers from various organizations; summer internships for first-year students; and an all-around-the-world party. The 1986–87 year promises to be even better; IBA plans to organize a symposium in international business and to host personalities of the international-business and international-political worlds.

JGSM Canadian Club—The JGSM Canadian Club was established to promote the unity and the interests of Canadian and Commonwealth residents attending the Johnson School. An important activity of the club is the compilation of a résumé book, sent to a host of prospective Canadian employers each year, that describes the experiences and skills of those who plan careers in Canada or abroad with Canadian firms. The club also wants to improve awareness at JGSM of the Canadian corporate world and to generate recruiting opportunities and

speaking engagements that will foster stronger ties between Cornell University and the Canadian business community.

JGSM Hockey Club (Johnson Icers)—The members of the JGSM Hockey Club (the Johnson Icers) skate in a men's competitive league from November through March and participate in Cornell's intramural hockey program. The team also competes in the Business School Ice Hockey Tournament, in Hanover, New Hampshire.

JGSM Student Association—The JGSM Student Association coordinates a variety of social events, including barn parties, cocktail hours, offbeat sports events, and a semiformal bash, held each spring and fall to counter the core-course blues. Association activities play up the lighter, brighter side of the Johnson School by providing students with an opportunity to relax, mingle with one another, and take a break from studies. Past activities included a "suitcase party" (a raffle whose winners flew to Puerto Rico to bask in the sun just for the weekend) and "puck bunny" hockey games between male and female M.B.A. students and between students and faculty members.

Malott Times—The *Malott Times* is the Johnson School's student newspaper. Its readership includes students, faculty members, and administrators. It is published five to six times each semester and is staffed exclusively by students, who serve as editors, writers, photographers, and advertising managers.

Marketing Association—The Marketing Association helps students go beyond the classroom walls to learn more about developments and careers in marketing. Each fall the association sponsors a series of company presentations by such leading consumer-goods firms as Procter and Gamble, General Mills, Richardson-Vicks, Frito-Lay, and Pet, as well as advertising agencies like J. Walter Thompson, Ogilvy and Mather, and Dancer Fitzgerald Sample, and high-technology firms like IBM, Hewlett Packard, and Du Pont. It also cosponsors a financial marketing symposium with the Old Ezra Investment Club and an international-marketing forum with the International Business Association. Its one-hundred-plus members explore their career interests through alumni contacts, résumé-writing and job-hunting



workshops, consulting projects, case competitions, and a newsletter, the *Malott Marketeer*.

Old Ezra Investment Club—The Old Ezra Investment Club is the finance club of the Johnson School. Members are interested in a variety of finance-related fields: corporate finance, investment banking, securities, commercial banking, treasury concerns, and accounting. The club's objective is to enhance the academic and professional experiences of students interested in those fields. In the 1985–86 academic year the club sponsored a New York City event in which students visited several Wall Street firms and attended a reception for Walter Wriston, former chief executive officer of Citicorp. Among its other activities and programs were numerous breakfasts and mock interviews with recruiters, corporate presentations, an annual financial-marketing colloquium, and a reception for the JGSM finance and accounting faculty. Members also participated in a semester-long stock-market game.

Operations Management Society—The Operations Management Society organizes activities for students interested in operations management or general management. Presentations by industry representatives and faculty members cover career opportunities and current issues and developments in the area of operations. Plant tours are arranged to supplement the presentations. The society also acts as a liaison between students and JGSM's Office of Career Services, to help coordinate career presentations and placement activities and to maintain reference material.

Sound Investments—The Sound Investments is a men's *a cappella* singing group made up of M.B.A. students. The group has performed at functions ranging from formal dinners and meetings at Cornell's Statler Inn and Herbert F. Johnson Museum of Art to impromptu concerts at local pubs, in return for liquid compensation. Always seeking ways to grow but retain its original character, the group seeks members with some background in singing and with a willingness to embarrass themselves in front of their peers and professors.

Student Committee on Professional Ethics—The Student Committee on Professional Ethics (SCOPE) was formed to promote the discussion of

ethical issues in business. It seeks to sensitize management students to all sides of a given issue, so that they will be better prepared to make decisions when ethical dilemmas arise. SCOPE, which has a very active membership, has in recent years arranged for talks on ethics in labor relations and has sponsored a panel discussion on the ethical implications of corporations' investing in South Africa. The committee also sponsors brown-bag lunches with university faculty members, at which ethical issues are debated. Topics addressed have included developing a personal code of ethics and the role of ethics in business. A prospective project is a forum on ethics and product liability.

Student-Faculty Committee—The Student-Faculty Committee (SFC) is the liaison between the students and the faculty and the administration of the Johnson School. It is composed of twelve student representatives elected by students and three faculty representatives appointed by JGSM's associate dean for academic affairs. As the representative student government organization of the Johnson School, SFC is involved in a wide variety of projects and activities, including orientation week, the Placement Council, and new programs to benefit students.

Management Forum

The Management Forum series takes place during the fall semester and presents visiting speakers who have a broad range of management backgrounds. Each forum focuses on various career options for students. It is a student-coordinated activity, and the topics covered each year reflect students' career interests. The forums are informal and help students to learn more about career opportunities in the companies represented, assess the corporate cultures at those companies, and determine if their own needs mesh with the attributes and values of the companies. In recent years the forum has hosted representatives from such organizations as McKinsey and Company, Prudential-Bache Securities, Eli Lilly and Company, S. C. Johnson and Son, Procter and Gamble Company, IBM Corporation, Booz-Allen and Hamilton, Merrill Lynch, and Chase Manhattan Bank, N.A.

Alumni Association and Alumni Executive Council

The Johnson School's Alumni Association, in existence for many years, has played an increasingly active role recently. A hundred alumni serve on the Alumni Executive Council, an associated group. Both groups are a vital part of the Johnson School. Their members maintain close ties with JGSM. They serve as guest lecturers in seminars, supply case materials to professors, interview prospective students for the Office of Admissions and Student Affairs, and assist graduating students in career planning and job searches.

Cornell Enterprise

Cornell Enterprise is a magazine produced and published twice a year by the Johnson School and distributed free to all students, faculty members, alumni, and friends. It contains interviews with alumni and members of the business community, like G. Michael Hostage, president and chairman of the Howard Johnson Company, and Roderick Chu, New York State commissioner of taxation and finance. It reprints talks of guest speakers at the Johnson School, like Helmut Schmidt, former chancellor of West Germany, and Jehan Sadat, former first lady of Egypt. It publishes articles by faculty members and keeps its readers informed about the Johnson School and its students, faculty, alumni, and friends.



Criteria

If you hold a baccalaureate degree from an accredited college, university, or technical school in the United States or abroad, you are eligible to be admitted to the Johnson School's M.B.A. program. When you apply, our admissions committee uses a variety of facts to evaluate your application. Among them are academic records, test results, and work experience. We also rely on what we learn about you during the interview. We hope to find a good fit between your academic goals and our program. We look carefully at you as a total person and take into consideration your work experience, your involvement in extracurricular activities, and your goals. Our criteria are both objective—for example, academic records and test results—and subjective—for example, interview contents. Work experience is not required; over 20 percent of the students we accept have no work experience.

Admission is selective. We accept those candidates whom we consider to be most attractive to the Johnson School. That means that sometimes we select applicants with work and life experiences, personalities, and philosophies that complement our school's characteristics rather than applicants with top grades and high GMAT scores.

It is the policy of Cornell University actively to support equality of educational and employment opportunity. No person shall be denied admission to any educational program or activity or be denied employment on the basis of any legally prohibited discrimination involving, but not limited to, such factors as race, color, creed, religion, national or ethnic origin, sex, age, or handicap. The university is committed to the maintenance of affirmative action programs that will assure the continuation of such equality of opportunity.

Cornell University is committed to assisting those handicapped students who have special needs. A brochure describing services for the handicapped may be obtained by writing to the Office of Equal Opportunity, Cornell University, 234 Day Hall, Ithaca, New York 14853-2801. Questions or requests for special assistance may also be directed to that office.

Admission to the Johnson School



Above: Ming En Chen '85, flanked by his family at commencement. Opposite: Jovita Thomas '86. Our graduates say that their Cornell degrees opened doors for them and provided the tools needed to succeed professionally.



Undergraduate Preparation

Because graduate-level professional education is so specialized, we welcome applicants with a broad undergraduate education. Taking courses in business administration as an undergraduate does not necessarily enhance your chances for admission to the Johnson School. About 90 percent of our students did not major in business as undergraduates.

No specific courses are required for admission, but because a number of core courses and electives assume a working knowledge of algebra and basic calculus, we suggest that you strengthen your background in mathematics. That is particularly important if your background is in the social sciences and liberal arts, and you have had little or no work in mathematics. We also advise students who plan to enter our program to include courses in economics, American government, the humanities, and the behavioral and social sciences in their undergraduate studies.

If you are unsure whether your calculus background is sufficient, you should know that a working knowledge of the following topics is assumed when the first semester begins:

1. the concept of a limit
2. the differentiation and integration of polynomials, exponential functions, and logarithmic functions
3. the partial differentiation of simple algebraic functions
4. the use of differentiation to find maxima and minima
5. the use of integration to find areas
6. the use of vectors and matrices to represent and solve systems involving several equations

You may enhance your mathematics background by taking an introductory calculus course before coming to Cornell. If you have had previous work in calculus but feel you need a review, the Johnson School offers the Pre-enrollment Mathematics Review Course each August. The two-week course is an intensive review of algebra as well as an introduction to, and a review of, basic calculus. Dates and tuition fees for next summer's course will be announced in May 1987. For a brochure on the program or for further information, write to the Office of Admissions and Student Affairs, Johnson Graduate School of Management, Cornell University, Malott Hall, Ithaca, New York 14853-4201.



Charlotte Rosen, senior lecturer in management communication

Although a majority of our entering students have had some course work in, or work experience with, computers, previous work in computer programming is not required for admission, nor is conventional programming required in any of the core courses. The core course in management information systems does involve programming in a data-base management system (dBase), but that can be done without having had previous experience in programming. The most valuable preparation in computing that you can bring to the Johnson School is reasonable competence in the basic "personal productivity tools"—in particular, the MS-DOS operating system and a word-processing and a spread-sheet system, preferably Lotus's 1-2-3. Workshops in those topics are offered in the early fall, however, for students who enter without such competence.

Graduate Management Admission Test

We require all applicants to take the Graduate Management Admission Test (GMAT), a three-and-a-half-hour aptitude test designed to measure certain mental skills important to the graduate study of management. The test is not a measure of achievement or knowledge in any specific subject area, and those who take the test are neither required nor expected to have had undergraduate preparation in management subjects.

To obtain an application for the GMAT and an explanatory pamphlet, write to GMAT, Educational Testing Service, CN6103, Princeton, New Jersey 08541-6103. The completed test application and payment of the testing fee should be received in Princeton at least three weeks in advance of the test date if you are taking the test in the United States or Canada, and at least six weeks in advance if you are taking it in another country.

The GMAT is given at many education centers in the United States and abroad, although it is not given at every test center on every date. If the testing center nearest you is a long distance from your residence, the Educational Testing Service will, on request, arrange to administer the test at a more-convenient location on the same date, but you must make arrangements for such testing at least two months in advance.

If you are currently enrolled in college, you should take the test during

your senior year, even if you intend to defer application for admission. The test dates for 1986–87 are:

<i>Regular Saturday Administration</i>	<i>Monday Administration</i>
October 18, 1986	October 20, 1986
January 24, 1987	January 26, 1987
March 21, 1987	March 23, 1987
June 20, 1987	June 22, 1987

Monday test dates are limited to those whose religious convictions prevent their taking tests on Saturdays.

You may take the test a second time, but doing so is not encouraged unless you were ill the first time or were confronted with some other serious handicap or emergency. The average increase in retaking the test is about thirty points; however, 25 percent of those who take the test over again actually score lower the second time. The score report of each applicant has space for two previous GMAT scores. In general, if the test is taken more than once, the Johnson School Admissions Committee uses the higher set of scores.

January Admission

New students are permitted to enter the Johnson School only at the beginning of the fall semester. Because of the integrated and sequential order of our core program, midyear admission in January is not permitted.

Deferred Admission

If you are admitted but decide to pursue employment or to delay enrollment because of medical or financial problems, you may request a deferral. Deferral is granted for up to two years. To apply for deferral, submit your request in writing to our office. If a deferral is granted, we will ask you to send a \$350 confirmation deposit to reserve a place in a future class.

We also guarantee future admission to a number of applicants each year on the condition that they work for two years before enrolling. Applicants accepted under those conditions may confirm their acceptance of our offer at any time within six months of receiving it.

Application Procedures and Timetable

Our application is in two parts. Part 1 is included at the center of this catalog. To apply for admission, complete Part 1 and submit it in the envelope supplied, along with payment of the application processing fee. We determine if and



when we will interview you from information supplied by you on Part 1. You should mail both Part 1 and the fee payment to us as early as possible during the academic year preceding the year in which you would like to attend. We must receive them no later than March 1.

As soon as we receive Part 1 and payment of the application processing fee, we will send you Part 2 of the application. We must have a completed Part 2 by April 1. We strongly recommend that you take the required GMAT in October or January. If you are completing the senior year of your undergraduate education when you apply, make sure that the registrar's office at your undergraduate college sends your fall-term transcript to the JGSM Office of Admissions and Student Affairs as soon as it is available.

Our admission decisions are made by a committee of three members. *All* completed applications are read by the committee. The two-part application process allows us to forward applications to the committee soon after we receive Parts 1 and 2. It is not unusual for applicants to receive a decision days after our office receives all application materials.

Decisions are made on a rolling basis. We begin as early as December and continue through April. During the height of the admission cycle, however, some of our responses may be delayed because of the large number of applications we process. We *do* consider *completed* applications after April 1, but the opportunities to be interviewed, and consequently the chances of being admitted, are greatly reduced after that date.

Documents

A complete application for admission to our M.B.A degree program consists of the following:

1. *Part 1 of the application*—Due in our office (the Office of Admissions and Student Affairs) by March 1 (Part 1 and a return envelope are included at the center of this catalog).
2. *Payment of application fee*—Due in our office by March 1, along with Part 1 of the application. Application fees are payable to Cornell University and are as follows: for regular applicants, \$50; for foreign applicants, \$80; for reactivations, \$20.
3. *Graduate and Professional School Financial Aid Service (GAPSFAS) form*—The form, which should *only* be filed if you are applying for financial aid, may be obtained from our office or from a financial-aid office at any college or university. It is due at GAPSFAS, Educational Testing Service, Princeton, New Jersey 08541-6660, by February 15. If it is received after that date, we cannot ensure that you will be considered for financial aid.
4. *A copy of your most-recent tax returns*—The copy, which should *only* be sent if you are applying for financial aid, is due in our office by February 15. You must also send us a copy of your parents' most-recent tax returns if you do not meet federal guidelines for financial independence.
5. *Part 2 of the application*—Due in our office by April 1. As soon as we receive Part 1 and payment of the application fee, we will send you Part 2 of the application. If you meet the March 1 deadline for Part 1, you should have ample time to obtain, complete, and submit Part 2 by April 1. Part 2 includes request forms for an essay, recommendations, and transcripts.
6. *Results of the GMAT and, if required, of the Test of English as a Foreign Language (TOEFL)*—The tests should be completed by the January testing dates.
7. *Transcripts of all previous academic work beyond the secondary level*—Due in our office by April 1. NOTE: Before fall registration, entering students must have on file in our office a final degree-granting transcript from each institution attended.



Above: John McClain, professor of quantitative analysis. Opposite: Jay Russo, associate professor of marketing and behavioral science.

8. *Two confidential letters of evaluation*—Due in our office by April 1. The forms for the letters are contained in Part 2. The letters should be from persons who have known you well for more than a year, preferably both classroom instructors and supervisors at work.

You are responsible for assembling all application materials and ensuring that they are received by our office on or before April 1. Because of space limitations, we cannot guarantee that completed applications received after that date will be considered.

Interview

We consider the interview an important part of the admission procedure because it provides us with a full picture of you, beyond your academic records and test scores. However, because of the large number of applications, we can only interview applicants who are competitive. We determine that by reviewing information supplied on the application.

Please *do not* contact our office to arrange for an interview. We will contact you during the application process. Interviews will be scheduled to take place on campus, near your home, or by telephone.

Admission Deposit

After you are accepted for admission, we ask you to confirm your September enrollment by sending a deposit of \$350, payable to Cornell University, by June 1. Of that \$350, \$50 becomes the university registration fee, and the remaining \$300 is applied toward tuition. The deposit is \$350 regardless of any prior connection with Cornell, the only exception being for those Cornell students admitted under combined programs with other departments and colleges of the university. Students receiving any form of financial aid that will cover full or partial tuition are still expected to remit the full deposit. If you decide after June 1 not to enroll in the Johnson School, the admission deposit is not refundable.

Health Requirements

As an entering student, you are expected to assume personal responsibility for fulfilling the following health requirements adopted by the Cornell University trustees. Permission to register for a new semester will not be granted unless all health requirements pertaining to the previous semester have been fulfilled.

► Health History

Once you have been accepted for admission, you must promptly submit your health history to Gannett Health Center on forms supplied by the university. A university physician reviews the material before it becomes part of your permanent health record. All information given is confidential. After arriving at Cornell, you may be given an appointment with a physician at the center if your medical history indicates a need for that. If you have been away from the university for more than a year, when you reenter you must submit an interim health history on a university form.

► Immunizations

Cornell requires that all new students be adequately immunized against tetanus, diphtheria, measles, and rubella before entering the university.

Information for Applicants from Foreign Countries

From its beginning Cornell University has encouraged the attendance of students from countries other than the United States. In 1985–86 there were about seventeen hundred international students registered at the university. About 1,400 were graduate students. The 1986 incoming class at JGSM has thirty-six international students. The Johnson School welcomes applications from qualified persons from other countries, but such applicants must have qualifications that compare favorably with those of applicants from the United States. The application procedure for applicants from abroad is identical to that for United States citizens. The April 1 deadline applies in all cases.

In the United States most men and women who enroll in a college or the undergraduate division of a university have completed twelve years of study in primary and secondary schools. Students are usually admitted to the graduate division of a university only after receiving a bachelor's or comparable degree, normally awarded after four years of college or university education.

Study techniques, classroom practices, teaching methods, and examinations in the United States can differ significantly from those in other countries. Regular class attendance, active participation in group discussions, frequent written examinations, extensive reading, and

required papers are all part of the pattern of education in the United States. Grades are often based not only on written examinations but also on papers, reports, research projects, and class participation. To complete the demanding program of study and derive full benefit from an educational experience in this country, you must adjust to those practices.

Entering students must have a mastery of the English language. Lectures, discussions, and examinations at Cornell are conducted in English, and you must be able to follow lectures closely and express thoughts quickly and clearly in both speaking and writing. To complete the rigorous reading assignments, you must read English with ease.

Many international students who are accepted refine their skills in Cornell's summer intensive English program before beginning study at JGSM.

► Test of English as a Foreign Language (TOEFL)

For all applicants whose native language is not English, the Test of English as a Foreign Language (TOEFL) is also required. TOEFL and the other tests mentioned are administered throughout the United States and in many major cities of the world by the Educational Testing Service. Inquiries and applications may be addressed to the Educational Testing Service, Princeton, New Jersey 08540. Although the tests are administered five times each year, taking the examinations in the fall is most convenient for the Johnson School and for you. You are responsible for arranging to have your test results sent directly to the Office of Admissions and Student Affairs, Johnson Graduate School of Management, Cornell University, Malott Hall, Ithaca, New York 14853-4201.

TOEFL Testing Dates

August 2, 1986	January 10, 1987
October 25, 1986	March 14, 1987
November 15, 1986	May 9, 1987

► Financial Support

Applicants from foreign countries should realistically assess their financial needs for the period during which they will be pursuing graduate study in management. The Johnson School does not offer any kind of financial aid to international students. Such students are therefore required to attest before leaving their country that they possess

adequate financial support from their own funds or from other sources to cover all expenses for the entire two-year course of study.

The United States Immigration Service prohibits international students who enter the United States on visas from engaging in part-time employment during the first year in the United States. Furthermore, the United States visa-granting authority in the country of origin (ordinarily the United States embassy) requires proof that sufficient funds are available for students to cover expenses for their entire course of study before they are granted either a student visa (F-1) or an exchange visa (J-1). Requirements for immigration visas are even more stringent. Estimated living costs for students attending Cornell are summarized on pages 60–61 of this catalog.

The publication *Study Abroad*, published by UNESCO and available at United States Information Agency libraries and from UNIPUB, may help a student find financial support. *Handbook on U.S. Study for Foreign Nationals*, compiled by the Institute of International Education, 809 United Nations Plaza, New York, New York 10017, provides information on awards for study and research. Also available from the Institute of International Education is a pamphlet entitled *Graduate Study in the United States: A Guide for Foreign Students*.



Profile of 1986 Entering Master's-Degree Candidates

Mean age 25.9 years
Mean GMAT score 630
Mean grade point average 3.26
Full-time work experience 67%
Female 22%
Minority 2%

Geographic Distribution

Mid-Atlantic 41%
Southeast 14%
New England 12%
Pacific Coast 11%
Midwest 6%
West 5%
International 11%

Undergraduate Majors

Business administration 25%
Economics 19%
Engineering 15%
Science and mathematics 13%
Social sciences 11%
Humanities 6%
Other 11%



Above: Joe Bugliari, professor of agricultural and business law and dean of the University Faculty. Opposite: Admissions office staff members Shika Jones and Mary Ellen Hartley.

American Institutions of Higher Learning Represented by Johnson School Students in 1985-86

Adelphi University
Agnes Scott College
Allegheny College
American University
Arizona, University of
Arizona State University
Babson College
Barnard College
Bates College
Baylor University
Boston College
Boston University
Bowdoin College
Brandeis University
Bridgeport, University of
Brigham Young University
Brown University
Bucknell University
California, University of,
Berkeley
Davis
Irvine
Los Angeles
San Diego
Santa Barbara
Santa Cruz
California State University
Chico
Los Angeles
Northridge
Carleton College
Carnegie-Mellon University
Case Western Reserve University

Cincinnati, University of
City University of New York, Baruch College
City University of New York, Queens College
Claremont McKenna College
Clark University
Colby College
Colgate University
Colorado, University of
Colorado College
Colorado State University
Columbia University
Connecticut, University of
Cornell University
Dartmouth College
Delaware, University of
Dickinson College
Drexel University
Duke University
Emory University
Fairfield University
Fairleigh Dickinson University
Florida, University of
Franklin and Marshall College
Franklin Pierce College
Gannon University
George Washington University
Georgia, University of
Georgia State University
Golden Gate University
Hamilton College
Harvard University
Harvey Mudd College
Haverford College
Hawaii, University of
Hobart College
Holy Cross, College of the
Houston, University of
Illinois, University of
Illinois State University
Iowa, University of
Johns Hopkins University
Kentucky, University of
Lawrence University
Lehigh University
Le Moyne College
Macalester College
Marist College
Marquette University
Massachusetts—Amherst, University of
Massachusetts Institute of Technology
Merrimack College
Michigan, University of,
Ann Arbor
Michigan State University
Middlebury College
Minnesota at Minneapolis Saint Paul, University of
Missouri at Rolla, University of
Moorhead State University
Mount Holyoke College
Muhlenberg College
Nevada at Reno, University of
New Hampshire, University of

New Mexico, University of
 New York, State University of, at
 Albany
 Binghamton
 Buffalo
 Stony Brook
 New York College, State University of, at
 Cortland
 Fredonia
 Oneonta
 North Carolina, University of
 North Dakota, University of
 Northeastern University
 Notre Dame, University of
 Occidental College
 Ohio State University
 Ohio Wesleyan University
 Pennsylvania, University of
 Pennsylvania State University
 Pittsburgh, University of
 Pomona College
 Princeton University
 Purdue University
 Rensselaer Polytechnic Institute
 Rochester, University of
 Rochester Institute of Technology
 Rutgers—the State University
 Saint Ambrose College
 Saint John's University
 Saint Lawrence University
 Saint Thomas Aquinas College
 Santa Clara, University of
 Scranton, University of
 Seattle University
 Skidmore College
 Smith College
 South, University of the
 Southeast Missouri State University
 Southern California, University of
 Southern Illinois University at
 Carbondale
 Southern Methodist University
 Stanford University
 Stevens Institute of Technology
 Swarthmore College
 Syracuse University
 Texas, University of, at
 Austin
 Texas A and M University
 Texas Tech University
 Trinity College
 Trinity University
 Tufts University
 Union College
 Union University
 United States Military Academy
 United States Naval Academy
 Utah, University of
 Vanderbilt University
 Vassar College
 Vermont, University of
 Villanova University
 Virginia, University of
 Virginia Polytechnic Institute and State
 University

Wake Forest University
 Washington, University of
 Washington State University
 Wellesley College
 Wesleyan University
 Western Connecticut State College
 Western New Mexico University
 Willamette University
 William and Mary, College of
 Williams College
 Wisconsin, University of,
 Madison
 Milwaukee
 Wooster, College of
 Worcester Polytechnic Institute
 Xavier University
 Yale University
 Yeshiva University

Foreign Institutions of Higher Learning Represented by Johnson School Students in 1985-86

Aoyama Gakuin Daigaku
 Bangalore University
 Chung-Ang University
 Delhi University
 Ecole des hautes Etudes commerciales
 du Nord
 Ecole supérieure de Commerce de Paris
 Hitotsubashi University
 Institut d'Etudes politiques de Paris
 Institute of Chartered Accountants,
 India
 Instituto tecnológico y de Estudios
 superiores de Monterrey
 Katholieke Universiteit te Leuven
 Korea University

Kyoto University
 London Business School
 Manila Central University
 MBA Institute
 McGill University
 Modern School of New Delhi
 National Defence Academy of Japan
 National Taiwan University
 National University of Singapore
 Osaka University
 Seoul National University
 Saint Stevens College, Delhi
 Saint Xavier's College, Bombay
 Sydenham College of Commerce and
 Economics, Bombay
 Tel-Aviv University
 Universidad Católica Andrés Bello,
 Caracas
 Universidad de Buenos Aires
 Universidade federal do Rio Janeiro
 Università degli Studi di Roma, "La
 Sapienza"
 Université catholique de Louvain
 Université libre de Bruxelles
 University College, Dublin
 University of Bath
 University of Bombay
 University of Delhi
 University of Neuchâtel
 University of the Philippines
 University of the West Indies
 University of Tokyo
 University of Toronto
 University of Western Australia
 Wasada University
 Yokohama National University



A

t the Johnson School, we are committed to admitting the best and brightest applicants, without regard to financial status.

Given the inevitable changes in existing loan programs and the increasing costs connected with a graduate management education, providing adequate scholarship funding will continue to be an essential concern at the Johnson School. Our goal is to be able to offer at least a partial scholarship to every one of those "best and brightest" applicants who have a demonstrated need for financial assistance. Our strong commitment to that goal is making the possibility a reality for an increasing number of our students each year.

Costs

Tuition at the Johnson School is currently \$6,050 a semester. New students who have not previously enrolled at Cornell pay a registration fee of \$50. For additional information about the rules of payment at Cornell, see the publication *Introducing Cornell*, available from the Undergraduate Admissions Office, Cornell University, 410 Thurston Avenue, Ithaca, New York 14850-2488.

NOTE: Tuition in 1987-88 will reflect any increases deemed necessary by the administration. The amount, time, and manner of payment of tuition, fees, or other charges may be changed at any time without notice.

Estimated living costs for the 1986-87 academic year are presented below. Cornell University establishes the guidelines yearly, based on the cost of

Costs and Financial Aid



Above: A student pores over an assignment. Opposite: Dean Curtis Tarr: "Offering an opportunity to redirect careers is an important function of a school like ours, and it is part of the reason that students come here."

ESTIMATED LIVING COSTS FOR THE 1986-87 ACADEMIC YEAR

Single Student

Tuition	\$ 12,100
Room	2,730
Board	1,630
Books	600
Personal	2,540
Total	\$ 19,600

Married Student

Tuition	\$ 12,100
Room	3,660
Board	2,340
Books	600
Personal	4,200
Total	\$ 22,900

(plus \$1,650 for each dependent child)





living in the Ithaca area. The estimated cost for housing is based on a shared dormitory accommodation. You may find it more expensive or less expensive to live off campus than the guideline figures suggest, depending on your living arrangements.

Financial Awards from University General Funds

All financial-aid awards at the Johnson School are based on both need and merit. Scholarships are available for students enrolled in our school. Application for financial aid is made separately from application for admission, and awards of aid are made independently of admission decisions.

The Johnson School is a participant in the Graduate and Professional School Financial Aid Service (GAPSFAS), which permits candidates to request aid at several participating schools in

one application, thus eliminating the need to provide information to each school. The GAPSFAS form may be obtained from our Office of Admissions and Student Affairs or from a financial-aid office at any college or university. If you are applying to the Johnson School and are requesting financial aid, you must file a GAPSFAS application for financial aid with the Educational Testing Service. The form should be sent directly to GAPSFAS, Educational Testing Service, Princeton, New Jersey 08541-6660. *To ensure that you receive timely consideration for financial aid, you should send your form to GAPSFAS no later than February 15.*

In addition, you must submit a copy of your most-recent tax returns to the Johnson School by February 15. You must also submit a copy of your parents' most-recent tax returns if you do not meet federal guidelines for financial independence. No awards can be made unless we receive those copies.

Students who apply for financial aid are expected first to have exhausted all possible outside sources of assistance. Only in that way can we adequately respond to those students who have no access to outside sources of support. The Johnson School requires financial information about the parents of all applicants who want to be considered for scholarship grants, even if the applicants are financially independent.

Students who enroll without financial assistance from the Johnson School should not expect to receive aid from us during their second year. Although the Financial Aid Committee attempts to respond to requests of second-year students for assistance, our policy and perceived obligation is to respond first to requests for continued financial aid from those students who received assistance their first year. We will try to help if an emergency arises or a sudden change in a student's financial situation occurs, but such help will generally be in the form of a loan.

Any questions or problems concerning financial aid should be addressed to the Office of Financial Aid, Johnson Graduate School of Management, Cornell University, 312 Malott Hall, Ithaca, New York 14853-4201.

Special Awards

In addition to the general funds of the Johnson School and of the university for scholarships, the following special awards are available:

Ruth and Morris Abner Scholarships.
Allied Corporation Foundation
Fellowships.

American Can Company
Scholarship, awarded on the basis of academic merit to a second-year business student studying finance.
Neal Dow Becker Scholarship Fund
Awards.

Bristol-Myers Company Scholarship, awarded to a minority student.

William H. Burns Scholarship of the
Tompkins County Trust Company,
awarded to a resident of Tompkins
County.

Carnation Scholarships.

Chase Manhattan Bank Scholarship,
awarded to a minority student.

Chemical Bank Scholarship.

Continental Bank Scholarship,
awarded to a minority student.

John W. de Forest Memorial
Fellowship, awarded to a Canadian
citizen or a member of the Cornell
Chapter of the Delta Upsilon
fraternity who is a candidate for the
M.B.A. degree.

Emerson Electric Scholarship,
awarded to students with interests in
manufacturing.

Exxon Minority Fellowships.

FMC Prize, awarded on the basis of
merit to a second-year student.

Thomas Gellert Memorial
Scholarship, awarded to a graduate
of Cornell's College of Agriculture
and Life Sciences.

GTE Graduate Fellowship.

Harris Entrepreneurial Scholarship,
awarded to a student who has
demonstrated entrepreneurial
aptitude.

Hemmeter Prize, awarded to the
student group that produces the best
business plan for an entrepreneurial
venture in the JGSM course
Entrepreneurship and Enterprise.

S. C. Johnson and Son, Inc.,
Fellowship, awarded to a minority-
group candidate for the M.B.A. degree.

Junior Achievement Scholarships,
awarded to students who have
participated in, or who have been
counselors in, the Junior
Achievement Program. Applicants



interested in the awards should indicate their past association with the Junior Achievement Program on the application for admission.

Chuji Kabayama Fellowship, awarded to a student from Japan.

Ada Howe Kent Foundation Scholarships.

Lester B. Knight Scholarships, eight \$4,000 scholarships for students in the Joint M.Eng./M.B.A. Program, provided by a gift from Lester B. Knight '29 to the Johnson School and the College of Engineering.

Stanley H. Krusen Scholarship Fund.

E. H. Litchfield Scholarship Fund, established in honor of the late Edward H. Litchfield, former dean of the Johnson School, and provided by contributions from faculty members of the Johnson School.

H. Beech Lockwood Scholarship, established in memory of H. Beech Lockwood by the class of 1951.

Donald McAllister Prize, awarded annually, and by competition, to the student writing the best essay on specialized business publications.

Deane W. Malott Fellowship of the Owens-Corning Fiberglas Corporation, in honor of Mr. Malott, president emeritus of Cornell University.

Deane W. Malott Fellowship/Teagle Foundation, in honor of Mr. Malott, president emeritus of Cornell University.

Menahem and Claire Monsoor Scholarship.

Henry Morgenthau, Jr., Fellowships.

Edward R. Novicky Scholarship Fund, awarded in memory of Edward R. Novicky '76.

Michael R. Riordan Scholarship.

Nelson Schaenen Special Loan Fund, awards low-interest loans to students who show financial need as well as exceptional academic merit and professional potential. The fund was established in 1985 by Mrs. Rose Schaenen in memory of her husband, Nelson Schaenen, Sr., B.S. '22. Also contributing to the fund are David Schaenen, Nelson Schaenen, Jr., and Constance B. Strand. Nelson Schaenen, Sr., was chief executive officer of Smith Barney and Company.

J. Stanford Smith Scholarship, in memory of the Johnson School's executive-in-residence from 1981 to 1983 and funded by donations from students, faculty and staff members, and business colleagues.

Kathryn A. Smith Scholarship.

William S. Smith Memorial

Scholarship, awarded to a candidate with career interests in financial management.

Spencer Stuart and Associates Scholarship.

Student Agencies Fellowship, provides a three-year scholarship to a student who directs the organization's venture fund.

Walter C. Teagle Memorial Fellowship of the Standard Oil Company (New Jersey).

David A. Thomas Scholarship, awarded to the most-outstanding member of the top 10 percent of the second-year class in honor of dean emeritus David A. Thomas.

TRW Minority Scholarship.

David and Sandra Yeater Scholarship Fund.

With the exception of the Junior Achievement awards, there are no special application procedures for the awards listed above. The Financial Aid Committee makes all scholarship awards on the basis of both financial need and merit and decides which candidates are best qualified for specific scholarships. Candidates need only file the GAPSFAS forms, mentioned earlier, to be considered for the specified awards or the awards from the general funds.

New York Tuition Assistance Program

If you are a master's-degree candidate at the Johnson School and have been a legal resident of New York State in the preceding year, you are eligible for the Tuition Assistance Program for each term in which you are registered as a full-time degree candidate. The amount of the award is based on the net taxable balance of your income and the income of those responsible for your support, as reported on the New York State income tax return for the previous calendar year.

Further information and application forms may be obtained by writing to New York Higher Educational Services Corporation, Student Financial Aid Section, Empire State Plaza, Tower Building, Albany, New York 12255.



Dale Morse, associate professor of accounting

G.I. Bill Assistance

If you are a veteran or if you are otherwise eligible for G.I. Bill payments, you should contact the Office of the University Registrar, Cornell University, 222 Day Hall, Ithaca, New York 14853-2801. You should have a copy of the DD-214 form or other proof of eligibility. For advance payment, a request must be presented in writing on the proper form. Enough time should be allowed so that the office can process and submit the form to the Veterans' Administration regional office at least thirty days before you register.

Guaranteed Student Loan (GSL) Program

The GSL program was established by the Higher Educational Act of 1965. The program is usually operated by state agencies and is specifically designed to provide deferred-payment private loans to full-time students. Although the program differs somewhat from state to state, the various state programs are similar in that commercial lenders make loan funds available at 7 or 9 percent, and the state and federal governments pay the interest charges while the student borrower is enrolled in an accredited education institution.

The maximum yearly loan disbursement to each student is \$5,000, although some lending institutions may not agree to lend the full amount. The cumulative limit of loans for graduate students under the program is \$25,000 (which includes outstanding undergraduate loans). Students interested in applying for such loan assistance should begin the process by contacting a loan officer at a local bank or lending institution. All students requesting financial assistance from the Johnson School or Cornell University are expected to apply for a GSL.

Auxiliary Loans to Assist Students (ALAS)

Auxiliary Loans to Assist Students (ALAS) are available to supplement GSLs and other financial-aid resources. Commercial lenders offer federally guaranteed loans at 12 percent; interest payments are due while the student is in school. The maximum yearly loan disbursement for each student is \$3,000.

Loans Administered by Cornell University

► *National Direct Student Loan (NDSL) Program*

Cornell University is a lending agent for federal funds from the National Direct Student Loan (NDSL) program. The NDSL funds available are used to help students meet financial need. The NDSL program is essentially the same as the GSL program except that the interest on NDSL funds is only 5 percent a year, beginning six months after the student graduates, and the federal estimate of need tends to be strict.

► *University Loan Program*

Cornell also has its own long-term loan program to complete your financial-aid package. University loans are offered at 12 percent interest, and repayment is deferred until three months after you leave Cornell. The loans must be repaid within ten years.

► *Work-Study Awards*

Work-study awards are part of the financial-aid package. To apply for a work-study position you must first verify your eligibility with the Office of Financial Aid, Johnson Graduate School of Management, Cornell University, 312 Malott Hall, Ithaca, New York 14853-4201.



D

ean Curtis W. Tarr, in assessing the Johnson School's strengths, cites the quality of our faculty and staff, the support of our alumni and friends, and the loyalty of the Cornell family. Indeed, the administrators of both the university and our school and the members of our Advisory Council—listed on the following pages—provide invaluable leadership and advice. The council, a group of alumni and friends, also establishes links with the business community and with society-at-large. All of those groups have helped us set new goals, expand our programs, grow, and, in the words of dean emeritus David A. Thomas, “strive to become one of the few preeminent management schools in the nation.”

► *University Administration*

Frank H. T. Rhodes, President of the University

Robert Barker, University Provost

Thomas H. Meikle, Jr., Provost for Medical Affairs

William G. Herbster, Senior Vice President

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Joseph B. Bugliari, Dean of the University Faculty

Administration and Advisory Council



Sam Johnson, chairman of S. C. Johnson and Son and a donor of JGSM's new endowment, the largest gift ever made to a business school

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James W. Schmotter, Associate Dean for Administration
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Paul Brenner, Director of Corporate Relations
Laurie Foltman, Director of Career Services
Daniel Mansoor, Director of Development
Harriet A. Peters, Director of Advising and Student Activities, and Registrar
Clinton Sidle, Director of Finance and Business Operations, and Executive Director of Continuing Education
Susan Stone, Director of Financial Aid
Eugene L. Ziegler, Director of Computing Services

► *Coordinators, Program Directors, and Editors*

Fredrick T. Bent, Coordinator of International Programs
John Freeman, Editor of *Administrative Science Quarterly*
Linda Myers, Managing Editor of *Cornell Enterprise*, and Publications Coordinator
Linda Pike, Managing Editor of *Administrative Science Quarterly*
James W. Schmotter, Editor of *Cornell Enterprise*
L. Joseph Thomas, Director of the Executive Development Program
Dick R. Wittink, Director of the Doctoral Program

► *Administrative Staff*

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Rhea J. Nickerson, Executive Staff Assistant, Office of the Dean

► *Librarians*

Betsy Ann Olive, Librarian
Donald W. Schnedeker, Department Head, and Librarian for Business Information Services
Sandra J. Bascom, Senior Assistant Librarian

► *Advisory Council of the Johnson School*

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Donald P. Berens, President and Owner, White Mountain Sales Corp.
I. MacAllister Booth, President and Chief Executive Officer, Polaroid Corporation
Kenneth T. Derr, Vice Chairman and Director, Chevron Corporation
Lewis M. Eisenberg, Partner, Goldman, Sachs and Company
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Albert Fried, Jr., Managing Partner, Albert Fried and Company
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C. Dickie Williamson, Chairman of the Board and Chief Executive Officer, Williamson-Dickie Manufacturing Company



A

Additional Publications

The *Announcement of the Graduate School* and the publication *Introducing Cornell* are useful to prospective Cornell graduate students and should be consulted for additional information about health requirements and services, vocational testing and guidance, the use of motor vehicles, and university social and cultural activities. Information about facilities, programs, and courses available in the other schools and departments of the university is included in *Courses of Study*. Copies of *Courses of Study* and *Introducing Cornell* can be obtained by writing to the Undergraduate Admissions Office, Cornell University, 410 Thurston Avenue, Ithaca, New York 14850-2488; copies of the *Announcement of the Graduate School* are available from the Graduate School, Cornell University, Sage Graduate Center, Ithaca, New York 14853-6201; or you can obtain copies by stopping by the Information and Referral Center in Day Hall.

More-detailed information required by state and federal regulations is available from the Dean of Students Office, 103 Barnes Hall, and the Information and Referral Center, Day Hall lobby. In addition an orientation handbook prepared by Johnson School students is sent to all entering students. The brochures *Cornell Resources in International Business and Management*, *Cornell Programs and Resources in Manufacturing Management*, and *Cornell Programs on Japanese Business* are available from the Office of Admissions and Student Affairs, Johnson Graduate School of Management, Cornell University, Malott Hall, Ithaca, New York 14853-4201. The brochure *The Sloan Program in Health Services Administration at Cornell* is available from the Department of Human Service Studies, College of Human Ecology, Cornell University, N132 Martha Van Rensselaer Hall, Ithaca, New York 14853-4401.

How to Get to Ithaca

BY PLANE. Tompkins County Airport, in Ithaca, is serviced by USAir and Piedmont airlines. Direct or connecting flights are available from major cities. A limousine or taxi may be taken from the airport, or a car may be rented.

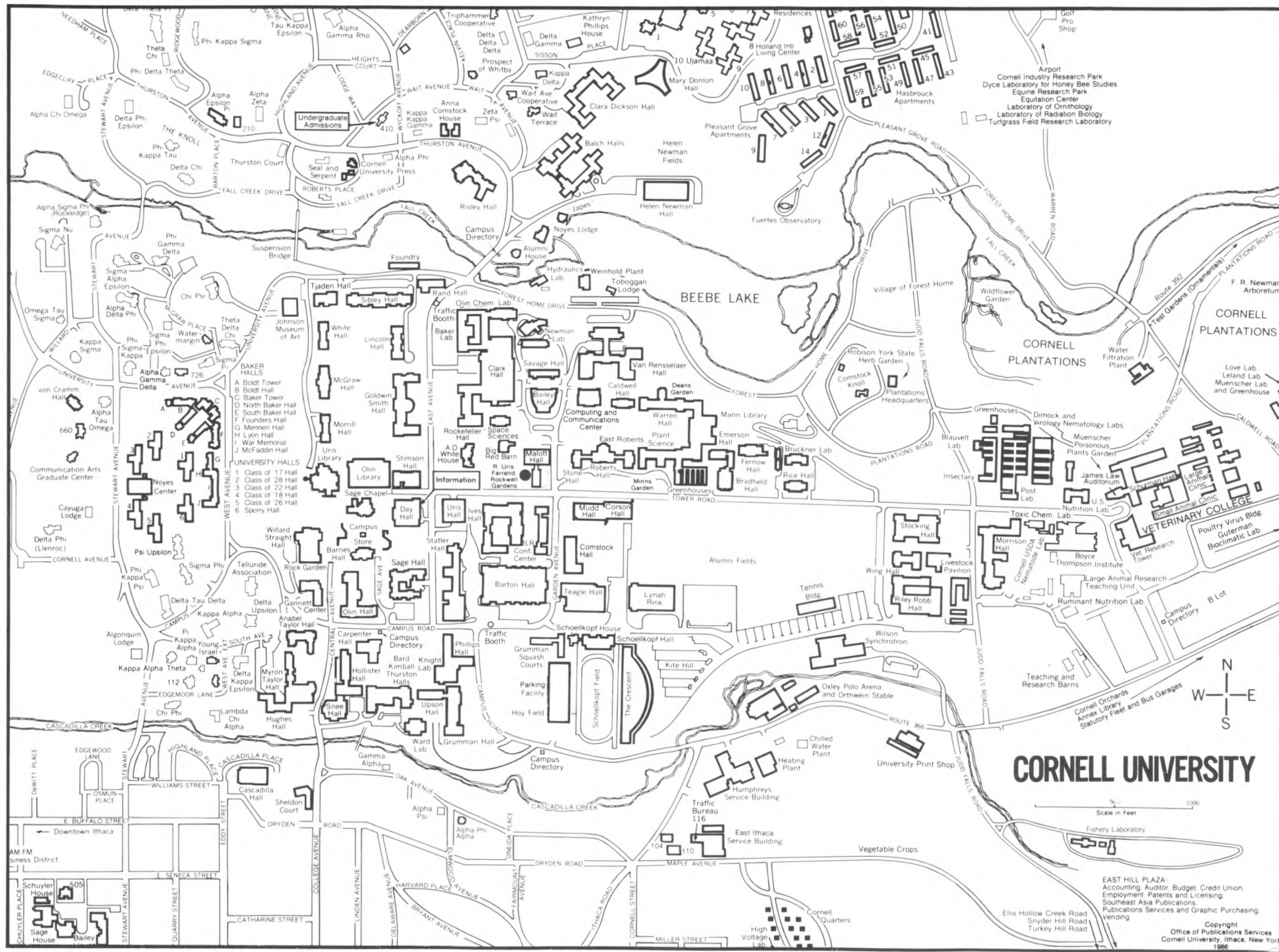
BY BUS. Ithaca is served by Greyhound Bus Lines. Visitors can reach the campus from the bus depot by taxi or Ithaca Transit bus.

Further Information



Above: The statue of Cornell University founder Ezra Cornell, silhouetted against an Ithaca sunset. Ezra Cornell's commitment to educational access and diversity, embodied by Cornell University, became his legacy to American higher education. **Opposite:** The McGraw bell tower.





CORNELL UNIVERSITY

EAST HILL PLAZA
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Employment, Patents and Licensing,
Southeast Asia Publications,
Publications Services and Graphic Purchasing,
Vending

Copyright
Office of Publications Services
Cornell University, Ithaca, New York
1985

Cornell Academic Calendar

Fall Semester

Registration begins
Registration ends
Instruction begins
Fall recess begins
Instruction resumes
Thanksgiving recess begins
Instruction resumes
Last day of instruction
Study period begins
Study period ends
Final examinations begin
Final examinations end

1986-87

Tuesday, August 26
Wednesday, August 27
Thursday, August 28
Sunday, October 12
Wednesday, October 15
Wednesday, November 26, 1:10 p.m.
Monday, December 1
Saturday, December 6
Sunday, December 7
Wednesday, December 10
Thursday, December 11
Saturday, December 20

1987-88

Thursday, August 27
Friday, August 28
Monday, August 31
Sunday, October 18
Wednesday, October 21
Wednesday, November 25, 1:10 p.m.
Monday, November 30
Wednesday, December 9
Thursday, December 10
Sunday, December 13
Monday, December 14
Wednesday, December 23

Spring Semester

Registration begins
Registration ends
Instruction begins
Spring recess begins
Instruction resumes
Last day of instruction
Study period begins
Study period ends
Final examinations begin
Final examinations end
Commencement

Thursday, January 22
Friday, January 23
Monday, January 26
Sunday, March 22
Monday, March 30
Saturday, May 9
Sunday, May 10
Wednesday, May 13
Thursday, May 14
Saturday, May 23
Sunday, May 31

Thursday, January 21
Friday, January 22
Monday, January 25
Sunday, March 20
Monday, March 28
Saturday, May 7
Sunday, May 8
Wednesday, May 11
Thursday, May 12
Saturday, May 21
Sunday, May 29

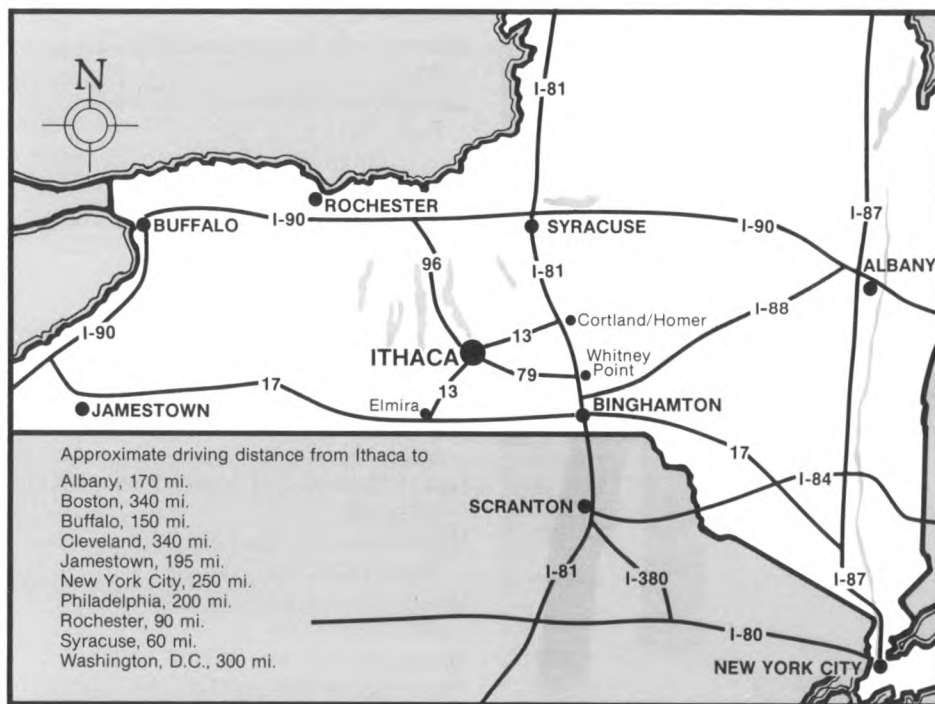
The calendar is subject to modification and is not legally binding. In enacting the calendar, the university has scheduled classes on religious holidays. It is the intent of the university that students missing classes because of the observance of religious holidays be given ample opportunity to make up work.

BY CAR. From the New England area, take the New York State Thruway west to exit 34A, Route 481 south to Interstate 81, Interstate 81 south to Homer, and Routes 281 and 13 south to Ithaca.

From New York City and the metropolitan area, take the New York State Thruway north to exit 16, Route 17 west to Binghamton, Interstate 81 north to Whitney Point, and Route 79 west to Ithaca; or take Route 17 through Binghamton to exit 64 and Routes 96 and 96B north to Ithaca.

From the south, take Interstate 81 north through Binghamton to Whitney Point and Route 79 west to Ithaca.

From the west, take the New York State Thruway east to exit 42 (Geneva) and Route 96 south to Ithaca, or take the Thruway east to exit 41 (Waterloo) and Route 89 south to Ithaca.



Index of Courses

Accounting Workshop (NRE 512), 43
 Advanced Accounting (NBA 501), 36
 Advanced Business Law (NBA 561), 38
 Advertising Management (NBA 621), 41
 Applied Econometrics (NBA 642), 42
 Applied Economics Workshop (NRE 510), 43
 Auditing (NBA 505), 36
 Behavioral Decision Theory (NBA 663), 37
 Business and American Society, 1800–1986 (NBA 571), 39
 Business and Economic Forecasting (NBA 523), 37
 Business-Government Interface (NCC 510), 35
 Business in Japan (NBA 589), 40
 Business Law (NBA 560), 38
 Business Logistics Management (NBA 641), 42
 Business Strategy and Policy (NCC 511), 35
 Comparative International Management (NBA 585), 40
 Competitive Industry Analysis (NBA 524), 37
 Consumer Behavior (NBA 626), 41
 Data-Base Management (NBA 600), 40
 Directed Reading and Research (NMI 500–502), 43
 Doctoral Seminar in Accounting (NRE 504), 43
 Doctoral Seminar in Banking and Financial Markets (NRE 506), 43

Doctoral Seminar in Corporate-Finance Theory (NRE 507), 43
 Doctoral Seminar in Decision Aiding (NRE 514), 43
 Doctoral Seminar in Economics (NRE 503), 43
 Doctoral Seminar in Finance (NRE 513), 43
 Doctoral Seminar in Operations Management (NRE 508), 43
 Doctoral Seminar in Organizational Behavior (NRE 509), 43
 Economic Evaluation of Capital Investment Projects (NBA 541), 38
 Effective Management Consulting (NBA 569), 39
 Entrepreneurship and Enterprise (NBA 564), 38
 Ethics of Managerial Power, The (NBA 575), 39
 External Environment of Business, The (NBA 577), 39
 Federal Income Tax (NBA 507), 36
 Finance Theory (NBA 545), 38
 Finance Workshop (NRE 505), 43
 Financial Accounting (NCC 500), 34
 Financial Information and Evaluation (NBA 506), 36
 Financial Markets and Institutions (NBA 543), 38
 Financial Policy Decisions (NBA 540), 38
 Health and Welfare Policy Analysis (NBA 685), 43
 Health-Services Organization and Financing (NBA 684), 43
 Industrial Policy: Lessons for the United States from Japan and Europe (NBA 580), 40
 Information Systems in Manufacturing (NBA 601), 40
 Intermediate Accounting (NBA 500), 36
 International Business in the Middle East (NBA 583), 40
 International Management (NBA 584), 40
 International Trade and Finance (NBA 582), 40
 Introduction to Estate Planning, An (NBA 562), 38
 Investment Banking (NBA 547), 38
 Investment Management and Security Analysis (NBA 542), 38
 Law of Business Associations (NBA 565), 38–39
 Law of Mergers and Acquisitions (NBA 572), 39
 Macroeconomics and International Trade (NCC 505), 34–35
 Management Information Systems (NCC 507), 35
 Management Science (NBA 643), 42
 Management Writing (NBA 567), 39

Managerial Cost Accounting (NBA 502), 36
 Managerial Economics (NBA 522), 37
 Managerial Finance (NCC 506), 35
 Managing Governmental Systems (NBA 683), 43
 Marketing Decision Analysis (NBA 624), 41
 Marketing Management (NCC 503), 34
 Marketing Planning (NBA 628), 41
 Marketing Research (NBA 620), 41
 Marketing Research Project (NBA 630), 41
 Marketing Science (NBA 631), 41
 Marketing Strategy (NBA 622), 41
 Marketing Workshop (NRE 502), 43
 Microeconomics for Management (NCC 502), 34
 Models and Methods for New Products (NBA 623), 41
 Negotiations for Managers (NBA 570), 39
 Options, Bonds, and Commodities (NBA 546), 38
 Oral Communication (NBA 568), 39
 Organizational Theory (NBA 669), 37
 Organizational Theory and Behavior (NCC 504), 34
 Power and Interpersonal Influence (NBA 662), 36
 Pricing and Strategy (NBA 520), 37
 Production and Operations Management (NCC 508), 35
 Production Management (NBA 640), 42
 Professional Manager at Work, The (NBA 573), 39
 Quantitative Methods for Management (NCC 501), 34
 Regulation, Deregulation, and Antitrust: Government Regulation of Business (NBA 521), 37
 Seminar in Bank Management (NBA 544), 38
 Strategic Business Policy Issues (NBA 563), 38
 Strategic Decision Making (NBA 549), 38
 Strategic Management and Behavioral Science (NBA 661), 36
 Strategy Implementation: Process and Politics (NBA 660), 36
 Systems Analysis (NBA 603), 40
 Taxation Affecting Business and Personal Decision Making (NBA 504), 36
 Trading (NBA 548), 38

Questions?

Answers are as close as our toll-free number: 800/847-2082, extension 1.



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