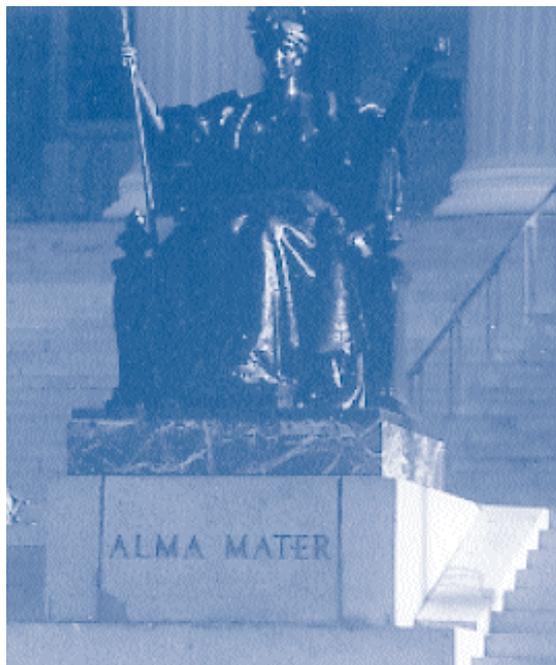


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Doctoral Program
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Research and the PhD Program at the Columbia Business School

Research leading to the creation and dissemination of knowledge is a central function of a great university. The PhD program at the Columbia University Graduate School of Business focuses on training students in the design and execution of original research. By promoting interaction between students and faculty in the research process, the program allows students to make significant contributions to the overall research activity of the School. Most Columbia PhD graduates assume academic posts at leading colleges and universities, where research and teaching are an integral part of a successful professional career. Others hold research oriented positions in business or government. While the program's emphasis is on research, Columbia Business School is also committed to excellence in teaching. Our students participate in a teacher training workshop designed to prepare them as teaching assistants and future faculty members. This provides a hands-on opportunity to develop teaching skills.

The ideal preparation for a PhD candidate includes a relevant master's degree, although applicants with bachelor's degrees are given full consideration. Many successful candidates have backgrounds in business or economics, but many have degrees in such fields as the physical sciences, engineering, mathematics, sociology, or psychology.

Even more important are three characteristics: analytic competence, a strong work ethic, and intellectual initiative. Analytic competence consists of mathematical

skills and the ability to think logically and clearly. A strong work ethic implies a commitment to the degree program and a willingness to make it the top priority. Intellectual initiative is the ability and willingness to create new ideas, put them on paper, share them in person, and accept the inevitable criticism they elicit.

In the program students become familiar with research methods and the literature of their major fields through research projects and directed reading. In the opening phase of the program, the candidate masters basic research tools by studying subjects such as economics, behavioral science, and quantitative methods in addition to completing course work and examinations in his or her major field. The completion of course work and qualifying examinations normally requires two to three years. The research phase begins as early as the first year, when students serve as research assistants. They gradually become more involved in the design and execution of research and, by the end of the second year, have typically produced at least one paper suitable for publication, often as coauthor with a faculty member.

Having developed a close working relationship with faculty through a hands-on, learning by doing, mentoring approach to education, students are prepared to devote their final year in the program to producing original research: the doctoral dissertation. The kind of research conducted varies widely, but two common characteristics are discernible, the identification of general principles

with broad application and a strong methodological orientation. Thus, even if an actual management problem motivates the research, as is often the case, the research results are intended for general application.

A commitment to earning the PhD degree at the Columbia Business School is a commitment of the student's full energies. Full-time study is required including summer terms, from enrollment to the completion of the dissertation. Candidates should expect to complete the program within four to five years. The University allows a maximum of seven years for completion of the PhD requirements.

Columbia University and the Business School have as a major resource one of the greatest research faculties in the world. All the resources of the School and the University community are available to doctoral candidates.

The PhD program at Columbia Business School maintains approximately ninety-five full-time students and admits an entering class of about eighteen students each fall. Applicants indicate a major field of study at the time of application. The overall program is a collection of related but tailored programs in each of the major fields of the School:

- Accounting
- Finance and Economics
- Management
- Management Science/
- Operations Management
- Marketing

Within each of these disciplines, students may focus on international issues.

URIS HALL



Major Fields of Study

Accounting

Doctoral candidates in accounting are expected to become familiar with theoretical structure and conceptual foundations, as well as the research literature, in financial accounting, managerial accounting, and auditing, becoming proficient practitioners of at least one research methodology in one of these subfields.

All students complete four doctoral seminars in accounting, two in each of their first two years in the program. A research paper, which is presented to the accounting faculty, is required at the end of the first year. Descriptions of two typical accounting seminars are included to give an idea of course content.

B9110 Accounting Research Methods and Problems

This course offers an overview of accounting research methodology, including a survey of recent developments in various areas of accounting and auditing research. Its main purpose is to expose students to mainstream research topics in accounting and to discuss future research opportunities. The seminar includes a general review of a carefully selected set of papers that summarizes recent major contributions to the accounting academic literature.

B9111 Topics in Accounting Research

This seminar covers recent developments in the accounting academic literature, and includes an in-depth analysis of the major aspects of accounting and auditing research. A different set of topics is covered each term. The seminar in analytical modeling focuses on the role of infor-

mation in organizations, presenting and analyzing the problems introduced by asymmetric information, risk aversion and imperfect monitoring within the organization, and the design of management control and incentive systems. The seminar emphasizes the role of accounting and auditing systems in the design of contracts, transfer pricing, decentralization, and executive compensation schemes. A research project is required.

Students also participate in Columbia's Burton Conference in which distinguished accounting scholars from other institutions join Columbia faculty members in a series of informal workshop sessions to review and evaluate current research. Furthermore, beginning in the first year of the program, each candidate has an opportunity to work closely with a member of the faculty.

Building on this foundation, each candidate selects a subfield as the focus of dissertation research—financial accounting, managerial accounting, or auditing. Financial accounting requires additional course work in financial market theory and econometrics; managerial accounting requires supplementary work in microeconomic analysis, management, management science, or information systems.

Sample of first-year course work in accounting:

FALL

- *Microeconomics Analysis I*
- *Mathematical Methods I*
- *Doctoral Seminar in Accounting*
- *Math Methods for Economists*

SPRING

- *Microeconomics Analysis II*
- *Mathematical Methods II*
- *Doctoral Seminar in Accounting*
- *Econometrics*

Recent Accounting Graduates: Dissertation Topics and Placement

Oren Fuerst

An Investor Protection Regulation Argument for Global Listing of Stocks
Yale University

Elizabeth Ann Gordon

Essays on Inflation Accounting and Valuation
University of Chicago

Martin Leibowitz

An Investigation of ROCE and the Market-to-Book Ratio
Yeshiva University

Elizabeth Venuti

Empirical Properties of Less Informative Accounting
CUNY, Baruch College

Finance and Economics

The Doctoral Program in Finance and Economics provides a one-year core of courses to be taken by all students, followed by the opportunity to specialize in either economics or finance. Required core courses include a two-semester microeconomics sequence, a two-semester econometrics sequence, and one-semester courses in macroeconomics, finance, probability and statistics, and mathematical methods. After the first year of course work, a student may select either the Economics Program or the Finance Program for the second year.

Economics Program

Students choosing to specialize in economics must successfully complete at least eight of the following fifteen courses, plus additional courses from the list below or from elsewhere to make a total of twenty. In particular, economic students may take courses from the finance program, or approved courses from the economics department, from mathematics, or from statistics.

Industrial Organization I and II
Public Finance I and II
Macroeconomics II
Applied Macroeconomics
Information Economics
Game Theory
International Finance
Macroeconomic Policy
Topics in Linear Models
Finance I and II
General Equilibrium Theory
Financial Markets

Finance Program

Students choosing to specialize in finance must successfully complete all of the following seven courses, plus additional courses from the list above or from elsewhere to make a total of twenty. Finance students may take courses from the economics list above, or approved courses from the Economics Department, from mathematics, or from statistics.

Finance I and II
Empirical Research in Finance
Continuous Time Models in Finance
Information Economics
Corporate Finance
Econometrics

Typical student selections:

The following are only illustrative and not mandatory:

Specialization in finance: all courses listed for finance above, plus *General Equilibrium Theory* and *Financial Markets* and additional courses in stochastic processes or econometrics.

Specialization in macroeconomics: *Macroeconomics II*, *Applied Macroeconomics*, *Finance II*, *Macroeconomic Policy*, *International Finance*, plus additional courses as recommended by the student's adviser.

Specialization in microeconomics: *Industrial Organization I and II*, *Public Finance I and II*, *Information Economics I and II*, *Game Theory*, *Theory of Industrial Organization*, plus additional courses as recommended by the student's adviser.

The following are samples of course offerings:

G6211 and G6215 Microeconomics Analysis I and II

Students are first introduced to topics involving consumer and producer choice, intertemporal optimization, general equilibrium and welfare. Second semester topics include imperfect information, imperfect competition, rational expectations, fixed-price models, and critiques of neoclassical theory.

B9207 Macroeconomics and Monetary Theory I

Topics include basic tools and models in macroeconomic dynamics, business cycle models, and growth models. Techniques of dynamic programming are introduced for the solution to these models.

B9302 Finance I

Students are introduced to aggregate decisions under uncertainty, portfolio theory, general equilibrium under uncertainty, the capital asset pricing model, option pricing, and dynamic asset pricing models.

B9311 Seminar in Corporate Finance

The emphasis is on theoretical research, with special emphasis on models using the tools and techniques in the economics of information and game theory. The first part of the course studies the firm's choice of its capital structure and dividend policy in settings characterized by moral hazard or asymmetric information. The second part discusses various other topics related to the recent research in corporate finance.

B9353 Rational Expectation Econometrics

Exploration of a number of applied econometric studies that make use of the theory of rational expectations (also referred to as the theory of efficient markets). Introduction to an econometric methodology that is usable in a wide range of applications in economics and finance areas. Provides an understanding of how empirical work is conducted and some of the most important empirical issues of the day.

Students are encouraged to begin developing thesis proposals during their second year. During the second and later years they are also encouraged to participate in a wide range of workshops and seminars on current research. Faculty research interests cover most aspects of finance and economics and include asset pricing, continuous time models in finance,

information economics, economics of resources and the environment, econometric models in finance, international trade and finance, theoretical and applied macroeconomics, general equilibrium theory and financial markets, the economics of telecommunications, industrial structure and government policy, and industrial relations. Faculty involved in teaching doctoral courses include Charles Calomiris, John Donaldson, Larry Glosten, Charles Himmelberg, Laurie Hodrick, Robert Hodrick, R. Glenn Hubbard, Gur Huberman, Frederic Mishkin, Paolo Siconolfi, and Zhenyu Wang.

Recent Finance and Economics Graduates: Dissertation Topics and Placements

Jorge Chan-Lau

Essays on Economic Dynamics
IMF, Washington, D.C.

Jason Cummins

Essays on Firm Investment with Applications to Taxation, Accounting Standards, and Project Evaluation under Uncertainty
New York University, Economics Department

Mark Loewenstein

Essays on Financial Markets with Frictions
Washington University at St. Louis

Marco Naldi

Essays in Financial Economics
Lehman Brothers

Xin Zhang

Essays in Financial Stability: Futures Clearinghouses and Mutual Funds
World Bank, Washington, D.C.

Management

The management field is devoted to increasing understanding of the ways in which organizations func-

tion and of the factors that contribute to organizational effectiveness. Students are trained to do research and to teach in this applied and interdisciplinary field that draws on concepts and theories from psychology, sociology, management, economics, political science, and the like.

The subfield of organizational behavior is the study of individual and group behavior in an organizational context. Its primary distinguishing characteristic is the focus on the individual or small group as the unit of analysis. Organizational behavior scholars draw heavily on theory from the various disciplines in psychology (especially social psychology). Research in this area includes such subjects as work motivation and satisfaction, negotiation, power and influence, decision making, and team processes. The subfield of organization theory focuses on organizations as the unit of analysis. Some questions that an organization theorist might ask are, Why do particular organization forms exist? Why do some organizations die and others survive? How do organizations interact with their environments? Organization theory is closely aligned with sociology, though it draws from economics as well. Finally, strategic management addresses the roles and problems of general managers—those who manage multifunctional business units or multi-business firms. Major topics include competitive strategy, strategic decision-making processes, management of diversification, and processes of top management teams. Most of the time the unit of analysis in the strategy area is the firm or the strategic business unit, though the industry is also of importance.

These subfields are interdependent; most faculty members teach and do their research in more than one. All doctoral candidates develop basic skills to conduct research

on organizations and then prepare individually tailored programs of study, taking advantage of the resources of the division and School, as well as those of the University.

Doctoral students begin the first year of the program by taking a series of PhD-level courses that provide an overview of theory and research. In addition, advanced doctoral seminars such as the following are offered throughout the year by various faculty members.

B9710 Advanced Seminar on Top Executives

This course addresses various aspects of the "upper echelons perspective"—the view that the organization's actions and outcomes are reflections of its top managers. Major topics include executive values and motives, cognitive processes of top managers, executive succession, executive compensation and rewards, top management teams, and corporate boards/governance. The course is for students who intend to conduct research in strategic management, organizational theory, organizational behavior, or other related areas (e.g., sociology of organizations, complex decision making, or marketing strategy).

B9711 Seminar in Organizational Strategy and Decision Making

This course provides an overview of theory and research in strategic management, with a scholarly research orientation on issues of both strategic content and process. The empirical study of these issues is emphasized.

B9707 Organization Theory

This introductory course in the theory of organizational functioning and macro-organizational behavior emphasizes the understanding of concepts and empirical research related to the design, structure, and functioning of organizations. Topics include the evolution of organiza-



tional theory, systems concepts and models, information process, control, communication, and the like.

B9706 Individual and Collective Behavior

This introductory course in the theory and research of behavior in organizational settings covers basic conceptions of behavior, motivation, attitudes, group functioning, etc. The emphasis is on understanding the processes of behavior at the individual and group level of analysis.

B9708 Research Methods

This course is aimed at developing competence in the use of social and behavioral science research methods to explore business and organizational problems. Topics include research design, measurement, data collection, reporting, analysis, etc. Students are expected to write research proposals and conduct a short research project.

Sample of first-year course work in management:

FALL

- *Individual and Collective Behavior in Organizations*
- *Organizational Theory*
- *Quantitative Political Research*
- *Sociological Theory: Origins*

SPRING

- *Research Methods*
- *Organizational Strategy/Decision Making*
- *Analysis of Political Data*
- *Contemporary Sociological Theory*

Recent Management Graduates: Dissertation Topics and Placement

Mathew Hayward

Learning from Acquisitions, 1985–1995
London Business School

J. Peter Murmann

Knowledge and Competitive Advantage in the Synthetic Dye

Industry, 1850–1914: The Coevolution of Firms Technology, and National Institutions in Great Britain, Germany, and the United States
Northwestern University

Phyllis Siegel

Tying a Hand Behind One's Back: An Examination of Self-Handicapping and Its Implications for Organizations
Rutgers University

Management Science/Operations Management

Management science is concerned with the development of computer-based planning models. These models are used to support managerial decisions in a wide variety of areas. Typical applications are the design and operation of distribution and production systems, financial planning models, marketing media mix decisions, and the deployment of emergency services.

The program is administered through the Interdepartmental Committee on Operations Research, which consists of faculty from the Graduate School of Business, the School of Engineering and Applied Science, and the Graduate School of Arts and Sciences.

The primary objective of the program is to prepare the student to be able to do original research. Thus a major portion of the program is the preparation of a doctoral dissertation, which is written under the close supervision of faculty members. Preparatory course work is used to develop the necessary methodological tools as well as to provide an understanding of problems and issues in the application area. Candidates with a relevant master's degree can expect to complete the program in three years. Those with a bachelor's degree will normally take four years.

Students concentrating in management science take methodological courses in optimization and stochastic (random) processes, courses in the methodology of operations management, as well as a broad range of courses in other divisions. The subject of the dissertation may be a contribution to the methodology of the field, an application to a significant applied planning problem, or a combination of the two. Note, the format and requirements of this program are somewhat different from those of other programs in the Business School. Further information is available from the Doctoral Office.

The following are samples of course offerings:

W6410 Logistics and Distribution Management

This course explores mathematical models of several multi-echelon, production/distribution systems; concentration on models that assume sto-



chastic demand. The purpose is to familiarize students with the existing literature on multi-echelon, stochastic inventory systems and to prepare them to do research in this area.

B9824 Foundations of Optimization

This course provides a rigorous introduction to the fundamental theory of optimization. It examines optimization theory in two primary settings: classical optimization (unconstrained, constrained, convex analysis, and optimization) and dynamic optimization (the calculus of variations, optimal control, and dynamic programming).

B9801 Topics in Discrete-Event Simulation

This course centers on three main topics: output analysis, variance reduction, and derivative estimation. Particular emphasis is placed on efficient rare-event simulation. This course stresses theoretical analysis of methods for simulation, rather than computer implementation.

B9823 Selected Topics in Math Models

This course concentrates on both the analysis and (optimal) control of random walks, Brownian motion, and diffusions, with applications to mathematical economics and

finance and the theory of optimal investment under uncertainty. Students are introduced to stochastic calculus and stochastic differential equations along with their applications in continuous-time finance.

Sample first-year course work in management science:

FALL

- *Linear Programming*
- *Network Flows*
- *Foundations of Optimization*
- *Elementary Stochastic Processes*

SPRING

- *Advanced Topics in Queuing Theory*
- *Simulation*
- *Advanced Stochastic Models*
- *Combinatorial Optimization*

Recent Management Science Graduates: Dissertation Topics and Placement

Yossi Aviv

Planning Models for the Design of Capacitated Multi-Stage Production and Distribution Systems
Washington University at St. Louis

Yan Jin

Modeling and Assessing Stochastic Discount Factors
Goldman Sachs & Co.

João Soares

Disjunctive Convex Optimization
University of Coimbra, Portugal

Yashan Wang

Service Levels in Production-
Inventory Networks: Bottlenecks
and Trade-Offs
MIT, Sloan School of Management

Marketing

The PhD degree in marketing is a research degree that is focused on developing the skills needed to do original research. Considerable latitude exists in the program: some students concentrate on mathematical modeling, some on using behavioral science to explain customer choices, and some on the selection of strategy and its impact. Students are expected to attend informal seminars and to take several marketing seminars and courses. The basic courses which vary somewhat from year to year are choice and decision-making models, applied social psychology (attitude formation and change), marketing-science models, measurement methods, and competitive strategy (from an applied microeconomic view).

The following are examples of course offerings:

B9610 Behavioral Research in Marketing

The application of concepts and theories from the behavioral and social sciences to consumer behavior are studied in this course. The course focuses on developing research skills to study, among other things, consumer perceptions, consumer information processing, consumer attitudes, and responses to advertisements. Class assignments include primary readings of journal articles from the social sciences and from the area of consumer research. In addition, students are asked to conduct a research project.

B9610 Doctoral Seminar in Marketing and Strategy

This seminar reviews major contributions and recent directions in research on marketing management and competitive strategy, with an emphasis on marketing models. Topics include pricing, advertising models, market pioneering, entry and defensive strategies, and marketing planning models.

B9610 Doctoral Seminar in Marketing Models

This course provides an overview of mathematical marketing models. It is organized around the major substantive areas in marketing. The course will cover some of the "classic" research papers in each substantive area. Topics include models of consumer behavior, bundling, product line pricing, advertising, promotions, and sales force.

Students are encouraged to work closely with faculty members to develop, conduct, and report significant research. The marketing division is widely recognized as one of the best in the world based on its published output in leading journals and on the quality of its PhD program. Faculty members have broad interests, including buyer behavior, industrial marketing and purchasing, marketing strategies, marketing planning and information systems, advertising, choice modeling, and the performance of multinational firms.

Sample first-year course work in marketing:

FALL

- *Microeconomics Analysis I*
- *Mathematical Methods I*
- *Doctoral Seminar in Marketing*
- *Theories: Human Cognition/Learning*

SPRING

- *Research Methods*
- *Mathematical Methods II*
- *Doctoral Seminar: Consumer Behavior*

- *Doctoral Seminar: Experimental Design/Analysis*

Recent Marketing Graduates: Dissertation Topics and Placement**Puneet Manchanda**

A Multi-Category Analysis of
Consumer Shopping Behavior
University of Chicago

C. Page Moreau

Entrenched Cognitive Structures
and Resistance to New Products
Southern Methodist University

Shi Zhang

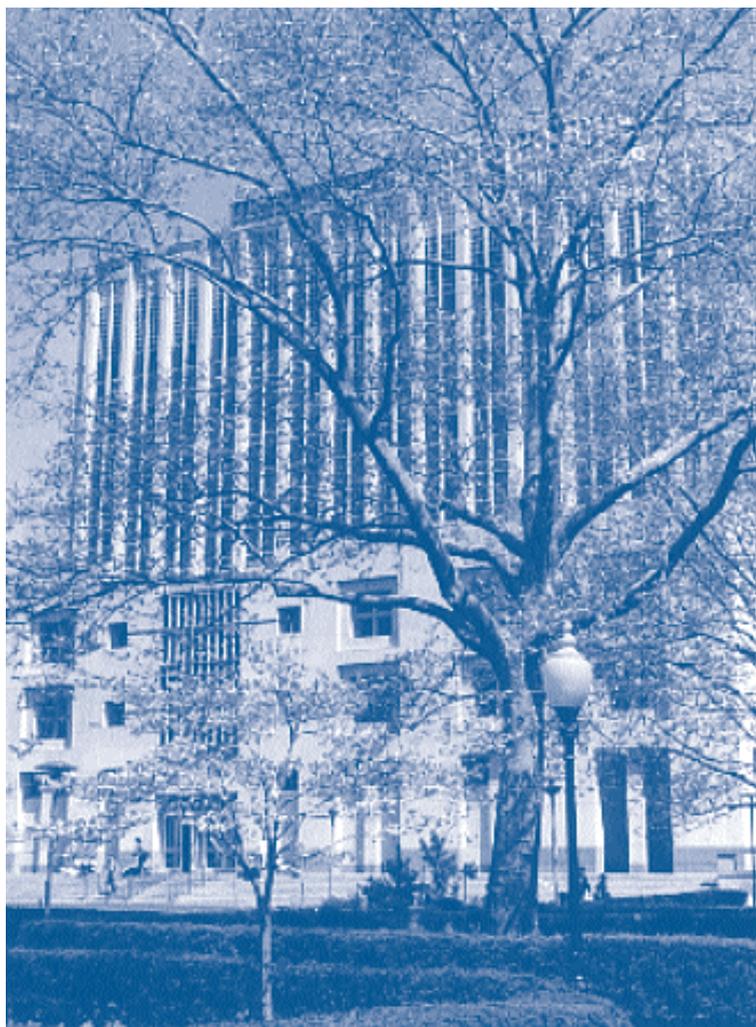
Attribute Structure in Consumer
Learning
UCLA, Anderson School of
Management

Requirements for Degrees

Admission

Applications for admission are accepted from qualified men and women for entrance in September and should be received no later than February 1. An application fee of \$50 in the form of a check drawn on a U.S. bank made payable to Columbia University must accompany the application materials. This fee is non-refundable and can not be waived.

A bachelor's degree or the equivalent, representing a four-year course of study in an accredited college or university, is required for admission. A master's degree is not required, although many applicants have the master's degree in business, economics, engineering, psychology, statistics, and the like. Superior academic performance is expected. Those who hold American PhD or ScD degrees or their foreign equivalents are not normally eligible for admission. (Occasionally, an exception to this rule can be arranged.) All candidates for admission must take either the Graduate Management Admissions Test (GMAT) or the Graduate Record Examination (GRE) given by Educational Testing Service at numerous centers throughout the United States and abroad. For further details, applicants should contact the Graduate Management Admissions Test, Educational Testing Service, CN 6103, Princeton, NJ 08540-6103, or the Graduate Record Examination, Educational Testing Service, CN 6000, Princeton, NJ 08541-6000. The institution code of both tests for the Columbia Business School Doctoral Program is 2141. Applicants should arrange to take



the GMAT or GRE exam prior to the end of the calendar year, to ensure our receipt of the test score by the February 1 deadline. Score reports typically arrive at the school up to six weeks following the test date.

For those whose native language is not English, demonstration of a high degree of competence in both written and spoken English is required. The Doctoral Admissions

Committee will accept the Test of English as a Foreign Language (TOEFL) or the TSE. Arrangements to take these examinations should be made by writing directly to TOEFL/TSE, P.O. Box 6151, Princeton, NJ 08541-6151, USA. Applicants who have received a prior degree in an English-speaking country may request an exemption from the TOEFL and TSE.

Those who wish to reapply to the Columbia Business School Doctoral Program and have applied within the previous three years are considered reapplicants. Reapplicants should provide the admissions committee with updated transcripts, letters of recommendation, and a revised essay, if appropriate. Reapplications are seldom successful, unless there has been substantial change in the applicant's qualifications.

Admissions interviews are possible upon completion of the application, but not required. To make arrangements to speak with faculty or staff members, applicants should contact the Doctoral Office at (212) 854-2836.

Mathematics Requirement

General Requirement

A mathematics prerequisite for entering PhD students is a thorough working knowledge of the material that is covered in a two-semester introductory calculus sequence.

Specific Topics

- I. Basic algebra
- II. Functions and graphs of one variable
 - A. Linear, quadratic, polynomial functions, exponential and logarithmic (including natural logs) functions
 - B. Simple trigonometric functions (e.g., sine, cosine, tangent)
 - C. Composite functions (e.g., functions of functions)
- III. Functions of two or more variables
- IV. Differential calculus
 - A. Definition of a derivative

- B. Concept of derivative as a:
 1. slope
 2. rate of change
 - C. Second- and higher-order derivatives
 - D. Partial derivatives
 - E. Differentiation of the functions in II.A.
- V. Optimization
 - A. Functions of one variable without constraints
 1. first-order conditions
 2. second-order conditions
 - B. Functions of more than one variable
 1. first-order conditions
 2. second-order conditions
 - C. Lagrangian methods for optimization with an equality constraint
- VI. Taylor series expansions
- VII. Integral calculus
 - A. Definite and indefinite integrals
 - B. Concept of an integral as the area under the function
 - C. Concept of a double integral as a volume
 - D. Knowledge of integration of the functions in II.A.
- VIII. Simple differential equations
- IX. Basic matrix algebra

Quantitative Tool-Area Requirement

All PhD students must know the material covered in *Management Science B9821* and *B9822*. Students either course certify (by obtaining a grade of HP or better in each course) or pass an examination on this material. *B9821* is a course in probability theory; *B9822* is a course in univariate statistics. Calculus is used in both courses, but no calculus per se is given; some calculus is covered in the weekly review sessions. However, it is each student's obligation to

know basic calculus before entering the program. Failure to do so will make the first year in the program almost insurmountably difficult.

Residence and Course-Credit Requirements

To maintain good standing as a PhD candidate, a student must be registered for two terms out of three during the trimester academic year, although in general students are expected to be in residence in all three terms. Satisfactory completion of at least twenty courses is required for the PhD degree. The exact number and selection of courses is determined by the student in consultation with faculty members in the major field. A normal course load during the fall and spring terms is four courses per term; summer-term course loads are generally lighter with a heavier emphasis on research work. PhD candidates are allowed, but not encouraged, to take one in five courses for R (Registration) credit. The other courses must be taken for letter grade credit (H = Honors; HP = High Pass; P = Pass; LP = Low Pass; F = Fail). Students enrolling in tool-area courses for course certification (see below) must register for letter-grade credit. They are also expected to take the required courses in their major fields for letter-grade credit.

In addition, registration for 10 credits of *Doctoral Research Instruction, B9000*, is required.

Advanced Standing

Up to ten courses of relevant graduate work completed at Columbia or at another university may be credited toward the course requirement

for the degree. If a student has completed more than twenty graduate courses at Columbia before entrance into the PhD program, he or she may be granted a maximum of fifteen courses of advanced standing. Granting of advanced standing depends on the assessment by the Doctoral Committee of the quality and relevance of the work. Credit for advanced standing is not conferred until the PhD student has successfully completed at least one term in the program.

Proficiency Requirements

Students must satisfy requirements in the following areas:

1. Mathematics
2. Teacher Training Workshops
3. Research Tools
4. Breadth Requirements
5. Research Paper
6. Major Field Examination
7. Oral Examination

1. Mathematics

Adequate proficiency in mathematics is demonstrated by certifying in the quantitative methods research tool area (see below).

2. Teacher Training Workshops

All students are required to participate in a teacher training workshop. This workshop is designed to develop the presentation skills necessary for doctoral candidates to be efficient teaching assistants and future teachers.

3. Research Tools

Students must become knowledgeable in the following research tool areas:

- a) Business Economics
- b) Quantitative Methods
- c) Behavioral Science

Certain approved alternative tools may be substituted for one of the standard tools listed above.

Students demonstrate proficiency in the standard research tool

areas by passing a written examination in one of the areas and either by course certifying or by passing an examination in the other two areas. Course certification consists of attaining a minimum grade of High Pass (HP) in all courses. Faculty members in the major field determine which examination(s) a student will take.

Business Economics

CERTIFICATION BY EXAMINATION
Students are examined on the material covered in the following courses:

- *Microeconomics Analysis I and II*
- *Microeconomic Theory*
- *Business Economics B9207*
- *Macroeconomics and Monetary Theory I*

CERTIFICATION BY COURSE

- Required: *Microeconomics Analysis I*
- Choose: *Microeconomics Analysis II* or *BB9207 Macroeconomics and Monetary Theory I* or *B9209 Econometrics*

Econometrics courses in the Graduate School of Arts and Sciences may be substituted with the permission of the Doctoral Coordinator.

Quantitative Methods

Candidates are expected to have a working knowledge of calculus at the level of a two-term undergraduate course prior to starting the quantitative methods course. Basic knowledge of matrix algebra is also useful.

CERTIFICATION BY EXAMINATION

Students are examined on the material covered in the following courses:

- *B9821 Mathematical Methods I: Probability*
- *B9822 Mathematical Methods II: Univariate Statistics*

and one of the following:

- *B8832 Applied Multivariate Statistics*
- *W46406 Elementary Stochastic Processes*
- *B9824 Foundations of Optimization*

CERTIFICATION BY COURSE

- Required: *B9821 Mathematical Methods I: Probability* and *B9822 Mathematical Methods II: Univariate Statistics*
- Most divisions also require one of the following: *B8832 Applied Multivariate Statistics*, *W4606 Elementary Stochastic Processes*, or *B9824 Optimization*

Some of the courses mentioned above are described below:

B9821 Mathematical Methods I: Probability

This course provides a rigorous introduction to probability theory. Topics include basic probability theory, general characteristics of random variables, particularly probability distributions which are frequently used in statistics, and elementary random (stochastic) processes.

B9822 Mathematical Methods II: Univariate Statistics

This course thoroughly covers univariate statistical inference with a special emphasis on likelihood methods, followed by complete coverage of the basic theory of linear models (such as linear regression and econometrics).

B8832 Applied Multivariate Statistics

In this comprehensive introductory survey of multivariate methods, the following topics are covered: matrix algebra, simple and multiple regression, data reduction, factor analysis, discriminant analysis, multidimensional scaling, experimental design, and analysis of variance.

Behavioral Science

CERTIFICATION BY EXAMINATION

Students are examined on the material covered in the following courses:

- *B9706 Individual and Collective Behavior*
- *B9707 Organization Theory*
- *B9711 Seminar in Organizational Strategy and Decision Making*
- *B9708 Research Methods*

CERTIFICATION BY COURSE

Each student must take core doctoral seminars in strategy, organizational behavior, organizational theory, research methods, and quantitative methods. In addition students are required to take additional courses that contribute to their major area of study (OB, OT, and Strategy). These requirements are often met by taking classes in the disciplines of psychology, political science, and/or economics.

Alternative Tools

Several divisions, including Accounting, Finance and Economics, and Management, allow the substitution of an alternative tool for one of the standard three research tools. Details are available from the Doctoral Office.

Progress in the Tool Areas

The requirements in two tool areas should be completed by the end of the first year in the program for those students who entered with a master's degree. Students entering with a bachelor's degree should complete at least one tool-area requirement by the end of the first year in the program. All students should complete three tools by the end of the spring term of the second year. Tool examinations are normally scheduled once a year at the end of the spring term.

Students may not take a written tool examination or course certification more than twice. Students should seek the advice of appropriate members of the faculty

about additional work to be done before attempting to repeat an examination.

4. Breadth Requirements

Students are normally expected to demonstrate proficiency in basic areas of management by taking five courses chosen from the following areas: accounting, finance and economics, international business, management, management science, and marketing.

Credit for previous graduate work may be used to satisfy this requirement.

5. Research Paper

By or before the end of two years (six terms) in the program, a student must complete a research paper and have it approved by two faculty members in his or her major field. This paper is distinct from the written dissertation proposal.

This paper can be one that is written as part of a course requirement, in connection with a research assistantship, or through independent or supervised study; the paper may also lead to a dissertation on the same or a related topic. A paper written jointly with a Business School faculty member can be used to satisfy this requirement. A copy of the approved paper must be filed with the Doctoral Office.

6. Major Field

A major field is selected at the time of application. A change can be made, but the student must obtain the written approval of a faculty member in the first field and also in the second, in addition to formal approval from the Doctoral Committee.

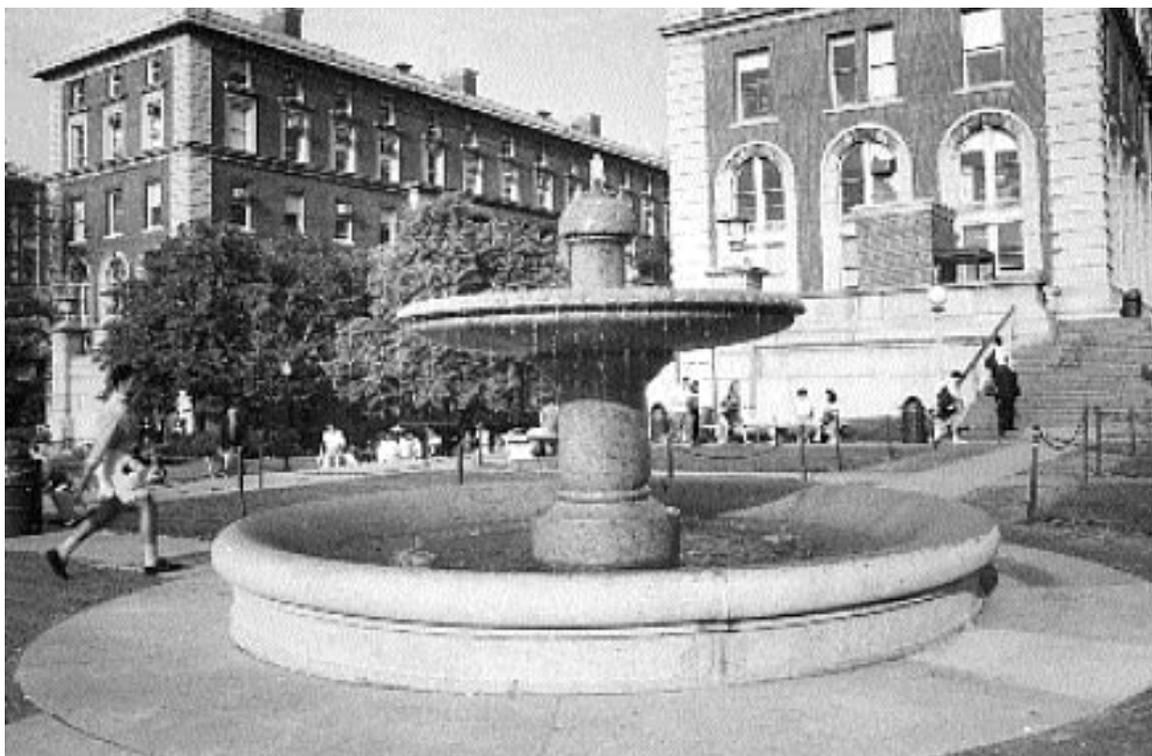
The student demonstrates proficiency in the major field by passing a comprehensive written examination. The major field is usually the one in which the student expects to write a dissertation and

to work after the completion of the degree. Requirements for each major field are established by the faculty of each division. Students take the major field examination after the tool-area requirements have been fulfilled. This examination must be taken by the end of two and a half years in the program for those who enter with a master's-level degree and by the end of three years for those who enter with a bachelor's-level degree. However, most students complete this requirement at the end of two years in the program.

7. Oral Examination

In the oral examination a student's preparation to do independent research is evaluated, in-depth knowledge within the major field is examined, and the ability to relate basic knowledge of other areas to the major field is tested. The examination is not intended to be a review of a dissertation proposal alone, but it is probably in the student's best interest to have this examination focused primarily on the dissertation topic. Indeed, if the oral is used as a "test" of the topic, it can help the student to complete subsequently a dissertation proposal that not only will be approved by two faculty members but also will provide an actual working document for completion of the dissertation. A student who treats the oral examination merely as a test of his or her ability to integrate the tool areas with the major field, without reference to the dissertation topic, is missing an important opportunity.

The oral examination is normally held within three to six months after the written major field examination. The oral examination committee is composed of four faculty members (except for students in management science/operations management; see separate program description). Two are chosen from the student's major field, and two



from outside but related fields. At least one of the faculty must represent one of the three standard tool areas and at least one must be a tenured faculty member.

Dissertation Proposal

A dissertation embodying original research constitutes the major requirement of the program. The dissertation is written under the guidance of a sponsor, who must be a tenured member of the Faculty of Business. The dissertation is defended before a University committee (the composition of which is described under Dissertation, Defense, and Deposit, below).

As a student progresses on the dissertation proposal, it is wise to establish a working relationship not only with the sponsor but also with other faculty members who will serve as readers of the dissertation at the time of the defense.

Each student must submit a written proposal detailing the dis-

sertation plan to the Doctoral Coordinator for approval. The proposal must be accompanied by an approval of dissertation proposal form signed by the sponsor and by two other faculty members, usually the chairman and the third reader, indicating their willingness to supervise the dissertation. Approval forms are available in the Doctoral Office.

A seminar on the dissertation topic is commonly presented by the student. The approved dissertation proposal must be submitted within six months of the completion of the other program requirements: course work, tool-area certifications and examinations, and major field and oral examinations.

Candidates can expect to spend at least one year of full-time work on the dissertation.

Master of Philosophy

The Master of Philosophy (MPhil) degree is a prerequisite to the PhD

degree and is awarded upon successful completion of all requirements of the PhD degree as stated above, except for the preparation and defense of the dissertation. Application for the MPhil degree is normally made after passing the oral examination and is made through the Doctoral Office. The MPhil degree is awarded on the University degree-conferral date immediately following the completion of the other degree requirements.

A student without an approved dissertation proposal is given the MPhil extra muros, a provision which formally severs the candidate's ties with the University but permits the PhD degree to be awarded on the basis of a defense of original scholarly material published by the candidate within ten years of receiving the MPhil degree. For further details, see the bulletin of the Graduate School of Arts and Sciences.

Typical Course Work and Examination Timetable

Term 1 (fall)

- Tool-Area Courses
- Microeconomics Analysis I
- Quantitative Methods
- Behavioral Science
- One other course chosen from the major field, an additional tool-area course or breadth-requirement course

Term 2 (spring)

- Tool-Area Courses
- Microeconomics Analysis II
- Quantitative Methods
- Behavioral Science
- One other course chosen from the major field or to fulfill breadth requirements
- Certification in two of the three tool areas either by course work or by examination

Term 3 (summer)

- Two courses
- Research assistantship—beginning of work on research paper

Terms 4 through 6 (fall, spring, summer)

- Completion of course requirements
- Certification in third research-tool area
- Completion of research paper
- Taking of major field examination followed within one year by the oral examination

Terms 7 through 12

- Submission of approved dissertation proposal
- Continuation of work as research assistant
- Completion and defense of dissertation

Dissertation, Defense, and Deposit

Students should plan to complete the dissertation within three terms (one year) after passing the oral examination.

When a dissertation is completed to the satisfaction of the sponsor, it is recommended for the defense. Through the Doctoral Office the student files an Application for the Final Examination for the PhD (Dissertation Defense) with the Office of the Dean of the Graduate School of Arts and Sciences, 108 Low Library.

Candidates should acquaint themselves thoroughly with the pamphlet, *The PhD Dissertation: Research Proposal, Sponsorship and Defense*, available from the Doctoral Office or the Dissertation Secretary, 108 Low Library, (212) 854-2854.

The dissertation is defended before a University-wide committee of five, including the sponsor (who must be a tenured member of the Faculty of Business), the chairperson (who must also be a tenured member of the Faculty of Business), a third inside reader (who must be a member of the Faculty of Business), and two outside examiners (who must be Graduate School of Arts and Sciences faculty members from any department other than the candidate's). In some cases, a variation is allowed and one of the outside examiners may be associated with an institution other than the Columbia Graduate School of Arts and Sciences, but only with the approval of the Assistant Dean of the Graduate School of Arts and Sciences. The student's sponsor, not the student, is responsible for selecting the committee, which is then subject to the approval of the Assistant Dean of the Graduate School of Arts and Sciences. The Doctoral Office assists the sponsor in selecting the committee members, getting committee approval, and scheduling the defense.

When the defense committee has met and examined the candidate on the dissertation, it evaluates and judges the dissertation

defense to fall within one of three categories: Pass, Incomplete, or Fail. The following are definitions of each category:

Pass

The dissertation is deemed acceptable subject to minor revisions. Upon completion of the required revision, the candidate is recommended for the degree. All revisions must be completed and the dissertation deposited no later than six months from the date of the dissertation defense.

Incomplete

The dissertation is deemed acceptable subject to major revisions. Upon completion of the required revisions, the candidate is recommended for the degree. The defense committee shall delegate the responsibility for the outcome of the revisions to a subcommittee made up of one to three members of the original committee. All revisions must be completed and the dissertation deposited no sooner than three months and no later than one year from the date of the dissertation defense.

Fail

The dissertation is deemed unacceptable, and the candidate is not recommended for the degree. Subject to the rules of the Graduate School of Arts and Sciences, however, the candidate, within ten years of the award of the MPhil degree, may submit to the Dean a body of published, independent, and original scholarly material. If that material is deemed acceptable, the candidate is permitted to sit for another examination.

In the case of a Pass or Incomplete dissertation, when the required revisions have been made and duly certified by the sponsor or the revisions subcommittee, the candidate is ready to make the final deposit of the dissertation

with the Dissertation Secretary, 108 Low Library. The dissertation may be deposited in microfilm or printed form. The pamphlet, *The PhD Dissertation: Research Proposal, Sponsorship and Defense*, available from the Doctoral Office and from the Dissertation Secretary, outlines requirements and gives full instructions for the deposit under both options.

With the deposit of the dissertation, all requirements for the PhD degree are satisfied, assuming that all Bursar's accounts are clear. The degree is awarded on the University degree-conferral date immediately following the deposit of the dissertation. Information about the annual Commencement exercises held each year in May is mailed by the Secretary of the University in March.

Academic Review

The Doctoral Committee reviews each student's performance every year and requires students to demonstrate a satisfactory rate of progress toward completion of the program requirements. Such progress is measured in terms of course work performance, completion of the tool-area requirements within a reasonable period of time, meeting specific requirements set by the faculty members in the student's major field, and proceeding steadily toward the completion of all other requirements for the PhD degree. Among specific factors taken into account are course grades, work in the major field, evaluation of the student's progress and potential (especially as it relates to the ability to perform independent, original research), and the student's evaluation of his or her own progress, time in the program, and potential for completion of the program. A formal evaluation both by faculty members in the student's major field and by the Doctoral Coordinator is made each summer.

As a satisfactory rate of progress is required at all times, the Doctoral Committee has an absolute right to terminate a student's candidacy at any time for academic reasons, or to deny the student readmission to the program.

Delays in Completing Degree Requirements

Candidates who hold a master's degree should plan to complete their work for the degree within a four-year period. Students entering with a bachelor's degree should complete work for the degree within four and one-half years.

A prospective candidate must complete the requirements, including the defense of the dissertation, within six years if ten courses of advanced standing have been granted, and within seven years without advanced standing. Exceptions may be made on the recommendation of the School to the Dean of the Graduate School of Arts and Sciences when special circumstances warrant. Exceptions are rare, far from automatic, and place the burden of proof for the extension on the student. A student must satisfy the academic requirements in force at the time the degree is awarded. Accordingly, if more than the normal time to complete requirements has been taken, the student may have to satisfy increased or changed requirements.

A student whose studies must be interrupted for a compelling reason such as maternity leave, military service, or sustained ill health may be granted a leave of absence for a stated period, usually not to exceed one year. Forms requesting leaves of absence can be obtained in the Doctoral Office. The period of a leave of absence is not counted as part of the time allowed for the completion of degree requirements.

If a student leaves the University without obtaining a leave of

absence, application must be made for readmission to candidacy. If readmitted, the student becomes subject to all current requirements.

If a student interrupts work and seeks readmission more than five years after his or her latest residence, all earlier academic work is reassessed and the dissertation subject reconsidered, either before the student is formally readmitted or during the first term of renewed residence. The amount of course credit granted the student is determined by the Doctoral Office in consultation with members of the faculty.

Services and Expenses

Program Administration

The Doctor of Philosophy degree in business is offered by the Graduate School of Arts and Sciences and administered by the Business School. The program is under the direction of the Doctoral Coordinator who is a tenured member of the Faculty of Business, working together with a Doctoral Committee made up of faculty representatives from each of the School's major fields, plus the Vice Dean for Academic Affairs who serves ex officio. The Doctoral Committee sets academic policy for the program, makes admissions decisions, and monitors students' academic performance. The Doctoral Office is managed by an

Administrative Director who reports to the Doctoral Coordinator and the Doctoral Committee and who is responsible for the administrative activities of the program.

Medical Care and Insurance

The University has developed a two-part program of medical care to protect and promote the health of its students. The University Health Service, on the second and third floors of John Jay Hall, provides students with complete out-patient care with its own staff of nurses, physicians, and specialists. The Health Service plan includes medical, surgical, and psychiatric consultation in the Health Center

as needed; health education and out-reach groups organized around topics of interest to students; an extensive program of women's health care, including gynecologic care, birth control, and pregnancy options as well as routine care; coverage for necessary tests and x-rays and medications and injections for allergies or foreign travel. The full range of services is described in the Health Service brochure issued yearly and is available at registration or from the Doctoral Office.

The other half of the program is the Student Medical Insurance (SMI), which supplements the Health Service by providing emergency room and hospital, accident, and sickness coverage throughout



the year, both at Columbia and away from the University. This policy may be extended to a student's spouse and children by filing an application with the carrier and paying an additional premium. The extensive benefits available under this policy are also described in the Health Service brochure. Further details of coverage and other insurance information can be obtained at the Health Center or by calling the company's representative, The Chickering Group, at 1-(800) 859-8471.

A full-time or residential student who already has a health insurance policy may be exempted from the SMI premium by completing the insurance waiver provided during registration and if the policy described is accepted by the University as being comparable to the SMI. Students who do not know the provisions of their policy or the extent of their coverage will have the SMI premium billed as a charge until they can provide information sufficient for a waiver to be granted. To receive an insurance waiver at registration, the name, number, and provisions of the policy must be known.

New York State Law on Measles Inoculation

Under New York State Law, as of September 1991, any student born after January 1, 1957, and enrolled for 6 or more points must be vaccinated twice after his or her first birthday against measles. If a student cannot prove that he or she has had the measles or is immune, that student may not attend classes, participate in University-sponsored events, or come onto campus. For more information regarding the State law, students should contact the University Health Service Measles Line at (212) 854-7210.

Such students must also demonstrate immunity for mumps and rubella (German measles).

Estimated Expenses

For the academic year 1998-99, the average cost of attending the Business School for one term is estimated to be:

Tuition and Fees

Tuition, per term, for the 1998-99 academic year

Each three-credit course . . .	\$2,652
Tuition (based on 15 points per term)	\$13,260
Full-time research only	\$992

Health Service Fee and Health Insurance Premium, 1998-99

Health Service fee, per year . . .	\$530
Student Medical Insurance (SMI)	\$715
Living expenses (room, board, books, clothing, sundries, travel, etc.)	\$6,850

University Apartment Housing (UAH): Types of Accommodations

There are five basic categories of accommodations available to students, and several are available with or without furnishings.

1. Apartment Share

The majority of students are housed in apartment shares. These are apartments that contain from two to four bedrooms. Most apartment shares are non-coed. Apartment shares are used to house single students only.

2. Suite Rooms

These are single- or double-occupancy rooms off a hallway. Students share the kitchen, bathroom, and any common areas in their suite.

3. Efficiency Apartments

Typically these are one-room apartments with a private bathroom and either kitchen appliances along one wall of the room or a

separate kitchen area. Single students or couples may live in efficiencies. Efficiency apartments are limited in number, so demand usually exceeds availability.

4. One-Bedroom Apartments

Couples and students with children are given priority in assignment of one-bedroom apartments.

5. Family-Style Apartments

Only students with dependent children may live in one of these larger, family-style apartments. Documentation of family composition (such as birth certificates, proof that dependent children reside with you, marriage certificates, or documentation of domestic partnership, etc.) is required.

6. International House

UAH has made a special arrangement to lease 100 single rooms in the International House. To apply for one of these rooms, students must fully and accurately complete both the UAH application and the I-House application. Both applications must be submitted directly to UAH, not I-House. To learn more about the I-House, you may access their Web site at <http://www.ihouse-nyc.org>.

UAH Accommodations

<i>1998-99 Average Monthly Rate Range per Lease/Contract Holder</i>		
Type of Accommodation	Furn	Unfurn
Apartment share	\$565	\$550
Single suite room	\$512	n/a
Shared suite room	\$365	n/a
Efficiency Apartment	\$790	\$757
One-Bedroom Apartment	\$965	\$900
Students with Dependent Children		
Two-Bedroom Apartment	n/a	\$1,015
Three-Bedroom Apartment	n/a	\$1,175



The Library

Access and exposure to business literature is crucial in preparing for a career in research. The Thomas J. Watson Library of Business and Economics holds a collection of more than 360,000 volumes, 600,000 microforms, more than 3,000 domestic and foreign periodicals and trade and association journals, and extensive files of government publications.

For coverage of public companies the library subscribes to a wide variety of information sources, including financial statements, major tracking services, and directories. In the extensive reference collection are materials on international business, finance and banking, accounting and taxation, economics, management, advertising, marketing, and statistics. Indices and bibliographies in business and economics are also available. The library also subscribes to computer-based searching services for business literature and time-series data. Library hours are maintained seven days a week while classes are in session.

The library provides electronic access to a wide range of business information and data sources, including Dow Jones News Retrieval, Nexis, Laser Disclosure, Compact Disclosure, ABI/Inform, Econlit,

Business Periodicals on Disk, Investext, and Statistical Masterfile.

Students also have access to twenty other libraries on the Columbia University campuses with collections comprised of over six million volumes. Alumni may continue to conduct research in the libraries of the University by obtaining a reader card.

Computing and Information Services

The Business School is committed to leadership in the area of information technology for management. Computing and Information Services (CIS) provides an extensive and unique computing environment for all the students, faculty, and administration. CIS maintains a network that provides students with access to important shared resources, including groupware and application software, printers, and electronic mail. There are also more than 400 network connections located throughout Uris Hall from which students may log onto the network using their notebook computers and a network adapter.

Various software is available on the network from the Novell Netware Server, including word-processing, spreadsheet, database, graphics, programming, statistical,

and specialized Business School course applications. There are also numerous software applications and extensive research databases accessible from the Business School's UNIX host.

The network offers access to Dow Jones News Retrieval, Lexis/Nexis, Columbia University computing services (bulletin boards, library catalogs, UNIX hosts), and Internet resources, including the World Wide Web. Dial-in access is available through ColumbiaNet and through an outside Telnet service.

Assistance and support for students are provided through the Help Desk located in 202 Uris Hall or by calling (212) 854-3730.

Financial Aid

Fellowships and other forms of financial aid are awarded by the Doctoral Program Committee. In practice, nearly every student admitted to the Doctoral Program in Business receives financial aid. These awards are made on the basis of academic merit and secondarily on financial need. Aid comes in the following forms:

Fellowships: For the academic year 1998-99, the typical stipend is \$5,067 per trimester academic term (\$15,201 annually). Fellowship support is continued for ten terms (three and one-third years) for a candidate entering with a master's-level background and for twelve terms (four years) for a candidate entering with a bachelor's degree only. Continuation of support during this period is subject to the candidate making adequate academic progress in the program.

Assistantships: Both teaching and research assistantships are available. Students are limited to two assistantships per term, and first-term students are strongly advised to carry only one assistantship.

Tuition Exemption: PhD students receive tuition exemption for up to 15 points per term. Tuition exemption is arranged for all approved course work while a candidate is in the program.

Additionally, students in the Doctoral Program are encouraged to apply for dissertation research support from government agencies, private foundations, and corporate industrial concerns. Research Centers at Columbia Business School also provide focus for faculty and doctoral student research and may provide support for doctoral research through assistantships or direct grants. Research Centers at the School include the Center for Chinese Business Studies; the Center for Human Resource Management Studies; the Center for Japanese Economy and Business; the Center for Research in the Marketing Financial Services; the Center on Global Consumers, Brands, and Communications; the Columbia Institute for Tele-Information; the Institute for Marketing Studies; the Center for the Studies of Futures Markets; the Center for International Business Education (CIBE); and the W. Edwards Deming Center for Quality, Productivity and Competitiveness.

Regional Institutes at Columbia University include the East Asian Institute, the Harriman Institute, the Institute for African Studies, the Institute for Latin and Iberian Studies, the Institute on East Central Europe, the Institute of Western Europe, the Middle East Institute, and the Southern Asia Institute. For complete descriptions and further information on these regional institutes, consult the bulletin for the School of International and Public Affairs.

Child support is also available in the amount of \$750 per term for one child or \$1,500 per term for two or more children.

Students requiring additional financial aid may also qualify for



Guaranteed Student Loans (GSL). Further information on GSL application procedures are available from the Doctoral Program Office.

Certain named fellowships in the School contribute to the general fellowship funds for doctoral students, and candidates of exceptional scholastic achievement are designated periodically as holders of specific fellowships, including the following:

JOHN M. CHAPMAN FELLOWSHIP
Preference is given to PhD candidates who are interested in consumer credit, mortgage credit, money and financial markets, or marketing.

ASENATH MARIE AND DUNCAN MERRIWETHER DOCTORAL FELLOWSHIP

PAUL MONTRONE SCHOLARSHIP
Awarded to married doctoral candidates.

MURRAY FELLOWSHIP

RUDOLPH FELLOWSHIP
Awarded to PhD candidates pursuing research in the area of marketing.

Applicants wishing to be considered for financial aid are asked to complete the Financial Assistance Application in the packet of application materials.

Placements

Most Columbia graduates seek and obtain positions as professors at leading universities and colleges. Some take research-oriented jobs in business or government. Recent graduates and their placements are listed in the descriptions of the major fields of study, pages 4–9. More detailed information is available from the Doctoral Program Office.

University and School Regulations

Reservation of University Rights

This bulletin is intended for the guidance of persons applying for or considering application for admission to Columbia University and for the guidance of Columbia students and faculty. The bulletin sets forth in general the manner in which the University intends to proceed with respect to the matters set forth herein, but the University reserves the right to depart without notice from the terms of this bulletin. The bulletin is not intended to be and should not be regarded as a contract between the University and any student or other person.

University Regulations

According to University regulations, each person whose registration has been completed will be considered a student of the University during the term for

which he or she is registered unless the student's connection with the University is officially severed by withdrawal or otherwise. No student registered in any school or college of the University shall at the same time be registered in any other school or college, either of Columbia University or of any other institution, without the specific authorization of the dean or director of the school or college of the University in which he or she is first registered.

The privileges of the University are not available to any student until he or she has completed registration. A student who is not officially registered for a University course may not attend the course unless granted auditing privileges. No student may register after the stated period unless he or she obtains the written consent of the appropriate dean or director.

The University reserves the right to withhold the privilege of regis-

tration or any other University privilege from any person with an unpaid debt to the University.

Attendance and Length of Residence

The minimum residence requirement for each Columbia degree is 30 points of course work completed at Columbia University.

Students are held accountable for absences incurred owing to late enrollment.

A student in good standing may, for a valid reason, be granted a leave of absence by the Dean of the School.

Religious Holidays

It is the policy of the University to respect its members' religious beliefs. In compliance with New York State law, each student who is absent from school because of his or her religious beliefs will be given an equivalent opportunity to register for classes or make up any examination, study, or work requirements that he or she may have missed because of such absence on any particular day or days. No student will be penalized for absence due to religious beliefs, and alternative means will be sought for satisfying the academic requirements involved.

Officers of administration and of instruction responsible for scheduling of academic activities or essential services are expected to avoid conflict with religious holidays as much as possible. If a suitable arrangement cannot be worked out between the student and the instructor involved, they should consult the appropriate dean or director. If an additional appeal is needed, it may be taken to the Provost.



Academic Discipline

The continuance of each student upon the rolls of the University, the receipt of academic credits, graduation, and the conferring of any degree or the granting of any certificate are strictly subject to the disciplinary powers of the University.

Rules of University Conduct

The Rules of University Conduct (Chapter XLI of the Statutes of the University) provide special disciplinary rules applicable to demonstrations, rallies, picketing, and the circulation of petitions. These rules are designed to protect the rights of free expression through peaceful demonstration while at the same time ensuring the proper functioning of the University and the protection of the rights of those who may be affected by such demonstrations.

The Rules of University Conduct are University-wide and supersede all other rules of any school or division. Minor violations of the Rules of Conduct are referred to the normal disciplinary procedures of each school or division ("Dean's Discipline"). A student who is charged with a serious violation of the Rules has the option of choosing Dean's Discipline or a more formal hearing procedure provided in the Rules.

All University faculty, students, and staff are responsible for compliance with the Rules of University Conduct. Copies of the full text are available in *FACETS*, the University student handbook (<http://www.columbia.edu/cu/facets/>), and at the Office of the University Senate, 406 Low Memorial Library.

Code of Integrity

One of the Columbia Business School's key objectives is to instill societal and professional values

supporting the highest human aspirations, including integrity, respect for the individual and the environment, and business ethics.

In keeping with this objective, the School's faculty and students approved the Code of Integrity (effective May 1992), which enhances the Honor Code adopted in 1987. Under the Code of Integrity, all enrolled Business School students pledge to conduct with integrity their academic endeavors and interactions with the Columbia community. All students who register for course work at the School promise to take an active part in following and promoting standards of integrity and respect and fostering a spirit of responsibility within the School.

The Code reads:

"As a student of the Graduate School of Business, I pledge to undertake my academic work with honor and integrity. I will submit only original work, giving credit to others where appropriate. I will not give or receive unauthorized aid on exams or on any other work that is to be evaluated by the instructor. I will represent myself honestly. I agree to respect the rights and property of others as required of good citizens and to act in accordance with the rules and regulations of the University."

Violations of the Integrity Code are resolved by a Hearing Panel composed of two student members of the Integrity Board, two administrators, and one faculty member.

Policy Statement on Discrimination and Harassment

The following statement was adopted by the University Senate on April 27, 1990.

As a great center of learning, Columbia University prides itself on being a community committed

to free and open discourse and to tolerance of differing views. We take pride, too, in preparing the leaders of our society and exemplifying the values we hope they will uphold. These commitments are subverted by intolerance, bigotry, and harassment. Even in recent history, we must recognize race, ethnicity, religion, gender, sexual orientation, disability, and other irrelevancies have all occasioned attacks by the ignorant, the foolish, the sick, the evil. Instead of enjoying our differences and the richness they bring to our shared lives, some have chosen to make those differences the targets of anger and hate. As a community, we are committed to the principle that individuals are to be treated as human beings rather than dehumanized by treatment as members of a category that represents only one aspect of their identity.

This University resolutely condemns conduct that makes such targets of our differences. The free exchange of ideas central to the University can take place only in an environment that is based on equal opportunity for admission to academic and other programs and to employment, and on freedom from behavior that stigmatizes or victimizes others. All decisions concerning an individual's admission to or participation in any University program must be based on that individual's qualifications, free of stigmatizing consideration of race, color, national or ethnic origin, religion, disability, gender, sexual orientation, marital status, age, citizenship, or Vietnam era or disabled veteran status. Nor will Columbia tolerate any behavior that harasses members of the community on the basis of any of these qualities. Such behavior will be regarded as a violation of the standards of conduct required of any person associated with the University and will subject the person guilty of it to the full range of

internal institutional discipline, including permanent separation. While mediation and consensual resolution are of course to be encouraged, we also recognize the right of all persons who believe themselves to have been the targets of such behavior to institute a formal grievance. Coercion to require them to overlook or retract their complaints fosters discrimination and harassment and is equally intolerable in our community.

It is not enough to be prepared to respond when ugliness appears. Members of a community such as ours must work preventively as well, to ensure that all our dealings with each other are marked by decency and characterized by civility. Columbia is committed to do what it can to engender mutual respect, understanding, and empathy. The University acknowledges a special responsibility to develop sensitivity to the concerns of those who are most vulnerable to discrimination and harassment.

Statement of Nondiscriminatory Policies

The University is publishing the following statements in accordance with certain federal, state, and local statutes and administrative regulations:

Consistent with the requirements of Title IX of the Education Amendments of 1972, as amended, and regulations thereunder, the University does not discriminate on the basis of sex in the conduct or operation of its education programs or activities (including employment therein and admission thereto). Inquiries concerning the application of Title IX may be referred to Ms. Beth Wilson, Associate Provost, who heads the University's Office of Equal Opportunity and Affirmative Action (402 Low Memorial Library, Mail Code 4333, 535 West 116th Street, New York, NY 10027,

telephone 212-854-5511), or to the Director, Office for Civil Rights (Region II), 26 Federal Plaza, New York, NY 10278.

Columbia University admits students of any race, color, national and ethnic origin, and age to all the rights, privileges, programs, and activities generally accorded or made available to students at the University. It does not discriminate against any person on the basis of race, color, national and ethnic origin, or age in administration of its educational policies, admissions policies, scholarship and loan programs, and athletic and other University-administered programs.

Title VI of the Civil Rights Act of 1964, as amended, prohibits discrimination against any person on the basis of race, color, or national origin in programs or activities receiving federal financial assistance. Title VII of the Civil Rights Act of 1964, as amended, prohibits employment discrimination against any person because of race, color, religion, sex, or national origin. Executive Order 11246, as amended, prohibits discrimination in employment because of race, color, religion, sex, or national origin and requires affirmative action to ensure equality of opportunity in all aspects of employment. In addition, the New York Human Rights Law, Article 15, Executive Law Section 296 prohibits discrimination against any person in employment because of age, race, creed, color, national origin, disability, sex, marital status, and genetic predisposition or carrier status.

Consistent with the requirements of Section 504 of the Rehabilitation Act of 1973, as amended, and regulations thereunder, the University does not discriminate against any person on the basis of disability in admission or access to, or employment or treatment in, its programs and activities. Section 503 of the Rehabilitation Act of 1973, as

amended, requires affirmative action to employ and advance in employment qualified workers with disabilities. The Americans with Disabilities Act of 1990 also prohibits discrimination in public accommodation and in employment against qualified persons with disabilities. It requires the University to provide qualified applicants and employees with reasonable accommodations that do not impose undue hardship or pose a direct threat of harm to themselves or others.

The Equal Pay Act of 1963 prohibits discrimination on the basis of sex in rates of pay. The Age Discrimination in Employment Act of 1967, as amended, prohibits discrimination in employment on the basis of age. The Age Discrimination Act of 1975 prohibits discrimination on the basis of age in programs and activities receiving federal financial assistance.

Section 313 of the New York Education Law, as amended, prohibits educational institutions from discriminating against persons seeking admission as students to any institution, program, or course because of race, religion, creed, sex, color, marital status, age, or national origin. The New York City Human Rights Law, Title 8, Section 8-107, makes it an unlawful discriminatory practice for an employer to discriminate against any person because of their age, race, creed, color, national origin, gender, disability, marital status, sexual orientation, or alienage or citizenship status. It also prohibits educational institutions from discriminating against persons in any of the above categories in the provision of certain accommodations, advantages, facilities, or privileges.

On December 1, 1978, the Columbia University Senate passed a resolution announcing its general educational policy on discrimination, which reaffirms the University's commitment to nondiscrimi-

natory policies and practices. The Senate reaffirmed this policy on April 27, 1990, by expanding the categories protected from discrimination and adding protection against harassment as well. Currently, the policies protect against discrimination and harassment on the basis of race, color, gender, religion, national and ethnic origin, age, disability, marital status, sexual orientation, and status as a Vietnam era or disabled veteran.

The Vietnam Era Veterans' Readjustment Assistance Act of 1974, as amended, (38 U.S.C. 4212), prohibits job discrimination and requires affirmative action to employ and advance in employment qualified special disabled veterans and veterans of the Vietnam era.

All employees, students, and applicants are protected from coercion, intimidation, interference, or retaliation for filing a complaint or assisting in an investigation under any of the foregoing policies and laws.

The University's Office of Equal Opportunity and Affirmative Action has been designated to coordinate compliance activities under each of the programs referred to above. Any employee who believes that he or she has been denied equal opportunity should contact this office, which may informally investigate complaints and offer advice and counsel on questions relating to equal opportunity and affirmative action, including information about applicable formal grievance procedures and agencies where complaints may be filed.

Discrimination Grievance Procedure

The University's Discrimination Grievance Procedure is available to enrolled students who feel that they have been the victims of sexual harassment or discrimination on the basis of race, color, reli-

gion, national or ethnic origin, sex, sexual orientation, marital status, age, disability, citizenship, or Vietnam era or qualified special disabled veteran status. A copy of the Procedure is available in *FACETS*, the University student handbook, and in the office of the Associate Provost for Equal Opportunity and Affirmative Action, 402 Low Memorial Library or 101 Bard Hall; telephone: (212) 854-5511.

A complaint under this Procedure is initiated through a written complaint filed with the Equal Opportunity and Affirmative Action Office. Staff in that office will assist with filing the complaint and are also available for confidential counseling and informal investigation of discrimination claims.

Columbia University Ombuds Office

The Ombuds Office is a neutral and confidential resource for informal conflict resolution, serving the entire Columbia University community—students, faculty, and employees.

For further information, contact Marsha Wagner, Ombuds Officer, 402 Hamilton; telephone: (212) 854-1234; fax: (212) 854-6046; e-mail: ombuds@columbia.edu. On Wednesdays the Ombuds Officer is at the Health Sciences campus office, 101 Bard Hall, 50 Haven Avenue; telephone: (212) 304-7026.

The Federal Family Educational Rights and Privacy Act (FERPA)

The University abides by the provisions of the Federal Family Educational Rights and Privacy Act of 1974. This act insures a wide range of rights, including but not limited to: information about student records that the University maintains, who maintains them, who has access to them, and for what

purposes access is granted. The act also permits the University to release "directory information" without a student's consent. In addition, the act guarantees students access to their records and restricts the access of others.

Students who wish to restrict access to their directory information may do so at the Registrar's Office, 205 Kent. This same office can provide a set of guidelines and a policy statement. The guidelines are also available on ColumbiaWeb and in the current edition of *FACETS*. Questions about the interpretation of the guidelines should be referred to the University's General Counsel, 412 Low Library.

Disability Services

Columbia is committed to serving the needs of students with disabilities. Services to students with permanent or temporary disabilities are coordinated by the University Office of Disability Services. Disability Services works in conjunction with Columbia Business School to support its academic program and standards and to meet students' disability needs.

The University Office of Disability Services provides a variety of services, programs, and resources to allow students with disabilities full participation in the academic and campus experience. Students are expected to identify their disability and to provide current and appropriate medical or diagnostic documentation before any accommodations can be considered. In cases involving students with learning disabilities, appropriate documentation should typically be no more than five years old in order to provide an assessment of the student's adult level of learning skills and style and must include a report summary and complete test battery scores. To allow sufficient time for review of needs and implementation of accommoda-

tions, students with disabilities are encouraged to contact Disability Services upon acceptance to discuss their specific disability needs and to plan any academic accommodations that may be necessary.

For information, contact Dr. Lynne Bejoian, Director, Columbia University Office of Disability Services, 305 Low Library, Mail Code 4322, 535 West 116th Street, New York, NY 10027; (212) 854-2388 (voice/TDD); fax: (212) 854-3448; e-mail: disability@columbia.edu.

Transcripts and Certification

The amended Family Educational Rights and Privacy Act (FERPA) of 1974 prohibits release of educational records without the written consent of the student (for certain exceptions and further restrictions, consult *FACETS*, the University student handbook). You may obtain an official transcript of your academic record at Columbia University by writing to: Office of the Registrar, Columbia University, Mail Code 9202, 1140 Amsterdam Avenue, New York, NY 10027, Attention: Transcripts.

Please include the following information with your request: current and former names; Social Security number; schools attended and dates of attendance; degrees awarded and dates awarded; number of transcripts desired and complete address for each; your current address and telephone number; and your signature authorizing the release of your transcript. You may also order transcripts in person at 205 Kent Hall on the Morningside campus (9 a.m.–5 p.m., Monday–Friday). Currently enrolled students may order transcripts for themselves and for colleges and universities via the Student Services page on the World Wide Web at <http://www.columbia.edu/cu/students/>. There is no charge for issuing transcripts; however, all students pay a

one-time transcript fee of \$30 upon their first registration at the University. The normal processing time for transcripts is two to three business days. If you mail in your request for a transcript, you should allow several additional days for delivery to and from the University.

You may order certifications of your enrollment and degrees via mail or in person, as described above. When requesting a certification by mail, include the notation "Attention: Certifications" on your envelope. Certifications are provided while you wait if you come to Kent Hall to request them. There is no charge for certifications.

Protection Against Sexual Harassment

Policy Statement on Sexual Harassment

Federal law, including Title VII of the Civil Rights Act of 1964, provides that it shall be unlawful discriminatory practice for any employer, because of the sex of any person, to discharge without just cause, to refuse to hire, or otherwise to discriminate against that person with respect to any matter directly or indirectly related to employment. Harassment of any employee on the basis of sex violates this federal law.

To help clarify what is unlawful sexual harassment the Federal Equal Employment Opportunity Commission (EEOC) has issued Guidelines on the subject. While the EEOC Title VII Guidelines apply only to faculty and other employees, Title IX, administered by the U.S. Education Department's Office for Civil Rights (OCR), also protects students from sexual harassment. Accordingly, the University prohibits sexual harassment of any member of the Columbia community, whether such harassment is aimed at students, faculty, or other employees, and violators will be subject to disciplinary action. Unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature will constitute sexual harassment when:

1. submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment;
2. submission to or rejection of such conduct by an individual is used as the basis for academic or employment decisions affecting that individual; or,

3. such conduct has the purpose or effect of unreasonably interfering with an individual's academic or work performance or creating an intimidating, hostile, or offensive academic or working environment.

Any person who believes that he or she is being sexually harassed may choose to seek a resolution of the problem through discussion with the person directly concerned. If this does not resolve the matter, or if there is a reluctance to deal directly with the person involved, the problem should then be brought to the attention of a member of the University Panel on Sexual Harassment. Advice may also be sought from the Office of Equal Opportunity and Affirmative Action, 402 Low Memorial Library or 101 Bard Hall, (212) 854-5511, or the Ombuds Office, 402 Hamilton Hall or 101 Bard Hall, (212) 854-1234. If these steps do not resolve the problem, the applicable University grievance procedure should be used. The University Discrimination Grievance Procedure is available if no other University grievance procedure is specifically applicable. No one at the University may retaliate in any way against a person who makes a claim of sexual harassment.

Charge of the University Panel on Sexual Harassment

The Columbia Panel on Sexual Harassment is composed of trusted, accessible, and sympathetic members of the University community who act as informal mediators. Their

goal is the protection and counsel of any member of the University who is made to feel personally pressured or uncomfortable because of the behavior of another University member. Members of the Panel provide a safe, impartial, nonadversarial setting in which the problem can be considered or solved through confidential counseling and, when requested, mediation between the complainant and the alleged harasser. The Panel thus provides guidance and protection for the accused as well, identifying false or mistaken accusations, misunderstandings, or unconscious behavior. Panel members are also a link through which the University can take account of, and take appropriate action against, those on campus who are behaving illegally. The Panel on Sexual Harassment is a timely, protective, and compassionate arm of the University, one that not only sensitizes and educates the University community but also demonstrates the University's commitment to fair treatment of all its members.

Panel Membership List

Names and contact information for members of the Columbia Panel on Sexual Harassment can be found in Appendix E of *FACETS*, the University student handbook.

Sexual Misconduct Policy and Alternative Procedure

On April 27, 1995, the University Senate adopted a Sexual Misconduct Policy and grievance procedure that can be used as an alternative to traditional Dean's Discipline. The Sexual Misconduct Policy

applies to students in all schools on the Morningside campus, all schools on the Health Sciences campus, Barnard College, and Teachers College. The alternative disciplinary procedure applies to these same groups (through April 2000, unless extended), with the exception of the Law School. The policy prohibits sexual assault of one student against another student. A comprehensive program to address the issue has also been developed. Copies of the policy and alternative procedure are available through Columbia's Office of Equal Opportunity and Affirmative Action, 402 Low Memorial Library or 101 Bard Hall; mailing address: Mail Code 4333, 535 West 116th Street, New York, NY 10027; telephone: (212) 854-5511; fax: (212) 854-1368. A brief summary description of the policy, procedure, and program follows.

Policy

Columbia University's policy defines sexual misconduct as non-consensual, intentional physical contact with a person's genitals, buttocks, and/or breasts. Lack of consent may be inferred from the use of force, coercion, physical intimidation, or advantage gained by the victim's mental and/or physical impairment or incapacity, of which the perpetrator was, or should have been, aware.

Alternative Procedure

The alternative procedure may be chosen in lieu of traditional Dean's Discipline, Columbia's sexual harassment procedure, or informal internal means of mediated resolution, by a student who alleges he or she has been the victim of sexual assault in violation of the University's policy. It can be initiated by contacting a Gatekeeper or the Associate Provost for Equal Opportunity and Affirmative Action and filing a complaint. If the established criteria are met and the situ-

ation is not otherwise resolved, a hearing may be convened before a three-member hearing panel consisting of one student, one faculty member, and one administrator. The complainant and the accused will be asked to provide information to the panel and, along with other information made available, it will be used to make a determination of guilt or innocence and any disciplinary action deemed warranted. The determination is sent as a recommendation to the Dean of Students of the accused's school, whose decision is final. There are appeal avenues at various stages of the procedure available to the complainant and the accused.

Hearing Panelists

Hearing Panelists are selected by the Associate Provost from a pool of students, faculty members, and officers of administration. None of the panelists will be from the school/department of the complainant or accused or closely affiliated with either party.

Gatekeepers

Twelve Associate or Assistant Deans have been appointed and trained to provide information about the policy and alternative procedure as well as other options for dealing with a sexual assault. They can also receive complaints for mediation, investigation, and formal or informal resolution. Any one of the Gatekeepers may be contacted for information or advice or to report an incident of sexual misconduct. Gatekeepers cannot accept complaints by or against students in their own schools. For a current list of Gatekeepers or for additional information, please contact the Office of Equal Opportunity and Affirmative Action, (212) 854-5511.

Romantic Relationship Advisory Statement

Faculty and staff members are cautioned that consensual romantic relationships with student members of the University community, while not expressly prohibited, can prove problematic. A faculty or staff member involved in such a relationship with a student is expected to remove him/herself from academic or professional decisions concerning the student. The Provost has, however, authorized some departments to adopt more restrictive policies. Individuals with questions about the position of their department are encouraged to raise them with their department head.

Should a romantic relationship with a student lead to a charge of sexual harassment against a faculty or staff member, the University will pursue it in accordance with its Sexual Harassment Policy and applicable grievance procedure. Questions about this Advisory Statement may be directed to Associate Provost Beth Wilson, Office of Equal Opportunity and Affirmative Action, 402 Low Memorial Library or 101 Bard Hall, (212) 854-5511. For the complete statement, please see Appendix F of *FACETS*, the University student handbook.

Full-Time Faculty



Meyer Feldberg
Dean



Awi Federgruen
Senior Vice Dean



Professor John B. Donaldson
Chair, Doctoral Subcommittee on Business

Eric Abrahamson *Professor*

BA, Haverford, 1982; MPhil, New York University, 1987; PhD, 1990. Joined faculty in 1989.

Teaching affiliations: Management, Human Resource Management Program.

Teaching and research interests: Professor Abrahamson studies the creation, spread, use, and rejection of innovative techniques for managing organizations and their employees. He uses time-series techniques to explore how macroeconomic and macropolitical forces have caused the popularity of various types of management techniques to rise and fall between 1870 and the present. This work guides his research explaining recent, transitory waves in the popularity of many modern management techniques such as t-groups, quality circles, corporate culture, total quality management, or business process reengineering. His teaching focuses on the use of power and influence techniques by managers

to lead widespread, successful, and lasting organizational change.

Michael Adler *Professor*

BS, Carnegie Institute of Technology, 1962; MS, 1963; DBA, Harvard, 1968. Joined faculty in 1968.

Teaching affiliations: Finance and Economics, International Business Program.

Teaching and research interests: Professor Adler researches and teaches in the fields of corporate finance for the international firm, international finance, forward and exchange futures markets, international risk management, and emerging fixed income and equity markets. He is pursuing research and consulting interests in the emerging market fields with special emphasis on new product design. Adler serves as a consultant to Donaldson, Lufkin & Jenrette, focusing on Latin American economies.

Christina L. Ahmadjian *Assistant Professor*

AB, Harvard, 1981; MBA, Stanford, 1987; PhD, University of California, Berkeley, 1995. Joined faculty in 1995.

Teaching affiliations: Management, Human Resource Management Program, International Business Program.

Teaching and research interests: Professor Ahmadjian's interests comprise interorganizational networks in Japan and their implications for corporate strategy and performance and Japanese employment systems. She has received research grants from the Chazen Institute—to study innovation in human research management practices in Japanese firms—and from the Japan–United States Friendship Commission. She teaches the core course *Leading and Managing in Organizations* and is developing a seminar on cross-cultural management.

Eli Amir

Associate Professor

BA, Tel Aviv University, 1985; MS, University of California, Berkeley, 1990; PhD, 1991.

Joined faculty in 1991.

Teaching affiliation: Accounting, Business Law and Taxation.

Teaching and research interests:

Professor Amir studies the valuation implication of corporate financial and nonfinancial disclosures, in particular, the relation between share prices and financial disclosures related to postretirement benefits and income taxes. He has also examined the impact of accounting method choice on firm value, the valuation implications of international differences in financial reporting systems, and the relationship between nonfinancial disclosures and firm value in the cellular communication industry. Amir's current research focuses on issues related to corporate pension asset allocation. He teaches the core course *Accounting I*, the elective *Corporate Financial Reporting*, and a doctoral seminar on valuation theory in accounting.

Asim Ansari

Associate Professor

BE, Osmania University, India, 1986; PGDM, Indian Institute of Management, Bangalore, 1988; PhD, New York University, 1993. Joined faculty in 1996.

Teaching affiliation: Marketing.

Teaching and research interests:

Professor Ansari joined the School's Marketing faculty after teaching for three years at the University of British Columbia, Canada. He teaches marketing strategy, and his research focuses on the quantitative modeling of competitive positioning and pricing strategies of firms. He is also interested in micromarketing and the development of methodologies and metrics for valuing a firm's database of consumers.

Enrique R. Arzac

Professor

CPN, University of Buenos Aires, 1963; MBA, Columbia, 1965; MA, 1966; PhD, 1968.

Joined faculty in 1971.

Teaching affiliation: Finance and Economics.

Teaching and research interests:

Professor Arzac is an expert on cor-

porate finance and valuation. He has published many articles on corporate finance, portfolio management, and commodity markets in finance and economics journals. He is currently studying the cost of capital of firms with changing capital structure and the design of value-based compensation schemes. Arzac teaches *Corporate Finance* in the MBA and Executive MBA programs. He has received many awards for teaching excellence, including the 1995 Margaret Chandler Award for Commitment to Excellence in teaching. Arzac is a director of the Adams Express Company, Petroleum & Resources Corporation, and BEA Funds.

Kyle Bagwell

Professor

BA, Southern Methodist, 1983; PhD, Stanford, 1986.

Joined faculty in 1996.

Teaching affiliation: Finance and Economics.

Teaching and research interests:

Professor Bagwell's research focuses on the strategic behavior that takes place among firms and between firms and consumers. In particular, he emphasizes strategic interactions in markets with large retail firms. He also studies the design of trade agreements among countries. A former national fellow at the Hoover Institution, Bagwell is also a member of the economics department in the Graduate School of Arts and Sciences.

Tim Baldenius

Assistant Professor

MA, University of Hamburg, 1994; PhD, University of Vienna, 1998.

Joined faculty in 1998.

Teaching affiliation: Accounting, Business Law and Taxation.

Teaching and research interests:

Professor Baldenius teaches and conducts research in managerial accounting. He is investigating the incentive effects of transfer pricing methods in divisionalized firms and the impact these rules have on investments. More broadly, he is interested in decentralization and performance evaluation within companies. Baldenius teaches the core course *Managerial Accounting*. Prior to joining the Columbia faculty, he taught at the University of California at Berkeley.

Ann P. Bartel

Professor; Director, Human Resource Management Program

BA, University of Pennsylvania, 1970; MA, Columbia, 1973; PhD, 1974.

Joined faculty in 1976.

Teaching affiliations: Finance and Economics, Human Resource Management Program.

Teaching and research interests:

Professor Bartel is an expert in the fields of labor economics and human resource management and has published many articles on employee training, job mobility, and technological change. She is currently using firm-level data to study how human resource management practices affect productivity in the financial services industry and is continuing her work on the impact of technological change on workers' careers. A popular teacher, Bartel received the 1992 Margaret Chandler Award for Commitment to Excellence in teaching. She is a research associate at the National Bureau of Economic Research and the recipient of research grants from the Alfred P. Sloan Foundation, the U.S. Department of Labor, and the Citicorp Behavioral Sciences Research Council.

Schon Beechler

Associate Professor

BA, Oberlin, 1981; MA, University of Michigan, 1990; PhD, 1990.

Joined faculty in 1989.

Teaching affiliation: Management.

Teaching and research interests:

Professor Beechler studies international management, globalization, and the management of organizational change. She is a specialist in Japanese management and has conducted a number of research studies that analyze how Japanese multinational corporations manage their overseas subsidiaries. Beechler plays an active role in designing and teaching courses for Executive Education. Her current research, sponsored by the International Consortium for Executive Development Research, focuses on the relationships between globalization, corporate culture, and organizational performance. She also teaches the core course *Leading and Managing in Organizations* and electives in international management in the MBA, Executive MBA, and PhD programs.

David O. Beim*Professor*

BA, Stanford, 1963; MPhil, Oxford, 1966.

Joined faculty in 1991.

Teaching affiliations: Finance and Economics, International Business Program.

Teaching and research interests:

Professor Beim joined Columbia Business School's faculty after a twenty-five-year career in investment banking. His work experience includes ten years in corporate finance at First Boston, where he founded and ran the project finance group, two years as executive vice president of the Export-Import Bank of the United States, ten years as head of investment banking at Bankers Trust Company, and three years as a partner at Dillon Read. He teaches *Corporate Finance*, *International Banking*, and *Emerging Financial Markets*, and in 1995 he received the Dean's Award for Teaching Excellence. He also serves as coordinator for the business ethics theme in the curriculum and adviser to the Integrity Board. His research interests include debt pricing and the banking industry.

E. Ralph Biggadike*Professor*

MBA, University of Virginia, 1972; DBA, Harvard, 1976.

Joined faculty in 1996.

Teaching affiliation: Management.

Teaching and research interests:

Professor Biggadike came to Columbia Business School with a combination of academic and practitioner experience. Most recently, he was vice president for strategic management and group president for worldwide drug delivery systems at Becton Dickinson and Company. Prior to that, he was the Paul M. Hamaker Professor of Business Administration at the Darden School of the University of Virginia. Biggadike examines strategy formation, organization alignment, and the roles, tasks, and skills of general managers. He teaches the core course *Strategic Management of the Enterprise* and the elective *Top Management Processes*.

Robert N. Bontempo*Associate Professor*

BS, University of Notre Dame, 1981; BA, Indiana University, 1984; PhD, University of Illinois, 1989.

Joined faculty in 1989.

Teaching affiliations: Management, International Business Program.

Teaching and research interests:

Professor Bontempo studies international comparative management, including international negotiations and cultural differences in decision making. His current research involves cultural factors in international negotiations and international differences in risk perception. The winner of the 1994 Singhvi Prize for Scholarship in the Classroom, Bontempo teaches the core course *Leading and Managing in Organizations* and the elective *Managerial Negotiations*. He is a consulting editor for the *Journal of Cross-Cultural Psychology*.

Julien Bramel*Associate Professor*

BS, Columbia, 1988; MS, 1990; PhD, 1993.

Joined faculty in 1993.

Teaching affiliation: Management Science.

Teaching and research interests:

Professor Bramel joined the Business School faculty after garnering two national awards as a student (Best Student Paper in Operations Research and Best Thesis in Transportation Science). His research examines the areas of logistics, distribution planning, vehicle routing, and production scheduling. He recently completed a book on logistics and received a career award from the National Science Foundation. Bramel serves as an associate editor for *Operations Research* and *Management Science*, and for the past five years he has designed and implemented routing algorithms for pupil transportation for the New York City Board of Education. He teaches courses on statistics and decision models in the MBA and Executive MBA programs.

Mark Broadie*Associate Professor*

BS, Cornell, 1979; PhD, Stanford, 1983.

Joined faculty in 1983.

Teaching affiliation: Management Science.

Teaching and research interests:

Professor Broadie teaches the core course *Decision Models* and the elective *Security Pricing: Models and Computation*. He is interested in the use of management science techniques and computational methods to solve problems in risk management, the pricing of derivative securities, and portfolio optimization. Broadie is an associate editor of *Management Science* and *Mathematical Finance* and a coeditor of the *Journal of Computational Finance*. He has served as a consultant to several investment banks, and previously he was a vice president at Lehman Brothers in the fixed-income research group.

Joel Brockner*Professor*

BA, State University of New York, Stony Brook, 1972; MS, Tufts, 1974; PhD, 1977.

Joined faculty in 1984.

Teaching affiliations: Management, Human Resource Management Program.

Teaching and research interests:

Within the broader field of organizational behavior, Professor Brockner is well known for his work in several areas, including the effects of organizational downsizing on the productivity and morale of the "survivors," management of organizational change, self processes in organizations, and managerial judgment and decision making. He teaches the core course *Leading and Managing in Organizations* and the electives *Leadership and Managerial Decision Making*, and he is an active consultant to and speaker at companies worldwide.

Sid Browne*Professor*

BS, City University of New York, 1981; MS, New York University, 1985; PhD, 1988.

Joined faculty in 1988.

Teaching affiliation: Management Science.

Teaching and research interests:

Professor Browne studies and develops mathematical and statistical methods for optimal dynamic decision making under uncertainty and teaches courses on probability, statistics, stochastic processes, and mathematical

finance. His recent research focused on the development and analysis of optimal investment and hedging policies of particular interest for pension funds, insurance firms, and institutional money managers, as well as other financial and economic applications of stochastic processes and control theory. Now he is studying stochastic investment games and their applications in risk management. Browne has served as a consultant to a variety of financial service companies.

John C. Burton
Professor

BA, Haverford, 1954; MBA, Columbia, 1956; PhD, 1962; CPA, New York. Joined faculty in 1962.

Teaching affiliations: Accounting, Business Law and Taxation.

Teaching and research interests: Professor Burton studies the institutions of accounting and how they affect the uncertainty of financial statements. A former New York City deputy mayor for finance, chief accountant of the SEC, and public governor of the NASD, Burton is a member of the Valuation Committee of E. M. Warburg Pincus Venture Capital Funds, the advisory board of the New York City Independent Budget Office, and the U.S. Comptroller General's consultant panel.

Charles W. Calomiris
Paul M. Montrone Professor of Finance and Economics

BA, Yale, 1979; PhD, Stanford, 1985. Joined faculty in 1996.

Teaching affiliations: Finance and Economics, International Business Program.

Teaching and research interests: Professor Calomiris is one of the country's leading authorities on financial institutions. His research spans the areas of banking, corporate finance, financial history, and monetary economics. He has advised numerous firms, agencies, and governments on the performance and regulation of financial institutions. Calomiris is a research associate at the National Bureau of Economic Research and directs the American Enterprise Institute's project on financial regulation. He teaches international banking and a case course on

business and finance in emerging market economies.

Dennis Caplan
Assistant Professor

AB, Washington University in St. Louis, 1978; PhD, University of California, Berkeley, 1994; CPA, New Mexico. Joined faculty in 1994.

Teaching affiliations: Accounting, Business Law and Taxation.

Teaching and research interests: Professor Caplan teaches the core managerial accounting course and a doctoral seminar on accounting. His research focuses on auditors' abilities and incentives to detect fraud and material errors and on the relationships among internal control systems, auditing, and managerial incentives. In 1998, Caplan received the Singhvi Prize for Scholarship in the Classroom. A certified public accountant and certified management accountant, he worked for ten years as an auditor for Touche Ross & Co. and Levi Strauss & Co.

Noel Capon
Professor; Director, Center for Research in the Marketing of Financial Services

BSc, University of London, 1960; PhD, 1964; DipBA, Manchester Business School, 1968; MBA, Harvard, 1969; PhD, Columbia, 1975. Joined faculty in 1979.

Teaching affiliations: Marketing, International Business Program.

Teaching and research interests: Professor Capon teaches the core course *Marketing* and the electives *Strategic Marketing Planning*, *Sales Management*, and *Services Marketing*. His research interests are in the marketing of financial services, marketing planning and strategy, key account management, and the determinants of corporate financial performance. He has published more than eighty articles, book chapters, and books and is working on books on integrated marketing and key account management. Capon has received several teaching prizes, as well as the Chazen International Innovation Prize in 1996. He has taught in many countries and held visiting professor appointments in France and Hong Kong.

Mary Ellen Carter
Assistant Professor

BS, Babson, 1988; MBA, Boston College, 1993; PhD, Massachusetts Institute of Technology, 1998. Joined faculty in 1998.

Teaching affiliations: Accounting, Business Law and Taxation.

Teaching and research interests: Professor Carter is interested in the areas of financial accounting, financial statement disclosures, and tax. She examines the operating performance effects of corporate restructurings and the related financial statement disclosures. In addition, she has studied the timeliness of SEC filings and the effects of taxes on firms' financing decisions. Carter teaches the core course *Accounting I*.

Sebastián Ceria
Associate Professor

Licenciado (Applied Math), Universidad de Buenos Aires, 1988; PhD, Carnegie Mellon, 1993. Joined faculty in 1993.

Teaching affiliation: Management Science.

Teaching and research interests: Professor Ceria teaches the core course *Decision Models* and the elective *Decision Models II*. His main research interest is in modeling and solving difficult discrete optimization problems. He is developing new methodologies and practical implementations for the efficient solution of these problems, which arise in a wide range of applications, including supply chain management, manufacturing, distribution and location, telecommunications, and scheduling. Ceria's research is funded by the National Science Foundation, through its high-performance computing and operations management divisions, and several software vendors. The new tools he develops are used in a wide variety of industries and corporations. In 1998, Ceria received a CAREER award from the National Science Foundation.

Fangruo Chen
Associate Professor

BS, Shanghai Jiao Tong University, 1985; MS, University of Pennsylvania, 1987; AM, 1992; PhD, 1993. Joined faculty in 1992.

Teaching affiliations: Management Science, Human Resource Management Program.

Teaching and research interests:

Professor Chen's research lies in the general area of supply chain management. His research topics include the design of cost-effective and easily implementable replenishment strategies, the value of centralized demand information, the impact of information flows on supply chain performance, coordination mechanisms, and product-variety issues. In 1997, Chen received a CAREER award from the National Science Foundation. He is an associate editor of *Management Science* and *Manufacturing & Service Operations Management*. He teaches *Operations Management*, *Decision Models*, and *Managerial Negotiations*.

John B. Donaldson*Professor*

BS, Lafayette, 1970; MS, Carnegie Mellon, 1972; MS, 1974; PhD, 1976. Joined faculty in 1977.

Teaching affiliation: Finance and Economics.

Teaching and research interests:

Professor Donaldson teaches courses in basic finance and options. He focuses on business cycles and asset pricing, particularly on understanding the real side of the economy's impact on equilibrium pricing of financial assets. His work has appeared in numerous professional journals, including the *Journal of Economic Dynamics and Control*, *Econometrica*, *Journal of Economic Theory*, and the *Journal of Monetary Economics*.

Franklin R. Edwards

Arthur F Burns Professor of Free and Competitive Enterprise; Director, Center for the Study of Futures Markets; Chair of Finance and Economics Division

BA, Bucknell, 1958; MA, 1960; PhD, Harvard, 1964; JD, New York University, 1968.

Joined faculty in 1966.

Teaching affiliation: Finance and Economics.

Teaching and research interests:

Professor Edwards is a specialist in financial markets and institutions, financial regulation, and derivatives markets. He teaches courses on futures markets and contemporary issues in financial markets. Edwards has written dozens of books and articles on topics in banking, financial

markets, and derivatives, including a textbook, *Futures and Options*. In a recent book, *The New Finance: Regulations and Financial Stability*, he argues that we must reform financial regulation to make it more compatible with today's market realities. His current research is on the effects of the rapidly growing mutual fund industry on the stock market and on financial stability.

Matthew Eichner*Assistant Professor*

AB, Harvard, 1988; MPP, 1993; PhD, Massachusetts Institute of Technology, 1997.

Joined faculty in 1997.

Teaching affiliation: Finance and Economics.

Teaching and research interests:

Professor Eichner is interested in the relationship between the tax system and employee benefits. He has examined the effect of health insurance plan provisions on medical expenditure patterns. His current research focuses on the intended and unintended consequences of government regulation of employer-sponsored health care and retirement programs, most notably under the landmark 1974 ERISA legislation. Eichner is a faculty research fellow of the National Bureau of Economic Research. He teaches the core course *Managerial Economics*.

Awi Federgruen

Charles E. Exley Professor of Management; Senior Vice Dean

BA, University of Amsterdam, 1972; MS, 1975; DSc, 1978.

Joined faculty in 1979.

Teaching affiliation: Management Science.

Teaching and research interests:

Professor Federgruen is a world renowned expert in planning models for logistical systems (production, inventory and distribution), supply chain management, and operations strategies for service systems. He is also a prime contributor to quantitative methodology, in particular in the areas of applied probability models and dynamic programming. Federgruen is departmental editor for manufacturing, service, and operations of *Management Science* and associate editor of *Operations Research*, the

flagship journals of his profession; he is senior editor of *Management Science* and *Operations Management*, the premier journal in operations management. The recipient of National Science Foundation and ARPA grants, he has published one hundred articles, a book on Markovian control problems, and numerous chapters for survey textbooks. His PhD students are affiliated with some of the most influential university and industrial departments. Federgruen consults frequently in the area of logistical planning, among others.

Meyer Feldberg

Professor; Dean of the School

BA, Witwatersrand, 1962; MBA, Columbia, 1965; PhD, University of Cape Town, 1969.

Joined faculty in 1989.

Teaching affiliation: Management.

Teaching and research interests:

Professor Feldberg focuses on strategic planning, corporate governance, international business, and multinational enterprise. He has been chairman of the National Advisory Council of Business Education and the Council on International Educational Exchange, as well as a consultant to numerous U.S. and European companies. Feldberg is a director of Federated Department Stores, Inc., Revlon, Inc., Primedia, and PaineWebber Funds. He is a member of the Committee of the Institutional Research Program of the American Council on Education and Council on Competitiveness in Washington, D.C. Feldberg was president of the Illinois Institute of Technology, 1986-89; dean of the A. B. Freeman School of Business, Tulane, 1981-86; director of executive education and associate dean of the J. L. Kellogg Graduate School of Management, Northwestern, 1979-81; and dean of the Graduate School of Business, University of Cape Town, 1972-79.

Nelson M. Fraiman

Professor; Codirector, W Edwards

Deming Center for Quality,

Productivity and Competitiveness

BS, Columbia, 1968; MS, 1969; MBA, 1971; PhD, 1977.

Joined faculty in 1995.

Teaching affiliation: Management Science.

Teaching and research interests:

Professor Fraiman joined the Business School faculty after a seventeen-year career at International Paper Company, where his most recent position was chief technology officer for eight manufacturing divisions. Prior to this he developed and managed a group responsible for productivity improvement and process innovation, and still earlier he directed company-wide educational activities. Fraiman teaches operations and technology management. His research explores institutionalizing quality improvement. He specializes in the retailing, consulting, and process industries.

William M. Gentry*Associate Professor*

SB, Massachusetts Institute of Technology, 1986; MA, Princeton, 1991; PhD, 1991.

Joined faculty in 1995.

Teaching affiliation: Finance and Economics.

Teaching and research interests:

Professor Gentry specializes in the economic effects of taxation. His recent research includes work on household saving decisions, annuity markets, capital structure of firms, and the effects of fundamental tax reform on the fairness of the tax system and corporate tax planning. He teaches courses in managerial economics and taxes and business strategy. Gentry is a faculty research fellow at the National Bureau of Economic Research.

Paul Glasserman*Professor; Chair of Management Science Division*

AB, Princeton, 1984; PhD, Harvard, 1988.

Joined faculty in 1991.

Teaching affiliation: Management Science.

Teaching and research interests:

Professor Glasserman studies stochastic problems in management science, including numerical methods for finance, Monte Carlo simulation, statistics, and operations. Prior to joining Columbia, he worked in research and consulting at AT&T Bell Laboratories. His research has been funded by grants from the National Science Foundation, IBM Corporation, and the Electric Power Research Institute.

Glasserman has received the Outstanding Simulation Publication Award from the Institute of Management Science, the National Young Investigator Award from the NSF, and the Erlang Prize in applied probability. He is an associate editor of several journals and has served as a consultant to industrial corporations, management consulting firms, and financial firms.

Lawrence R. Glosten*S. Sloan Colt Professor of Banking and International Finance*

AB, Occidental, 1973; MS, Northwestern, 1977; PhD, 1980.

Joined faculty in 1989.

Teaching affiliation: Finance and Economics.

Teaching and research interests:

Professor Glosten is widely known for his analyses of the operation, design, and regulation of securities markets. In a recent prize-winning paper in the *Journal of Finance*, he argues that an electronic open limit order book (such as that found in Paris) is a desirable and even inevitable form of equity market. His current work in this vein is concerned with the nature of competition within and among equity markets and how this competition is affected by institutional design. Glosten has also done work on the relationships between entrepreneurs and venture capitalists. This has led to his current research and a course on initial public offerings. Glosten teaches the core course *Corporate Finance* and doctoral courses on finance theory and research.

Linda Green*Armand G. Erpf Professor of the Modern Corporation*

BS, City University of New York, City College, 1970; MS, New York University, 1973; PhD, Yale, 1978.

Joined faculty in 1978.

Teaching affiliation: Management Science.

Teaching and research interests:

Professor Green focuses on the use of quantitative models for the design and management of service operations. Her current interests are in applications to service call centers and health care. She has consulted for service and manufacturing organizations, including the New York City Police Department, AT&T, Johnson &

Johnson, and Citibank. She teaches the core course *Operations Management* and a doctoral course on mathematical methods.

Bruce C. N. Greenwald*Robert Heilbrunn Professor of Finance and Asset Management*

BS, Massachusetts Institute of Technology, 1967; MS, MPA, Princeton, 1969; PhD, Massachusetts Institute of Technology, 1978.

Joined faculty in 1991.

Teaching affiliation: Finance and Economics.

Teaching and research interests:

Professor Greenwald has worked in the areas of market mechanics, corporate finance, and managerial economics, and his current research centers on asymmetric information problems in equity pricing and value investing strategies. He teaches the core course *Corporate Finance*, the elective *Economics of Strategic Behavior*, and an advanced seminar on value investing. Greenwald received the 1997 Margaret Chandler Award for Commitment to Excellence in teaching.

Sunil Gupta*Professor; Chair of Marketing Division*

BTech, Indian Institute of Technology, Delhi, 1979; MBA, Indian Institute of Management, 1981; PhD, Columbia, 1986.

Joined faculty in 1990.

Teaching affiliation: Marketing.

Teaching and research interests:

Professor Gupta's expertise lies in the areas of marketing strategy, product management, pricing, and analytical decision making. His work in these areas has been published in many journals, including *Journal of Consumer Research*, *Journal of Marketing Research*, and *Marketing Science*. His article on promotions won the 1993 O'Dell Award of the *Journal of Marketing Research* for the most significant contribution in the field of marketing.

Yasushi Hamao*Associate Professor*

BA, University of Tokyo, 1978; MPPM, Yale, 1983; MA, 1985; PhD, 1987.

Joined faculty in 1991.

Teaching affiliations: Finance and Economics, International Business Program.

Teaching and research interests:

Professor Hamao is an expert on Japanese and Pacific Basin financial markets. His research agenda covers topics in the microstructure of equities trading, corporate finance, and the behavior of stock and bond prices in the Japanese markets. Hamao has developed and teaches an MBA course on Japanese and Pacific Basin financial markets. He was awarded the Batterymarch Fellowship and the American Association of Individual Investors Award for Best Paper on Investment.

Donald C. Hambrick

Samuel Bronfman Professor of Democratic Business Enterprise

BS, University of Colorado, 1968; MBA, Harvard, 1972; PhD, Pennsylvania State, 1979.

Joined faculty in 1979.

Teaching affiliations: Management, Human Resource Management Program.

Teaching and research interests:

Professor Hambrick is an expert on strategic management and, particularly, is a leading authority on top executives and their effects on corporate performance. He is working on studies of executive staffing in corporate spin-offs and how the behavior and performance of CEOs vary over their tenures. His book *Navigating Change: How CEOs, Top Teams, and Boards Steer Transformation* was published in 1998. Hambrick has received several awards for teaching, including the Singhvi Prize for Scholarship in the Classroom (for the MBA program) and the Margaret Chandler Memorial Award for Commitment to Excellence (for the Executive MBA program). He is an active consultant to and speaker at corporations worldwide.

Kathryn R. Harrigan

Henry R. Kravis Professor of Business Leadership

BA, Macalester, 1972; MBA, University of Texas, Austin, 1976; DBA, Harvard, 1979.

Joined faculty in 1981.

Teaching affiliations: Management, International Business Program.

Teaching and research interests:

Professor Harrigan, who teaches courses in strategic management and international business strategy, is a

specialist in corporate strategy, industry and competitor analysis, diversification strategy, joint ventures, mergers and acquisitions, turnarounds, industry restructurings, and competitive problems of mature- and declining-demand businesses. She serves on the boards of three publicly traded firms and is the author of several prize-winning books on strategy.

Trevor S. Harris

Jerome A. Chazen Professor of International Business

BComm (Hons.), University of Cape Town, 1976; MComm, 1980; PhD, University of Washington, 1983.

Joined faculty in 1983.

Teaching affiliations: Accounting, Business Law and Taxation, International Business Program.

Teaching and research interests:

An expert in international and U.S. accounting standards, Professor Harris teaches both core courses in accounting, *International Financial Reporting*, *Corporate Financial Reporting*, and a doctoral seminar on valuation theory. His research examines global and domestic accounting, valuation, and controllership issues. Using his experience with auditing firms, multinational corporations, and financial institutions, he continues to explore how investors and managers use and could use accounting information for a variety of decisions. Harris has received many awards for teaching excellence, including the Singhvi Prize for Scholarship in the Classroom, the Margaret Chandler Memorial Award for Commitment to Excellence, and the Chazen International Innovation Prize, and is a member of the International Capital Markets Advisory Committee to the Board of the New York Stock Exchange.

Ann E. Harrison

Associate Professor; Director, International Business Program

BA, University of California, Berkeley, 1982; PhD, Princeton, 1991.

Joined faculty in 1994.

Teaching affiliations: Finance and Economics, International Business Program.

Teaching and research interests:

Professor Harrison teaches courses on international business and economic

development. Her published articles examine the impact of trade reforms on labor markets and on prospects for long-run growth. She has also examined the impact of foreign direct investment on host country wages and the role of foreign firms in promoting technology transfer. A faculty research fellow at the National Bureau of Economic Research, Harrison is the recipient of numerous research grants from the World Bank.

Heather A. Haveman Professor

BA, University of Toronto, 1982; MBA, 1985; PhD, University of California, Berkeley, 1990.

Joined faculty in 1998.

Teaching affiliation: Management.

Teaching and research interests:

In her research, Professor Haveman investigates several questions that relate to stability and change in systems of firms: How strong are the forces that impel or inhibit change in organizational structures and activities? What are the consequences of such change? Her research focuses on three related phenomena: (1) firms' responses to shifting industry conditions and the impact of organizational change on firm performance and survival, (2) the evolving structures and activity patterns of entire industries, and (3) the consequences of organizational founding, failure, and change processes for the careers of employees and the composition of firms' workforces. Haveman has taught a core-level course on management and organizations as well as elective courses on entrepreneurship, the management of technology and innovation, and the management of diversity.

Geoffrey M. Heal

Paul Garrett Professor of Public Policy and Business Responsibility

BA, Cambridge University, 1966; MA, 1968; PhD, 1968.

Joined faculty in 1983.

Teaching affiliations: Finance and Economics, International Business Program.

Teaching and research interests:

Professor Heal's current research interests include modeling the impact of markets for derivative securities on the allocation of risks in the economy,

modeling the pricing of derivatives in a general equilibrium framework, and studying ways of controlling the impact of economic activity on the environment and ways of valuing the economic services provided by environmental assets. Heal teaches *Managerial Economics*.

Andrew D. Henderson

Assistant Professor

BSEE, Rice University, 1983; MBA, University of Texas, Austin, 1990; PhD, 1996.

Joined faculty in 1996.

Teaching affiliation: Management.

Teaching and research interests:

Professor Henderson's research and teaching interests lie in two areas. The first is the effect of technology strategy on firms' abilities to cope with major changes in their industry, an issue he is exploring using twenty years of data from the personal computer industry. The second area concerns understanding how a firm's strategy and its competitive environment affect the way its executives make decisions and process information. Henderson is studying this question in the context of corporate mergers and acquisitions.

Charles P. Himmelberg

Associate Professor

BA, BS, University of Kansas, 1985; PhD, Northwestern, 1990.

Joined faculty in 1995.

Teaching affiliation: Finance and Economics.

Teaching and research interests:

Professor Himmelberg teaches the MBA core course *Global Economic Environment* and does research on product market strategy and corporate finance. He has most recently been studying the role of investment banks in security underwritings and is also working under a grant from the National Science Foundation to study the strategic implications of new product introductions in the computer hard disk industry.

Gailen Hite

Associate Professor

BS, Ohio State, 1970; MA, University of Washington, 1974; PhD, 1975.

Joined faculty in 1987.

Teaching affiliation: Finance and Economics.

Teaching and research interests:

Professor Hite teaches the core course in corporate finance in the full-time and Executive MBA programs and coordinates the adjunct faculty. His research interests include corporate restructuring, dividends and dividend policy, capital structure, corporate bond ratings, executive compensation, and valuation. He is an associate editor of the *Journal of Financial Economics*.

Laurie Simon Hodrick

Professor

BA, Duke, 1984; PhD, Stanford, 1988.

Joined faculty in 1996.

Teaching affiliation: Finance and Economics.

Teaching and research interests:

Professor Hodrick is known for her groundbreaking research on corporate finance, which earned her the National Science Foundation Presidential Young Investigator Award. She examines corporate financial decisions made by firms, with a particular interest in share repurchases and dividends, takeovers, and optimal capital structure. Hodrick has also received many awards for teaching excellence, including the Outstanding Professor of the Year Award at Kellogg and the Singhvi Prize for Scholarship in the Classroom at Columbia.

Robert J. Hodrick

Nomura Professor of International Finance; Academic Director, Jerome A. Chazen Institute of International Business

AB, Princeton, 1972; PhD, University of Chicago, 1976.

Joined faculty in 1996.

Teaching affiliations: Finance and Economics, International Business Program.

Teaching and research interests:

Professor Hodrick teaches both fundamental and advanced courses in international finance. His expertise is in the valuation of financial assets. His current research explores the empirical implications of theoretical pricing models that generate time-varying risk premiums in the markets for bonds, equities, and foreign currencies. He is a research associate of the National Bureau of Economic Research.

Morris Holbrook

William Dillard Professor of Marketing

BA, Harvard, 1965; MBA, Columbia, 1967; PhD, 1975.

Joined faculty in 1975.

Teaching affiliation: Marketing.

Teaching and research interests:

Professor Holbrook has taught marketing management, sales management, consumer behavior, and commercial communication in the culture of consumption. He has conducted research on the validity of perceptual and preference mapping and on consumer aesthetics applied to responses toward radio listening, jazz recordings, and classical music. His current research studies consumption experiences, nostalgia, communication effects, semiotics, and hermeneutics in marketing, as well as symbolic consumption in works of art, interpretive methods, techniques of visual representation, and aspects of consumer responses to pop culture and the arts.

Raymond D. Horton

Professor; Director, Public and Nonprofit Management Program; Chair of Management Division

BA, Grinnell, 1962; JD, Harvard, 1965; PhD, Columbia, 1971.

Joined faculty in 1970.

Teaching affiliation: Management, Public and Nonprofit Management Program.

Teaching and research interests:

An expert in municipal finance and urban affairs, Professor Horton teaches *Modern Political Economy* and seminars on performance evaluation and consulting in the public and nonprofit sectors. His research studies the management of public and nonprofit organizations, with a particular interest in the trade-off between consumer service and bureaucratic aggrandizement. He has published fourteen books, including *Power Failure: New York City Politics and Policy since 1960*.

R. Glenn Hubbard

Russell L. Carson Professor of Finance and Economics

BA, BS, University of Central Florida, 1979; AM, Harvard, 1981; PhD, 1983.

Joined faculty in 1988.

Teaching affiliation: Finance and Economics.

Teaching and research interests:

Professor Hubbard is a specialist in public finance, managerial information and incentive problems in corporate finance, and financial markets and institutions. He has written more than eighty articles and books on corporate finance, investment decisions, banking, energy economics, and public policy, including a textbook, *Money, the Financial System, and the Economy*. In a recent book, *Tax Policy and Multinational Corporations*, he argues that U.S. tax policy significantly affects financing and investment decisions of multinational corporations. Hubbard has applied his research interests in business (as a consultant on taxation and corporate finance to many corporations), in government (as deputy assistant of the U.S. Treasury Department and as a consultant to the Federal Reserve Board, Federal Reserve Bank of New York, and many government agencies), and in academia (in faculty collaboration or visiting appointments at Columbia, University of Chicago, and Harvard).

Gur Huberman
Professor

BS, Tel Aviv University, 1975; MS, University of British Columbia, 1977; PhD, Yale, 1980.
Joined faculty in 1989.

Teaching affiliation: Finance and Economics.

Teaching and research interests:

Professor Huberman teaches the core course on corporate finance. His primary research interests include portfolio theory, return-risk trade-offs, and risk management. He was a vice president at J. P. Morgan Investment Management, where he developed and implemented quantitative investment strategies in equities and equity derivatives.

James M. Hulbert

R. C. Kopf Professor of International Marketing

BSc, University of London, 1964; MBA, Oklahoma State, 1966; PhD, Washington University, 1970.
Joined faculty in 1969.

Teaching affiliations: Marketing, International Business Program.

Teaching and research interests:

Professor Hulbert teaches the core

course *Marketing*, serves as faculty director of the School's executive education program in marketing management, and is a consultant to major corporations around the world. His research studies strategy, planning, and organization. He is working on a theory of marketing organization and the evolution of the brand management system and is also writing a book on integrated marketing to be published in 1999. Hulbert has published more than seventy articles and books on planning and strategy and has been a visiting professor in Wales, France, Brazil, Australia, England, and Iran.

Casey Ichniowski
Professor

BA, Harvard, 1977; MBA, Massachusetts Institute of Technology, 1981; PhD, 1983.
Joined faculty in 1984.

Teaching affiliations: Management, Human Resource Management Program.

Teaching and research interests:

Professor Ichniowski analyzes the impact of human resource management on the economic performance of firms. In several research projects funded by the National Science Foundation, Alfred P. Sloan Foundation, U.S. Department of Labor, and Citibank Behavioral Research Council, he investigates the development of high-performance work systems, employee participation and involvement in continuous improvement activities, international differences in work organization, and the determinants of worker activities on the job. Ichniowski has also written extensively on the emergence of unionization in the public sector and its effects on economic outcomes of government jurisdictions. He teaches the course *Managerial Negotiations*.

Paul Ingram

Associate Professor

BBA, Brock University, Ontario, 1990; MS, Cornell, 1993; PhD, 1994.
Joined faculty in 1998.

Teaching affiliation: Management.

Teaching and research interests:

Professor Ingram studies the effect of the competitive environment on the structure and performance of organizations. The courses he teaches on

management and strategy benefit from his research on organizations in the United States, Canada, Israel, and Australia. His research has been published in a number of articles, book chapters, and books. Ingram's current research projects examine organizational learning among Manhattan hotels and the effect of changes in the role of the state on the survival of Israeli organizations. He serves on the editorial boards of *Administrative Science Quarterly* and *Management Science*.

Kamel Jedidi

Associate Professor

BS, Faculté des Sciences Economiques de Tunis, 1982; MA, University of Pennsylvania, 1986; MS, 1987; PhD, 1988.

Joined faculty in 1987.

Teaching affiliation: Marketing.

Teaching and research interests:

Professor Jedidi teaches *Marketing Research*, *New Product Development*, and *Applied Multivariate Statistics*. He is interested in developing quantitative models for consumer perception, preference, and choice. He uses these models to examine managerial issues related to market segmentation, product design and positioning, and new product sales forecasting. In addition, he is exploring the long-term effectiveness of advertising and promotions on brand performance, category sales, and market structure.

Gita Venkataramani Johar

Associate Professor

Bachelor of Commerce, Bombay University, 1983; MBA, Indian Institute of Management, Calcutta, 1985; MPhil, New York University, 1991; PhD, 1993.

Joined faculty in 1992.

Teaching affiliation: Marketing.

Teaching and research interests:

Professor Johar examines consumer information processing and decision making. She focuses on communication to consumers and studies (1) the meanings that different consumers take away from advertising and promotional claims, (2) when they attribute a message to the accurate source, and (3) conditions under which they are persuaded. Johar has coauthored a review chapter on consumer psychology for the *Annual*

Review of Psychology. She teaches the core marketing course and an elective on advertising management to MBA students and courses on research methods and consumer behavior to PhD students.

Charles Jones

Class of 1967 Associate Professor of Business

SB, Massachusetts Institute of Technology, 1987; PhD, University of Michigan, 1994.

Joined faculty in 1997.

Teaching affiliation: Finance and Economics.

Teaching and research interests:

Professor Jones's research focuses broadly on how information gets into asset prices. He has published articles in finance and economics journals on transaction costs, volatility, the effect of oil prices on equity markets, and the effect of government news releases on U.S. Treasury markets. He is studying municipal bond markets, indexed government debt, and the relationship between the stock market and macroeconomic forecasts. Jones teaches the elective *Debt Markets*. While at the University of Michigan, he received the Dykstra Award for outstanding student teaching.

Deen Kemsley

Assistant Professor

BS, Brigham Young, 1982; MA, University of Kentucky, 1986; PhD, University of North Carolina, Chapel Hill, 1995.

Joined faculty in 1995.

Teaching affiliations: Accounting, Business Law and Taxation, International Business Program.

Teaching and research interests:

Professor Kemsley studies the effects of taxes on the business decisions of multinational corporations, examining the international production location, transfer pricing, and accounting strategies of large U.S. companies. He also examines the effects of dividend and capital gains taxes on stock values, price-to-earnings ratios, and the relative cost of different components of equity capital. Kemsley teaches accounting and taxes, including an elective course on taxes and business strategy.

Michael Kirschenheiter

Associate Professor

BS, University of Chicago, 1977; MSc, London School of Economics, 1980; MBA, University of Chicago, 1981; PhD, Kellogg Graduate School of Management, Northwestern, 1994; CPA, Illinois.

Joined faculty in 1992.

Teaching affiliation: Accounting, Business Law and Taxation.

Teaching and research interests:

Professor Kirschenheiter analyzes comparative accounting standards. He is investigating the differential impact on firm value and contracting using historical cost versus market valuation accounting methods, as well as the roles that corporate taxes and deferred tax accounting play in firm value. Kirschenheiter teaches both core courses in accounting. He received the 1996 Robert W. Lear Award for his service to students in the MBA program.

Rajeev Kohli

Professor

BS, Birla Institute of Technology and Science, 1977; MBA, Northern Illinois University, 1980; PhD, Wharton, 1985.

Joined faculty in 1991.

Teaching affiliation: Marketing.

Teaching and research interests:

Professor Kohli focuses on the use of information technology for marketing and manufacturing and on the use of technology for new product design. He teaches *Information Technology* and *Product Management* to MBA students and *Mathematical Models of Marketing* to PhD candidates. Kohli serves as an associate editor for *Management Science* and as a member of the editorial board for the *Journal of Interactive Marketing*. He is an active consultant and presenter to companies on business issues relating to the Internet.

Peter J. Kolesar

Professor

BA, City University of New York, Queens College, 1959; BS, Columbia, 1959; PhD, 1964.

Joined faculty in 1976.

Teaching affiliations: Management Science, Operations Management.

Teaching and research interests:

Professor Kolesar studies quality man-

agement and statistical quality control as well as applications of operations research and statistics, particularly in relation to the management of production and service systems. His recent research includes building models for the analysis and design of service systems with random cyclic customer demand patterns, accelerating the implementation and effectiveness of total quality management systems, and optimizing credit-screening procedures. He was awarded the 1975 Lanchester Prize—the highest award in operations research—for work on the logistics of such emergency services as police and fire departments and for contributions to the design of the New York City Fire Department's Computerized Control System. Kolesar is an associate editor for *Interfaces* and the *Quality Management Journal*, was twice an examiner for the Malcolm Baldrige National Quality Award, and is a consultant to numerous firms and government agencies.

Nathaniel H. Leff

Professor

AB, Harvard, 1959; MA, Columbia, 1962; PhD, Massachusetts Institute of Technology, 1966.

Joined faculty in 1967.

Teaching affiliations: Finance and Economics, International Business Program.

Teaching and research interests:

Professor Leff studies international business and the economies of developing countries. He has published books and papers on a variety of topics, ranging from microeconomic disequilibrium to entrepreneurship and the transfer of technology. He is included in *Who's Who in Economics, 1700–1994*, a volume limited to the one thousand economists cited most often in the professional literature. His most recent research project, "Trust, Envy and the Political Economy of Economic Development," focuses on entrepreneurship and industrial organization in developing countries.

Donald R. Lehmann

George E. Warren Professor of Business

BS, Union, 1966; MSIA, Purdue, 1967; PhD, 1969.

Joined faculty in 1969.

Teaching affiliation: Marketing.

Teaching and research interests:

Professor Lehmann teaches several different marketing courses. His research focuses on individual and group choice and decision making, research methodology, the adoption of innovation, and new product development. He is particularly interested in knowledge accumulation, empirical generalizations, and information use. Lehmann has published more than eighty articles and books, serves on the editorial boards of several academic journals, and is the founding editor of *Marketing Letters*. He is a past president of the Association for Consumer Research and a trustee and former executive director of the Marketing Science Institute.

Frank Lichtenberg*Courtney C. Brown Professor of Business*

BA, University of Chicago, 1973; MA, University of Pennsylvania, 1976; PhD, 1982.

Joined faculty in 1983.

Teaching affiliations: Finance and Economics, International Business Program.

Teaching and research interests:

Professor Lichtenberg teaches the core course *Global Economic Environment*. His research examines how the introduction of new technology arising from research and development affects the productivity of companies, industries, and nations. Recently, he has studied the impact of new drugs on hospitalization rates, the effect of computers on productivity in business and government organizations, and the consequences of takeovers and LBOs for efficiency and employment. A research associate of the National Bureau of Economic Research, Lichtenberg has received numerous research fellowships and grants, served as a consultant to a variety of private and public organizations, and testified before Congress.

Murray B. Low*Associate Professor; Director Entrepreneurship Program*

BA, Simon Fraser, 1976; MBA, 1985; PhD, University of Pennsylvania, 1991.

Joined faculty in 1990.

Teaching affiliations: Management, Entrepreneurship Program.

Teaching and research interests:

Professor Low is an experienced entrepreneur and a leading authority on family business and venturing into both independent and corporate settings. Starting businesses in several industries led him to study how the entrepreneurial process differs by context. His current research examines the dynamics of entrepreneurial careers. In developing the Entrepreneurship Program, he has worked to make entrepreneurship a viable career option for MBA graduates. He is a frequent commentator in the media and consults for both small and large companies.

Constantinos Maglaras*Assistant Professor*

BSEE, Imperial College of Science, Technology and Medicine, London, 1990; MS, Stanford, 1991; PhD, 1998. Joined faculty in 1998.

Teaching affiliation: Management Science.

Teaching and research interests:

Professor Maglaras's research focuses on problems in the areas of operations management, logistics, and control, with an emphasis on dynamic flow management and performance analysis for stochastic processing networks. His work is motivated by applications in modern manufacturing systems, service operations, and communication networks. Prior to joining the Columbia faculty, he worked in consulting and research for Canon Research Center America. He teaches the core course on statistics.

Elizabeth A. Mannix*Associate Professor*

BA, Roosevelt University, 1983; PhD, University of Chicago, 1989. Joined faculty in 1995.

Teaching affiliations: Management, Human Resource Management Program.

Teaching and research interests:

Professor Mannix teaches *Managerial Negotiations* and a doctoral course on organizational behavior. Her research focuses on negotiation, power, and influence, particularly within teams. Mannix is the coreipient of two Center for International Business Education grants to study cultural and international aspects of negotiation behavior, and, with a colleague with a

mutual interest in teams, she has launched an annual conference on "Research in Groups and Teams." She also serves as an editorial board member for the *International Journal of Conflict Management*.

Safwan Masri*Associate Professor; Vice Dean of Students and the MBA Programs*

BS, Purdue, 1982; MS, 1984; PhD, Stanford, 1988.

Joined faculty in 1988.

Teaching affiliations: Management Science, International Business Program.

Teaching and research interests:

Professor Masri studies general areas of operations management, technology, and international business. He works in the area of process reengineering in the financial services industry, with a special emphasis on the role of technology in attaining back-office productivity gains. Additionally, he is involved in consulting work with Executive Education and includes Merrill Lynch, Bankers Trust, PaineWebber, J. P. Morgan, Bristol-Myers Squibb, the United Nations, and NCR among his clients. He was awarded the Singhvi Prize for Scholarship in the Classroom.

Christopher Mayer*Associate Professor*

BA, University of Rochester, 1987; PhD, Massachusetts Institute of Technology, 1993.

Joined faculty in 1996.

Teaching affiliations: Finance and Economics, MBA Real Estate Program.

Teaching and research interests:

A specialist in real estate markets, Professor Mayer teaches courses in finance and economics and in the real estate program. His research interests focus on understanding the cyclical nature of real estate. He is working on projects that explore the determinants of house dynamics, the relationship between credit availability and the supply of real estate, and the impact of tax limitation measures on local real estate prices. Prior to coming to Columbia, Mayer worked for the Federal Reserve Bank of Boston, where he currently serves as a visiting scholar.

Rita Gunther McGrath

Associate Professor

BA, Barnard, 1981; MPA, Columbia, 1982; PhD, University of Pennsylvania, 1993.

Joined faculty in 1993.

Teaching affiliation: Management.

Teaching and research interests:

Professor McGrath is fascinated by strategy under uncertainty, particularly the uncertainty associated with the introduction of new technologies and methods of production in an economy. She does her research in three related arenas: (1) the development and commercialization of new technologies; (2) entrepreneurship, and (3) attempts by established firms to venture into and dominate new opportunity spaces. She has been using "real options" reasoning to help both large and small firms decide how best to profit from the opportunities created by massive economic change. Among her recent projects are a study of multiple-venture entrepreneurs and research into long-run technology investments by high-technology firms.

Nahum D. Melumad

James L. Dohr Professor of Accounting

BA, Tel Aviv University, 1978; MBA, University of California, Berkeley, 1983; PhD, 1985; CPA, Israel.

Joined faculty in 1993.

Teaching affiliation: Accounting, Business Law and Taxation.

Teaching and research interests:

Professor Melumad teaches the core courses in accounting as well as *Strategic Management Control Systems*. His research interests include management control, controllership, performance measurement, managerial compensation, designing financing mechanisms for joint ventures, strategic costing systems, and pricing. Melumad has received the Chazen International Innovation Prize, is a research fellow at the Joseph Kasierer Institute for Research in Accounting at Tel Aviv University, and is on the editorial boards of *Contemporary Accounting Research* and *Review of Accounting Studies*. He has published numerous articles in academic and professional journals. Prior to joining the Columbia faculty, Melumad was a faculty member at Stanford Business School from 1984 to 1993. He has

also served as a consultant to numerous companies, including Bristol-Myers Squibb, the former Chemical Bank, and General Electric.

Frederic S. Mishkin

A. Barton Hepburn Professor of Economics

BS, Massachusetts Institute of Technology, 1973; PhD, 1976.

Joined faculty in 1983.

Teaching affiliation: Finance and Economics.

Teaching and research interests:

Professor Mishkin's research focuses on monetary policy and its impact on financial markets and the aggregate economy. He is the author of over one hundred articles and books, including *The Economics of Money, Banking, and Financial Markets*, 5th edition, the number-one-selling textbook in its field. He is a research associate of the National Bureau of Economic Research and a member of the editorial boards of seven professional journals. He has been an academic consultant to the Board of Governors of the Federal Reserve System and a visiting scholar at the Ministry of Finance in Japan and the Reserve Bank of Australia. He is an academic consultant to and on the Academic Advisory Panel of the Federal Reserve Bank of New York. From 1994 to 1997, he served as executive vice president and director of research at the Federal Reserve Bank of New York and was an associate economist of the Federal Open Market Committee of the Federal Reserve System.

Richard R. Nelson

George Blumenthal Professor of International and Public Affairs, Business and Law

BA, Oberlin, 1952; PhD, Yale, 1956.

Joined faculty in 1986.

Teaching affiliations: Management, International Business Program.

Teaching and research interests:

Professor Nelson's research interests center on the processes of long-run economic growth, and in particular on the role of technical advance and the evolution of economic institutions. Recently, he has focused on the narrowing of the economic and technological lead that the United States has had over other countries since the

turn of the century. Nelson teaches the seminars *Roles of Government in a Mixed Economy* and *Science, Technology, and Economic Growth*, among others.

Atul Nerkar

Assistant Professor

BE, University of Bombay, 1989; MIB, Indian Institute of Foreign Trade, New Delhi, 1991; MA, University of Pennsylvania, 1996; PhD, 1997.

Joined faculty in 1997.

Teaching affiliation: Management.

Teaching and research interests:

Professor Nerkar is interested in the areas of technology, innovation, and entrepreneurship and how they affect corporate strategy. He is studying research productivity in organizations and the resultant evolution of technology platforms in the context of the pharmaceutical, chemical, and optical disc industries. Nerkar teaches the core course *Strategic Management of the Enterprise*.

Doron Nissim

Assistant Professor

BA, University of Haifa, 1991; MS, University of California, Berkeley, 1995; PhD, 1997.

Joined faculty in 1997.

Teaching affiliation: Accounting, Business Law and Taxation.

Teaching and research interests:

Professor Nissim is interested in financial accounting, financial statement analysis, and security valuation. In particular, he has examined how financial statements can be analyzed to extract information about future growth and profitability. He has also investigated the reliability of disclosures by bank holding companies. Nissim teaches the core course *Accounting I*.

Eli M. Noam

Professor; Director, Columbia Institute for Tele-Information

BA, Harvard, 1970; MA, 1972; PhD, 1975; JD, 1975.

Joined faculty in 1976.

Teaching affiliations: Finance and Economics, Management of Information, Communications and Media, International Business Program.

Teaching and research interests: Professor Noam's research and teach-

ing focus on the economics and management of media, information, and communications. He has served as New York State Public Service Commissioner, regulating the telecommunications and energy industries. His books and articles include a series on global telecommunications and volumes on international film and television, media concentration, electronic banking, and the cybermedia of the future.

Darius Palia

Associate Professor

BCom, Bombay University, 1981; MMS, 1983; MBA, New York University, 1988; PhD, 1991. Joined faculty in 1993.

Teaching affiliation: Finance and Economics.

Teaching and research interests:

Professor Palia's area of expertise is in empirical corporate finance and banking. His published articles examine CEO compensation and firm valuation, mergers and acquisitions, and the federal guaranty of bank deposits. His research also focuses on managerial ownership, productivity, and capital structure. Palia has received the Dean's Award for Teaching Excellence for his performance in the core finance class.

Hugh T. Patrick

R. D. Calkins Professor of International Business; Director, Center on Japanese Economy and Business

BA, Yale, 1951; MA, University of Michigan, 1955; MA, 1957; PhD, 1960; MA (Hon.), Yale, 1968. Joined faculty in 1984.

Teaching affiliations: Finance and Economics, International Business Program.

Teaching and research interests:

Professor Patrick specializes in the Japanese economy and its business systems, Pacific Basin economic relations, and U.S.-Japan economic relations. He has organized a number of research projects resulting in volumes (which he edited and contributed to) on the Japanese banking systems and financial markets: comparative analysis of the Japanese, Korean, and Taiwan financial systems; industrial policy for troubled industries in nine Pacific Basin economies; international

trade policy; and the structure of the Japanese economy. He chairs the Pacific Trade and Development conference series and is on the board of directors of the Japan Society. Patrick teaches the electives *Contemporary Japanese Economy* and *Pacific Basin Economic Relations* and the seminar *Japanese Economy and Business*.

Michel Tuan Pham

Associate Professor

License in Applied Economics, Catholic University of Mons, Belgium, 1987; MA, University of Florida, 1992; PhD, 1994.

Joined faculty in 1994.

Teaching affiliation: Marketing.

Teaching and research interests:

Professor Pham's areas of expertise are marketing communications and the psychology of decision making. He is studying the effects of sports sponsorship and the role of feelings in decision making. His research has appeared in leading journals in the United States and Europe, including the *Journal of Consumer Research*, *Marketing Letters*, *Journal of Economic Psychology*, and *Recherche et Applications en Marketing*. Pham teaches marketing in the MBA, Executive MBA, and Executive Education programs. He also teaches various PhD seminars and is associate faculty director of the Executive Education program in marketing management.

William G. Pietersen

Professor

BA, LLB, Rhodes, 1960; MA, Oxford, 1963.

Joined faculty in 1998.

Teaching affiliation: Management.

Teaching and research interests:

Professor Pietersen joined the School after a career as a senior corporate executive. Over a period of twenty years, he was CEO of a number of major multinational businesses in South Africa, the United Kingdom, and the United States and was responsible for several business turnarounds. He teaches strategy, global competitiveness, and the development of learning organizations as a means of corporate renewal. Pietersen serves on a number of corporate boards and is chairman of the Institute for the Future, based in Menlo Park, Calif. He

is an active adviser to corporations and speaks frequently to business groups in the United States and around the world.

Matthew Rhodes-Kropf

Assistant Professor

BA, Duke, 1993; PhD, 1998.

Joined faculty in 1998.

Teaching affiliation: Finance and Economics.

Teaching and research interests:

Professor Rhodes-Kropf specializes in the financial applications of auction theory. In particular, he researches market microstructure and corporate finance auctions in which bidders understand how others will use the information contained in their bids and react accordingly. He has developed models of price improvement on the NASDAQ exchange and a model of the Federal Communications Commission bandwidth auction. He is currently considering the corporate bankruptcy process and examining the controversy over whether to allow bids in securities (reorganization plans) or only in cash. Rhodes-Kropf teaches the core course *Corporate Finance*.

Lynne B. Sagalyn

Professor; Earle W. Kazis and Benjamin Schore Director, MBA Real Estate Program

BS, Cornell, 1969; MCRP, Rutgers, 1971; PhD, Massachusetts Institute of Technology, 1980.

Joined faculty in 1992.

Teaching affiliations: Finance and Economics, MBA Real Estate Program.

Teaching and research interests:

Professor Sagalyn is a specialist in real estate finance. She teaches the elective *Real Estate Finance* as well as several seminars on real estate. Sagalyn is widely known as an expert in real estate equity securities and public development finance. Her research and writings on real estate investment, securitization, urban development, and public policy have been published in both academic and professional journals. She is coauthor of *Downtown, Inc.: How America Rebuilds Cities* and is currently writing a book on the redevelopment of New York City's Times Square. She serves on a number of boards, including United Dominion Realty Trust (NYSE)

and Capital Trust (NYSE), and has consulted for many public agencies and private firms.

Bernd Schmitt

Professor; Director, Center on Global Consumers, Brands, and Communications

Diplom, University of Heidelberg, 1984; PhD, Cornell, 1988.

Joined faculty in 1988.

Teaching affiliation: Marketing.

Teaching and research interests:

Professor Schmitt teaches the core course *Marketing* and the seminar *Corporate Identity*. His research focuses on corporate identity and branding, as well as international marketing. He has been active as a teacher, researcher, and consultant in China since 1991 and has held visiting appointments at MIT, Hong Kong University of Science and Technology, and other institutions in Beijing, Shanghai, Germany, and Poland. Schmitt is the author of over thirty articles in leading marketing and psychology journals and the coauthor of *Marketing Aesthetics: The Strategic Management of Brands, Identity, and Image*.

Larry Selden

Professor

BA, Washington University, 1964; MBA, University of Pennsylvania, 1966; PhD, 1976.

Joined faculty in 1976.

Teaching affiliation: Finance and Economics.

Teaching and research interests:

Professor Selden teaches debt markets and lectures on shareholder value creation for business groups around the world. A recipient of grants from the National Science Foundation and the Center for Operations Research and Econometrics, he has analyzed models of portfolio allocation and preference determination. His current research focuses on linking sales and marketing efforts to a corporation's share price. He is also translating his findings for executive education programs.

Sheena Sethi-Iyengar

Assistant Professor

BA, University of Pennsylvania, 1992; BS, Wharton, 1992; PhD, Stanford, 1997.

Joined faculty in 1998.

Teaching affiliation: Management.

Teaching and research interests:

Professor Sethi-Iyengar, who teaches managerial decision making and organizational behavior, specializes in cross-cultural differences in worker motivation, decision making, and barriers to conflict resolution. Her research and publications address such questions as, Are employees from different cultural backgrounds motivated by the same incentive programs? What are the motivational consequences of offering choices to employees and consumers from different cultural backgrounds? What differentiates experts and novices in the way they manage multiple choices and voluminous information? Sethi-Iyengar has both consulted for and conducted research with manufacturing companies in both Japan and in the United States, and as a recent Citicorp grant recipient, she is working on a multinational investigation of employee motivation and performance.

Donald E. Sexton

Professor

BA, Wesleyan, 1963; MBA, University of Chicago, 1965; PhD, 1970.

Joined faculty in 1966.

Teaching affiliations: Management Science, Marketing, International Business Program.

Teaching and research interests:

Professor Sexton's research concerns successful global product and brand strategies and is based on both empirical work and his considerable experience with companies throughout the world. A recipient of the Business School's Distinguished Teaching Award, Sexton has taught a wide variety of courses in the fields of marketing, international business, and management science.

Nachum Sicherman

Associate Professor

BA, Hebrew University, 1980; MA, 1982; MPhil, Columbia, 1985; PhD, 1987.

Joined faculty in 1991.

Teaching affiliations: Finance and Economics, Public and Nonprofit Management Program.

Teaching and research interests:

Professor Sicherman analyzes the roles of education, job training, occupational and job mobility, moonlight-

ing, and retirement in the formation of careers. He currently studies the various effects of technological change on the U.S. labor market. In addition, Sicherman works with different medical groups on using cost-benefit analysis in medical decision making. A faculty research fellow at the National Bureau of Economic Research, he is the recipient of research grants from the National Science Foundation, U.S. Department of Labor, and Citicorp Behavioral Science Research Council. Sicherman teaches the core course *Managerial Economics* and the elective *Cost-Benefit Analysis*.

Paolo Siconolfi

Professor

BA, University of Rome, 1981; MA, University of Pennsylvania, 1983; PhD, 1987.

Joined faculty in 1989.

Teaching affiliation: Finance and Economics.

Teaching and research interests:

Professor Siconolfi teaches the core course *Managerial Economics*. He works with general equilibrium theory, information theory, and dynamic models in monetary theory. His main contributions deal with the equilibrium properties of incomplete market economies, the existence of sunspot equilibria, and the informativeness of equilibrium prices. Recently, he has also examined the dynamic efficiency of a social security system in the context of an overlapping generations model.

Françoise L. Simon

Professor

BA, Université de Nantes, 1968; MA, 1969; MBA, Northwestern, 1983; PhD, Yale, 1980.

Joined faculty in 1991.

Teaching affiliations: Marketing, International Business Program.

Teaching and research interests:

Professor Simon teaches core courses on international business and marketing, as well as electives on international marketing and Latin American integration, in the MBA and Executive MBA programs. Her research focuses on global strategies in the consumer, health, and high-technology sectors and on management in emerging markets. She is the coauthor of *Europe*

and *Latin America in the World Economy* and is researching global health care management. Simon has held senior positions with two leading consulting firms, where she led practices in global corporate strategy and marketing. She works extensively with the Executive Education program and has designed and led senior management seminars for such firms as Avon, Deloitte & Touche, and Merck. Simon received the 1997 Margaret Chandler Award for Commitment to Excellence in teaching in the Executive MBA program.

Arthur A. Small
Assistant Professor

BA, Columbia, 1987; MS, Cornell, 1990; MS, University of California, Berkeley, 1994; PhD, 1998.
Joined faculty in 1998.

Teaching affiliation: Finance and Economics.

Teaching and research interests: Professor Small's research focuses on market-based instruments for environmental management and on how their introduction affects firms' strategies. His work has addressed the development of intellectual property rights in biological resources and their effects on the biotechnology industry. He is also interested in strategies for managing firm-specific and economy-wide risks associated with the use of tradable emissions quotas for greenhouse gases. Small teaches microeconomics.

Jaeyong Song
Assistant Professor

BA, Seoul National University, 1987; MBA, 1989; MA, University of Pennsylvania, 1994; PhD, 1997.
Joined faculty in 1997.

Teaching affiliation: Management.

Teaching and research interests: Professor Song's research and teaching interests are in the areas of corporate strategy and international management, specifically coordination and configuration mechanisms in the global production and R & D network, organizational transformation of large corporations in response to major environmental changes, the role of R & D races in industry evolution, and investments in firm capabilities as sources of path dependencies of firm behaviors. His previous research examined high-technology industries

such as semiconductors and biotechnology. Song teaches the core course *Strategic Management of the Enterprise* and the elective *Advanced International Business Strategy*.

Suresh M. Sundaresan
Chase Manhattan Bank Foundation Professor of Financial Institutions
MS, Carnegie Mellon, 1978; PhD, 1980.

Joined faculty in 1980.

Teaching affiliation: Finance and Economics.

Teaching and research interests: Professor Sundaresan studies corporate finance, capital markets, term structure theory, commodity spot and futures markets, continuous time equilibrium models, options pricing, and capital asset pricing. He serves as a consultant in dynamic asset allocation strategies, derivatives, fixed-income trading and portfolio strategies, and in-house executive development programs of options and futures markets. His current research focuses on corporate debt, auctions, and derivatives. Sundaresan teaches electives on debt markets and on derivatives in the MBA and Executive MBA programs.

Jacob K. Thomas
Ernst & Young Professor of Accounting and Finance; Chair of Accounting, Business Law and Taxation Division

BTech, Indian Institute of Technology, 1974; MBA, Iran Center for Management Studies, 1977; PhD, University of Michigan, 1984.
Joined faculty in 1988.

Teaching affiliation: Accounting, Business Law and Taxation.

Teaching and research interests: Professor Thomas focuses on the relation between accounting information and stock prices. Insights recently developed in this area that suggest fundamental links between accounting numbers and value form the basis of much of his recent teaching and research. He has written cases and other teaching material for the course he teaches on equity valuation using financial statements. Differences between stock prices and fundamental value provide the basis for his examination of various extant stock trading strategies and the development of new strategies.

Michael van Biema
Assistant Professor
BS, Princeton, 1978; MS, Columbia, 1984; PhD, 1989.

Joined faculty in 1992.

Teaching affiliations: Finance and Economics, Computer Science.

Teaching and research interests: Professor van Biema examines corporate finance, productivity, and management of technology. He directs a program at Columbia University for the study of technology and productivity in the service sector funded by the Alfred P. Sloan Foundation. Along with other members of the faculty, he is conducting case studies with companies such as Salomon Smith Barney, Citigroup Inc., and Bell Atlantic.

Garrett J. van Ryzin
Associate Professor

BSEE, Columbia, 1985; SM, Massachusetts Institute of Technology, 1987; PhD, 1991.

Joined faculty in 1991.

Teaching affiliations: Management Science, Public and Nonprofit Management Program.

Teaching and research interests: Professor van Ryzin's research and teaching interests are stochastic modeling and operations management in the service sector. He is a leading authority on the theory and practice of airline yield management. He is involved in several research projects on retail operations focused on integrating pricing, inventory, and assortment decisions. Van Ryzin's research has been funded by several National Science Foundation grants and has appeared in a variety of professional journals. He also serves as an associate editor of several leading journals.

Maria G. Vassalou
Assistant Professor

BA, University of Athens, Greece, 1988; PhD, London Business School, 1994.

Joined faculty in 1995.

Teaching affiliations: Finance and Economics, International Business Program.

Teaching and research interests: Professor Vassalou specializes in international finance. Her recent work on international asset pricing determines the magnitude of exchange rate and inflation risk premiums in equities and

has important implications for asset management and international capital budgeting. She is evaluating the performance of trading strategies in the foreign exchange markets. These strategies arise from her innovative approach to analyzing changes in exchange rates. Vassalou teaches the elective *International Financial Management*.

Ruth Wageman
Associate Professor

BA, Columbia, 1987; PhD, Harvard, 1993.
Joined faculty in 1992.

Teaching affiliation: Management.
Teaching and research interests: Professor Wageman teaches the core course *Leading and Managing in Organizations* and a seminar on managing teams. Her work in organization management involves the social psychology of organizations, reward systems, human motivation, structural and individual influences on group and interpersonal behavior, and group effectiveness. She received the Academy of Management's Best Publication of 1995 Award, Organizational Behavior Division, for her article "Interdependence and Group Effectiveness."

Zhenyu Wang
Associate Professor

BS, Dalian Institute of Technology, 1982; MS, 1985; MA, University of Minnesota, 1994; PhD, 1995.
Joined faculty in 1995.

Teaching affiliation: Finance and Economics.
Teaching and research interests: Professor Wang focuses on both theoretical and empirical research in asset pricing models as well as econometric methods for finance. He was awarded the American Association of Individual Investors Award for Best Paper on Investment in 1994. Wang teaches *Capital Markets and Investments* in the MBA program and *Empirical Research in Finance* in the PhD program.

E. Kirby Warren
Professor; Director, Management Institute

BA, Columbia, 1956; MS, 1957; PhD, 1961.
Joined faculty in 1961.

Teaching affiliation: Management.
Teaching and research interests: Professor Warren teaches *Top Management Processes* and a seminar on management consulting, and he is a coordinator and teacher in Columbia's and other corporate executive programs. His research examines management processes, management consulting, and organization design. Warren has provided expert witness testimony in antitrust suits, works with numerous corporations in restructuring and strategy planning, among other topics, and is a director of several corporate boards.

John O. Whitney
Professor; Codirector, W Edwards Deming Center for Quality, Productivity and Competitiveness AB, University of Tulsa, 1948.

Joined faculty in 1987.
Teaching affiliation: Management.
Teaching and research interests: Professor Whitney has spent about half of his professional life in education and the other half in business as an entrepreneur. He was at Harvard Business School as a lecturer from 1968 to 1970 and as associate dean from 1970 to 1972. Before 1968, Whitney had started several businesses in the Midwest. In 1972, he began his career as a turnaround specialist and has since served as chairman, CEO, or COO of several turnaround companies. His first book, *Taking Charge: Management Guide for Troubled Companies and Turnarounds*, has been characterized as a bible for the turnaround business. Whitney's research interests have shifted to the policies and practices that will help large, profitable businesses stay out of trouble. He received the Singhvi Prize for Scholarship in the Classroom in 1988 and 1996.

Maurice Wilkinson
Professor

BA, University of California, Los Angeles, 1961; MA, Harvard, 1963; PhD, 1965.
Joined faculty in 1965.

Teaching affiliations: Finance and Economics, International Business Program.
Teaching and research interests: Professor Wilkinson teaches the core

course *Global Economic Environment*. He is widely known for his publications in economic theory, financial markets, and public economics. A former member of the professional staff of the President's Council of Economic Advisers and chief economist of the Council on Wage and Price Stability, he has consulted extensively for the federal government and major U.S. and European companies.

Kristen L. Willard
Assistant Professor

BA, Pomona College, 1987; MA, Princeton, 1991; PhD, 1994.
Joined faculty in 1994.

Teaching affiliations: Finance and Economics, International Business Program.
Teaching and research interests: Professor Willard teaches the core course *Managerial Economics* and the elective *Economics of Strategic Behavior*. Her research examines the interaction between business and government activity, with particular regard to multinational corporations and international tax policy. She is working on projects that explore the role of tax policy in firms' decisions about where to locate and how to finance international expansion and the role of informal financial markets in the birth and growth of new establishments.

Stephen P. Zeldes
Benjamin Rosen Professor of Finance and Economics

BS, Brown, 1978; PhD, Massachusetts Institute of Technology, 1984.
Joined faculty in 1996.

Teaching affiliation: Finance and Economics.
Teaching and research interests: Professor Zeldes teaches the core course *Global Economic Environment*. His research has examined a wide range of applied macroeconomic issues, including the determinants of household saving and portfolio choice, the effects of government budget deficits, and the relationship between consumer spending and the stock market. His research has been published in leading academic journals. He is currently engaged in research on Social Security reform. Zeldes is a research associate at the National Bureau of Economic Research.

Z. John Zhang**Assistant Professor**

BA, Huazhong University of Science and Technology, China, 1982; PhD, University of Pennsylvania, 1989; PhD, University of Michigan, 1994. Joined faculty in 1997.

Teaching affiliation: Marketing.

Teaching and research interests:

Professor Zhang, whose main teaching interests include pricing strategies and marketing management, teaches the core course *Marketing* and the seminar *Pricing Strategies*. In his research, he is studying the strategic implications of information-intensive marketing, price promotions, and market entry. He has published articles on competitive targeted promotions and price matching policy.

Amir Ziv**Associate Professor**

BA, University of Haifa, 1984; CPA Examinations, Israel, 1985; MSc, joint program of University of Haifa and Technion (Israel Institute of Technology), 1986; PhD, Stanford, 1990. Joined faculty in 1994.

Teaching affiliation: Accounting, Business Law and Taxation.

Teaching and research interests:

Professor Ziv specializes in the role of accounting information in organizational design, auditing, financial disclosure, product quality and information transmission among strategic players. His recent research examines optimal firm structure, market reaction to a qualified auditor's opinion, the relation between product quality and market concentration under limited capacity, timing of adoption of new accounting standards, and subsidization of tax preparation fees. Ziv teaches the core course *Accounting I* and the doctoral seminar *Analytical Modeling of Accounting Phenomena*.