

# Cornell University

ANNOUNCEMENTS

## Graduate School of Business and Public Administration



1970-71

#### **CORNELL UNIVERSITY ANNOUNCEMENTS**

Volume 62 of the Cornell University Announcements consists of twenty-three catalogs, of which this is number 12, dated August 19, 1970. Publication dates: twenty-three times a year (four times in August and October; three times in March; twice in June, July, September, and November; once in January, April, May, and December). Publisher: Cornell University, Sheldon Court, 420 College Avenue, Ithaca, New York 14850. Second-class postage paid at Ithaca, New York.

GRADUATE SCHOOL OF BUSINESS  
AND PUBLIC ADMINISTRATION



Cornell University

Graduate School of  
Business and Public  
Administration

1970-71

# CALENDAR OF THE GRADUATE SCHOOL OF BUSINESS AND PUBLIC ADMINISTRATION

## FALL SEMESTER

1970-71\*

Opening exercises, first-year students	W, Sept. 9
Registration, new students	Th, Sept. 10
Registration, continuing and rejoining students	F, Sept. 11
First semester instruction begins, 7:30 a.m.	M, Sept. 14
Citizenship recess:	
Instruction suspended, 1:10 p.m.	S, Oct. 24
Instruction resumed, 7:30 a.m.	Th, Nov. 5
<i>Thanksgiving Day</i> , a holiday	Th, Nov. 26
<i>Christmas recess:</i>	
Instruction suspended, 4:30 p.m.	T, Dec. 22
Instruction resumed, 7:30 a.m.	M, Jan. 4
First semester instruction ends, 1:10 p.m.	S, Jan. 9
Independent study period begins, 2:00 p.m.	S, Jan. 9
Final examinations begin	W, Jan. 13
Final examinations end	W, Jan. 20
Intersession begins	Th, Jan. 21

## SPRING SEMESTER

Registration, new and rejoining students	Th, Jan. 28
Registration, continuing students	F, Jan. 29
Second semester instruction begins, 7:30 a.m.	M, Feb. 1
<i>Spring recess:</i>	
Instruction suspended, 1:10 p.m.	S, Mar. 27
Instruction resumed, 7:30 a.m.	M, Apr. 5
Second semester instruction ends, 1:10 p.m.	S, May 15
Independent study period begins	M, May 17
Examinations begin	M, May 24
Examinations end	T, June 1
Commencement Day	M, June 7

\* The dates shown in the Academic Calendar are subject to change at any time by official action of Cornell University.

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## I. INTRODUCTION

### Faculty, Staff, and Advisory Council

Listed below are the officers of administration, the faculty, and the administrative staff of the School. Brief descriptions of the background and interests of those currently teaching in the School are presented. The School's Advisory Council is also noted.

### Administration of the University

DALE R. CORSON, President of the University  
ROBERT A. PLANE, University Provost  
MARK BARLOW, JR., Vice President for Student Affairs  
LISLE C. CARTER, JR., Vice Provost for Social and Environmental Studies  
W. DONALD COOKE, Vice Provost for Research  
LEWIS H. DURLAND, University Treasurer  
W. KEITH KENNEDY, Vice Provost  
SAMUEL A. LAWRENCE, Vice President for Administration  
E. HUGH LUCKEY, Vice President for Medical Affairs  
THOMAS W. MACKESEY, Vice President for Planning  
PAUL L. McKEEGAN, Director of the Budget  
ROBERT D. MILLER, Dean of the University Faculty  
STEVEN MULLER, Vice President for Public Affairs  
ARTHUR H. PETERSON, University Controller  
NEAL R. STAMP, Secretary of the Corporation and University Counsel

### Administration of the School

H. JUSTIN DAVIDSON, M.S., C.P.A., Dean of the School  
DAVID A. THOMAS, M.B.A., Ph.D., C.P.A., Associate Dean of the School  
RICHARD R. WEST, M.B.A., Ph.D., Associate Dean for Planning and Development  
ROGER M. BATTISTELLA, M.P.H., Ph.D., Coordinator for the Sloan Institute of Hospital Administration  
FREDRICK T. BENT, Ph.D., Coordinator of the International Program

DOUGLAS R. BROWN, D.P.A., Director of the Health Administrators Development Program

THOMAS R. DYCKMAN, Ph.D., Director of the Doctoral Program

EDWARD S. FLASH, JR., M.P.A., Ph.D., Coordinator of the Career Education Awards Program

FRANK F. GILMORE, S.M., Director of the Executive Development Program

CHARLES G. MCCORD, M.A., Director of Placement and Alumni Affairs and Assistant Director of the Executive Development Program

RICHARD A. RETTIG, Ph.D., Coordinator of the Science, Technology, and Society Program

ROBERT E. SHEARER, M.B.A., Director of Admissions and Student Affairs

WILLIAM H. STARBUCK, Ph.D., Editor of the *Administrative Science Quarterly*

## Faculty

DOUGLAS E. ASHFORD, M.A. (Oxford), Ph.D. (Princeton), Professor of Public and International Affairs

- Professor Ashford's research and teaching are focused on the problems of modernization and political development in the less developed parts of the world. His several books and articles in this field draw heavily on research he has undertaken in North Africa. He has served as an area studies director in a Peace Corps training program and as a consultant for the Institute for Defense Analyses. He is also a professor in the Department of Government.

ROGER M. BATTISTELLA, M.P.H., Ph.D. (Michigan), Associate Professor of Medical Care Organization

- Formerly a staff member of the United States Senate's Special Committee on Aging, Professor Battistella is interested principally in public policy issues involving health planning and the organization, financing, and delivery of personal health services. He has done research on utilization of health services under voluntary insurance plans and the health behavior of late adulthood persons. He has written in the areas of health affairs, regional and comprehensive health planning, and medical sociology. He serves as coordinator of the program in hospital and health services administration and as a seminar chairman in the School's Health Administrators Development Program. He is active as a consultant to HEW and state and local governmental bodies.

FREDRICK T. BENT, Ph.D. (Chicago), Associate Professor of Public Administration

- International and comparative administration are Professor Bent's chief interests. He is coordinator of the School's International Program. He has

served as home staff coordinator of the School's contract with the Agency for International Development providing technical assistance to the Middle East Technical University in Ankara, Turkey, and spent two years in Turkey under that program. He has also served as acting editor of the *Administrative Science Quarterly* and as associate director of Cornell's Center for International Studies.

**HAROLD BIERMAN, JR., M.B.A., Ph.D. (Michigan), Nicholas H. Noyes**  
Professor of Business Administration

- Professor Bierman's interests are in the areas of measuring and communicating financial information and business decision making with the aid of quantitative techniques. He has had experience in public accounting and industry and is the author of a number of books and articles in the fields of accounting, finance, taxation, and quantitative analysis. He is a coordinator of the School's Executive Development Program. Professor Bierman will be on leave during the fall of 1970.

**EARL BROOKS, M.S. (American University), Professor of Administration**

- Professor Brooks teaches in the fields of organizational behavior and personnel management. He serves as a coordinator of the School's Executive Development Program and as a management consultant in this country and overseas. He has published several articles on delegation, labor relation, communications, management by objectives, and management development.

**DOUGLAS R. BROWN, D.P.A. (Syracuse), Associate Professor of Hospital and Medical Care Administration**

- Professor Brown joined the Cornell faculty after serving in an administrative capacity in several hospitals. His research commitment is in the area of planning for health services. He is the executive director of the School's Health Administrators Development Program.

**JOSEPH B. BUGLIARI, LL.B. (Cornell), Associate Professor of Agricultural and Business Law**

- Professor Bugliari was formerly an associate with the firm of Royall, Koegel, and Rogers in New York and an assistant to an associate justice of the Appellate Division of the New York Supreme Court, Third Department. He is interested in the law pertaining to farming operations, business associations, estate planning, and legal problems in the hospital-health area.

**LISLE C. CARTER, JR., LL.B. (St. John's), Professor of Public Policy**

- Although he has devoted a portion of his career to the private practice of law, Professor Carter has been most active in the area of social and urban problems. He has been affiliated with the National Urban League and the Office of Economic Opportunity, and most recently he served as assistant sec-

retary of HEW for Individual and Family Services. His interests have included programs for the handicapped and the achievement of social welfare through planning, participation, and manpower. Professor Carter has also served as vice president for social and environmental studies at Cornell.

**RICHARD W. CONWAY, Ph.D. (Cornell), Professor of Computer Science**

- Professor Conway specializes in the fields of operations research and computer science. He has been a consultant to a number of large companies and to the Rand Corporation in these fields. He is currently director of National Science Foundation research projects on the theory of scheduling and on computer language development.

**ROBERT W. DALY, M.D. (State University of New York at Syracuse), Visiting Professor of Administrative Medicine**

- Dr. Daly's major interests are in the fields of personality theory, psychopathology, psychoanalysis, and the history and sociology of psychiatric institutions. He has served as a consultant to the social studies curriculum committee of the Maxwell School at Syracuse University and to the Life Sciences Division of the Inter-University Communications Council from the National Library of Medicine in Washington, D.C. He is currently a member of the Board of Consultants of *The Psychoanalytic Review*. As a member of the Department of Psychiatry of the State University of New York, Upstate Medical Center at Syracuse, he serves as director of the Adult Outpatient Psychiatric Services and as a coordinator of undergraduate training in psychiatry for the College of Medicine.

**H. JUSTIN DAVIDSON, M.S. (Carnegie-Mellon), C.P.A., Professor of Administration**

- Professor Davidson is interested in the application of quantitative techniques to management problems, information systems for public and private organizations, and long range planning. Prior to coming to Cornell, he was a consulting partner in the firm of Touche Ross & Company and was that organization's director of planning. Mr. Davidson has written widely in the fields of management and accounting. He has participated actively in the affairs of the American Institute of Certified Public Accountants, including service as chairman of the Institute's Planning Committee.

**ARCH T. DOTSON, Ph.D. (Harvard), Professor of Government**

- Professor Dotson has long experience in problems of public administration and state and local government. For two years he served as deputy controller of New York State. More recently, as a consultant to the Ford Foundation, he has played an active part in development planning in India, Iran, Japan, and the Philippines.

**THOMAS R. DYCKMAN, Ph.D. (Michigan), Professor of Accounting and Quantitative Analysis**

• Accounting, statistics, and quantitative approaches to decision making are Professor Dyckman's fields of interest. His publications have dealt with such topics as automobile sales and installment credit, the investment decision, the effects of alternative accounting techniques on management decisions, and statistical decision theory applications. He is currently engaged in research on certain issues associated with decision making. He is a faculty leader in the School's Executive Development Program and director of the doctoral program. Professor Dyckman will be on leave during the fall of 1970.

**ROBERT M. EDELSTEIN, Ph.D. (Columbia), Assistant Professor of Marketing**

• Professor Edelstein's research and teaching interests focus on the identification, collection, and analysis of information for individual (consumer), management, and policy decisions, with strong emphasis on both the technical and behavioral aspects of the decision process. He has served as a marketing consultant for industry and as a planning consultant for governmental units.

**MILTON J. ESMAN, Ph.D. (Princeton), John S. Knight Professor of Public Administration**

• Professor Esman is interested in the politics of development administration, approaches to international development, and institution building in national development. He has worked for the Department of State and the United States Civil Service Commission. He is on the editorial board of the *Public Administration Review*. Professor Esman is also a professor in the Department of Government and serves as director of Cornell's Center for International Studies.

**EDWARD S. FLASH, JR., M.P.A., Ph.D. (Cornell), Associate Professor of Public Administration**

• Professor Flash's teaching and research interests focus on urban affairs and federal administration, including work in such areas as science and public policy, regional development, and business-government relations. He has published a book on the Council of Economic Advisers. An experienced civil servant, he has served with the Navy Department, the District of Columbia government, and the Commission on the Organization of the Executive Branch of the Government. He has consulted with other federal agencies. He is currently coordinator of Cornell's Career Education Awards Program.

**FRANK F. GILMORE, S.M. (M.I.T.), Professor of Business Administration**

• The fields of executive development and business policy, both domestic and international, are the major concerns of Professor Gilmore. His work in these subjects is based on experience both as an executive and as a consultant in several firms. He is now a consultant to the Mobil Oil Corporation on executive development. His recent research and writings have been in the area of cor-

porate planning. He is the director of the School's Executive Development Program. Professor Gilmore will be on leave during the academic year 1970-71.

**JEROME E. HASS, M.S., M.B.A., Ph.D. (Carnegie-Mellon), Assistant Professor of Managerial Economics and Finance**

- Applied mathematical economics, finance, and macroeconomic theory and use are Mr. Hass's fields of interest. His publications have dealt with such topics as the application of mathematical programming techniques to the divisionalized firm and natural resource utilization and the theory of merger and acquisition decision. He is a member of an interdisciplinary research team exploring the nature and extent of future energy requirements, methods of energy generation, and their cost both in terms of inputs and impact on the environment.

**THOMAS R. HOFSTEDT, Ph.D. (Stanford), Assistant Professor of Accounting**

- Professor Hofstedt's teaching interests include managerial accounting and the application of the behavioral sciences to information systems. He is now conducting experimental research on the role of accounting information in individual decision processes.

**G. DAVID HUGHES, M.B.A., Ph.D. (Pennsylvania), Associate Professor of Marketing**

- Professor Hughes's interests encompass marketing, bargaining behavior, economic development, and quantitative approaches to measurement problems. He has written a number of articles on these subjects. His present work includes a text on measuring marketing opportunity, the public policy aspects of marketing structure and advertising, and the development of the transaction as the basic unit for economic analysis. He is a consultant to the travel and banking industries and to several European executive development programs. Professor Hughes will be on leave during the academic year 1970-71.

**JOHN G. B. HUTCHINS, Ph.D. (Harvard), Professor of Business History and Transportation**

- Professor Hutchins is primarily concerned with the fields of transportation, economic and business history, and business-government relations. His current research deals with problems and public policies relating to the maritime industries. He has written a book on American shipping and shipbuilding and numerous shorter pieces on this and other topics. He is a director of Brown-Wales Company, a steel warehousing enterprise in Cambridge, Massachusetts.

**FRANK A. JOHNSON, M.D. (Illinois), Visiting Professor of Administrative Medicine**

- Dr. Johnson is coordinator of graduate training in the Department of Psychiatry at the State University of New York, Upstate Medical Center at Syracuse. He has served as a lecturer and field psychiatrist for the Peace Corps and

has been a consultant in hospital programming with the New York State Department of Mental Hygiene in Albany. He has written in the areas of mental hospital organization and psychiatric education. His current research interests include the theoretical and instrumental relationships that exist between psychiatry and the social sciences.

**MANLEY H. JONES, M.B.A., D.C.S. (Harvard), Visiting Professor of Business Management**

- Professor Jones's major interest is in the field of business policy. For the past twenty-two years he has taught at the Illinois Institute of Technology, prior to which he served in executive capacities in the Houghton Mifflin Company for fifteen years. He has written extensively on the subject of executive decision making.

**SANDER KELMAN, Ph.D. (Michigan), Assistant Professor of Medical Economics**

- Professor Kelman is interested in political economy, the economics and political economy of medical care, and econometrics. His research includes work on an econometric model of the United States economy, an econometric model of the medical care sector of the economy, a statistical study of the hard-core unemployed, and an international model predicting the onset of war.

**JAMES C. KINARD, M.B.A., Ph.D. (Stanford), C.P.A., Assistant Professor of Accounting and Management Information Systems**

- Professor Kinard's teaching and research interests lie in the area of information systems in organizations with particular reference to accounting information systems. His research approach includes quantitative and behavioral science models and methods. He recently completed research in the area of psychological models of information processing.

**DAVID C. KNAPP, Ph.D. (Chicago), Professor of Administration**

- Professor Knapp, dean of the New York State College of Human Ecology at Cornell, has held academic and administrative positions at several universities and has been a Fulbright Scholar in Finland and a Bullard Fellow at Harvard. His research and teaching interests are in the fields of public policy and higher education.

**ARTHUR J. KOVER, Ph.D. (Yale), Assistant Professor of Organizational Behavior**

- Mr. Kover worked eight years in the advertising business, his last position being vice president and manager of the Research Department of a large advertising agency. His academic interests are the structures of complex organizations and the roles of organizational ideologies in shaping behavior. His interests are to find ways of increasing personal expression and freedom within

large business organizations. He has published articles in both sociological and advertising journals about these subjects.

**THOMAS M. LODAHL, Ph.D.** (California at Berkeley), Professor of Administration

- A specialist in social-industrial psychology, Professor Lodahl has done research on leadership, group learning and problem solving, and the definition and measurement of job involvement. As an associate of the National Training Laboratories, he has consulted with various organizations on problems of improving leadership and human-relations skills of members. He is currently working on research projects on personality and buying behavior and on organizational change. He has served as editor of the *Administrative Science Quarterly*.

**NORMAN R. LYONS, M.S.** (Carnegie-Mellon), Lecturer in Computer Science and Information Systems

- Mr. Lyons's teaching and research interests lie in the area of information systems and operations research. He has worked as a system analyst for the Control Data Corporation and more recently as an operations research analyst for the Irving Trust Company. He is currently engaged in dissertation research in the area of scheduling.

**GAIL S. MACCOLL, M.P.A.** (Michigan), Lecturer in Administration

- Miss MacColl is completing a Ph.D. thesis in political science, with a specialization in administrative theory. In addition to her academic preparation, she has been a senior planner for the city of Ann Arbor, Michigan. Her interest in administration is at the local government level where problems of organization, public policy, and administrative responsiveness are all involved.

**ALAN K. McADAMS, M.B.A., Ph.D.** (Stanford), Associate Professor of Managerial Economics

- Professor McAdams's interests and publications are in the fields of managerial economics and business-government relations. During 1966 he was on leave, studying the impact of new technology on the steel industry of Western Europe. He is a coordinator of the School's Executive Development Program and has served as a consultant to industry and to the Ford Foundation. Professor McAdams will be on leave during the fall of 1970.

**JOHN O. McCLAIN, Ph.D.** (Yale), Assistant Professor of Quantitative Analysis

- Professor McClain's interests involve the application of quantitative methods to managerial problems. His current teaching and research efforts are focused on applications of operations research techniques to medical care problems.

VITHALA R. RAO, Ph.D. (Pennsylvania), Assistant Professor of Marketing and Quantitative Methods

● Professor Rao's research interests include application of multidimensional scaling to various substantive problems of marketing, development of prescriptive models of marketing behavior, and long range planning. His teaching interests encompass marketing, quantitative methods, managerial economics, and research design. He has done research in the area of salience of price in the perception and evaluation of product quality, and he has written papers in the fields of statistics and measurement in marketing.

JOHN M. RATHMELL, M.B.A., Ph.D. (Pennsylvania), Professor of Marketing

● Professor Rathmell's current interests include the marketing of services, marketing in the multinational firm, the effect of divestiture on competition, the role of the trade fair in economic development, marketing's involvement in urban problems, and innovation in the marketing program of the firm. He has written articles, monographs, and books in various areas of the field.

RICHARD A. RETTIG, Ph.D. (M.I.T.), Assistant Professor of Public Administration

● Professor Rettig is concerned with executive and legislative decision making for federal research and development programs especially related to resource allocation issues and with the process by which research and development programs are made responsive to national purposes. He has worked in the Bureau of the Budget, Executive Office of the President, and more recently as an assistant to the chancellor of higher education of the state of New Jersey.

DONALD C. SAMSON, M.D. (Syracuse), Visiting Professor of Administrative Medicine

● Dr. Samson, who teaches part-time in the Sloan Institute of Hospital Administration, is working on methods of programming medical instruction. He has written in the fields of cerebral metabolic disorders and on brain function. For several years he has conducted a family health care clinic for migrant agricultural laborers during the summer months. Dr. Samson is responsible for the medical clinic and the introductory course in clinical medicine at the State University of New York Upstate Medical Center in Syracuse.

RICHARD SCHRAMM, Ph.D. (Carnegie-Mellon), Assistant Professor of Economics and Finance

● Professor Schramm's research and teaching interests are in the area of capital theory and investment behavior. He has studied the determinants of manufacturing investment in the United States and France, focusing on the role of tax and monetary influences on investment behavior. He is currently studying the interrelationships between fixed and working capital management. Professor Schramm will be on leave during the academic year 1970-71.

SEYMOUR SMIDT, Ph.D. (Chicago), Professor of Managerial Economics

- Professor Smidt has engaged in studies in the fields of managerial economics, business conditions, and agricultural economics. He has written in the areas of economic development, capital budgeting, and commodity futures markets. He has been a consultant to industry and chief of party on the School's project at the Middle East Technical University in Ankara. During the past year he has served as associate director of the Securities and Exchange Commission's Institutional Investor Study.

DAVID B. SMITH, Ph.D. (Michigan), Assistant Professor of Medical Care Organization

- Professor Smith's interests include medical sociology and the application of social psychology to health care problems. He is also interested in the methodology of social research. His recent dissertation involved a study of differing perceptions of quality in a prepaid group practice.

WILLIAM H. STARBUCK, Ph.D. (Carnegie-Mellon), Professor of Administration

- Professor Starbuck employs a wide range of methodologies—including mathematical models, computer simulation, laboratory experiments, and field investigation—in the study of individual decision making and behavior, bilateral bargaining, group problem solving, organizational structure, and other areas. He serves as editor of the *Administrative Science Quarterly*, is a member of the Scientific Advisory Committee of the United States Air Force Human Resources Laboratory, and is vice chairman of the College on Organizations of the Institute of Management Sciences. Professor Starbuck will be on leave during the academic year 1970-71.

BERNELL K. STONE, Ph.D. (M.I.T.), Assistant Professor of Finance

- Professor Stone is concerned with the use of quantitative methods in financial decision making. His immediate interests focus on cash management, investment analysis, risk measurement, and capital market theory. He is the author of a book on risk and asset selection in the context of market equilibrium. He has served as president of Codon Computer Utilities, Inc., and has been a consultant to a number of organizations.

DAVID A. THOMAS, M.B.A., Ph.D. (Michigan), C.P.A., Professor of Accounting

- Professor Thomas is interested in cost accounting, accounting for the construction industry, industry cost structures, and philanthropy. He is the author of several books, monographs, and articles on these subjects. He has worked in public accounting and industry and is on the Board of Directors of the Ithaca Growth Fund and of the Student Agencies, Inc. He is president of Executive Investors Associates and serves as the administrator of the Charles E. Merrill Trust.

**L. JOSEPH THOMAS, Ph.D. (Yale), Assistant Professor of Production and Quantitative Analysis**

● Professor Thomas specializes in the field of operations research. His teaching interests include production and quantitative methods, particularly with respect to decision analysis. He has done research on models for price-quantity decisions for new products. His research is oriented toward the building and analyzing of mathematical and computer models for business processes.

**ROBERT D. TOLLISON, Ph.D. (Virginia), Assistant Professor of Economics and Public Finance**

● Professor Tollison's research and teaching interests lie in the fields of microeconomics, public finance, and industrial organization. His publications have dealt with such topics as draft deferment policy and the volunteer army proposal. He is currently engaged in research on a variety of problems in industrial organization and public finance.

**EDWARD H. VAN NESS, Ph.L. (College of St. Thomas), Visiting Professor of Health Planning**

● Professor Van Ness is executive director of the New York State Health Planning Commission and executive secretary of the State Joint Council on Regional Medical Programs for Heart Disease, Cancer, Stroke, and Related Diseases. He is coeditor of the book, *Concepts and Issues in Administrative Behavior*. For six years he was a member of the governor's program policy staff responsible for health, mental health, and social welfare matters. He has been responsible for government executive development programs both at New York University and the University of Chicago.

**RICHARD R. WEST, M.B.A., Ph.D. (Chicago), Professor of Finance**

● Professor West is particularly concerned with the organization and functioning of money and capital markets. He is currently writing a book on the economics of securities markets and is the author of a number of articles in this general area. He has served as a consultant to the Ford Foundation, the New York Stock Exchange, and the Irwin Management Company, and was for a time chief economist of the Cummins Engine Company. He is associate dean for planning and development.

**THOMAS D. WILLETT, Ph.D. (Virginia), Associate Professor of Economics and Public Affairs**

● Professor Willett's primary interests are in the areas of international capital movements and international monetary problems and microeconomic aspects of social policy. Prior to coming to Cornell he was a member of the faculty at Harvard University. He is a consultant to the Council of Economic Advisors, where he has served as a member of the senior staff. In recent years he has been a member of several study groups concerned with international financial problems, including the Burgenstock group studying greater exchange-rate flexi-

bility, the American Society of International Law's Study Panel on International Monetary Policy, and President Nixon's Task Force on Balance-of-Payments Policy. He is coeditor of *Public Policy* and has been an associate editor of the *Quarterly Journal of Economics* and the *Review of Economics and Statistics*.

### Associated Faculty

A number of faculty members in other schools and colleges at Cornell have interests closely allied to interests of the faculty of the Graduate School of Business and Public Administration. In the School of Industrial Engineering and Operations Research there are, for example, Professors Hamilton Emmons (inventory and scheduling theory), Walter R. Lynn (environmental systems), Howard L. Morgan (management information systems and information processing), Sidney Saltzman (information processing systems and city and regional planning), and Howard M. Taylor III (applied probability and stochastic processes). Close relationships also exist with faculty members in the Departments of Economics, Psychology, and Sociology of the College of Arts and Sciences; the Department of Agricultural Economics in the College of Agriculture; and the Department of City and Regional Planning of the College of Architecture, Art, and Planning. Through the courses that associated faculty teach and committees on which these members serve, diversity is given to the programs of the Graduate School of Business and Public Administration.

### Emeritus Professors

MELVIN G. DE CHAZEAU, Ph.D., Professor of Business Economics and Policy, Emeritus

DONALD ENGLISH, M.B.A., Professor of Accounting, Emeritus

ALBERT M. HILLHOUSE, J.D., Ph.D., Professor of Public Finance, Emeritus

ARTHUR E. NILSSON, Ph.D., Professor of Finance, Emeritus

### Administrative Staff

EDLA L. BEALD, B.S., Registrar and Administrative Aide II

NANCY A. CULLIGAN, Secretary and Administrative Assistant

INEZ M. KING, Administrative Aide

BETSY ANN OLIVE, B.L.S., Librarian

SUSANNE B. HENDSEY, M.L.S., Assistant Librarian

JANET S. REED, M.L.S., Assistant Librarian

LILLIAN B. PARKE, Head, Library Circulation and Reserve

F. JOYCE PORCELLI, Secretary and Administrative Assistant  
GERALD F. WAGNER, M.S., Administrative Assistant, Sloan Institute  
of Hospital Administration

### Advisory Council to the School

NELSON SCHAEFEN, SR., Former President and Chairman of the Executive Committee, Smith, Barney & Co., Inc. (*Chairman of the Council*)  
RICHARD TUCKER, President, North American Petroleum Division, Mobil Oil Corporation (*Vice Chairman of the Council*)  
ROBERT O. BASS, Executive Vice President, Borg-Warner Corporation  
HERMAN F. BORNEMAN, President, BMS Service Corporation and Managing Partner of Exchequer Associates  
HAROLD BRAYMAN, former Director of Public Relations, E. I. du Pont de Nemours & Company, Inc.  
FLETCHER L. BYROM, Chairman of the Board, Koppers Company, Inc.  
JOSEPH L. EASTWICK, former Chairman of the Board, James Lees and Sons  
ROBERT G. ENGEL, Vice President, Morgan Guaranty Trust Company  
GLENN W. FERGUSON, Chancellor, Long Island University  
WILLIAM HINCHMAN, Vice President, Chase Manhattan Bank, N.A.  
ROGER W. JONES, Assistant Director, Bureau of the Budget, Executive Office of the President  
WILLIAM G. KIRKLAND, Partner, Kidder, Peabody & Co., Inc.  
JOHN MEAKEM, JR., Executive Vice President, Combe Chemical, Inc.  
WILBUR PARKER, Budget Director, City of Newark  
GEORGE G. RAYMOND, JR., President, The Raymond Corporation  
WILLIAM B. ROSS, Deputy Undersecretary, Department of Housing and Urban Development  
NELSON SCHAEFEN, JR., Partner, Brokaw, Schaenen, Clancy & Co.  
DUDLEY N. SCHOALES, Partner, Morgan, Stanley & Company  
RICHARD A. STROUCE, Vice President, Integrated Container Service, Inc.  
HORACE L. TOWER, Director, Corporate Development, General Foods Corporation  
THOMAS O. WAAGE, Vice President, Federal Reserve Bank of New York  
GILBERT H. WEHMANN, Partner, White, Weld & Company  
FRANKLIN R. WINNERT, Executive Vice President, Certain-teed Saint Gobain Insulation Corporation  
ARTHUR S. WOLCOTT, President, Seneca Foods Corporation

## The School and the University

In its creation and development the Graduate School of Business and Public Administration has drawn support from and in turn has reflected the century-long traditions of Cornell University. From its very founding Cornell University broke from the then dominant emphasis on the classics and provided educational programs more closely related to the growth of American life and society. In the same spirit Cornell took the lead in welcoming students from overseas.

The pursuit of this broad purpose has made Cornell—a private institution but also the land-grant university of New York—a university of fifteen major schools and colleges, of which four are supported by New York State. Coeducational and nonsectarian, it has a student body of approximately 14,000, a faculty of over 2,000, and a library of over 3,500,000 volumes. It is within this framework that the School has set its goals and fashioned its programs.

Like the University of which it is a part, the School draws its student body from a wide variety of disciplines and cultural environments. The 300 Master's degree candidates currently in residence come from approximately 100 American and foreign colleges and universities. More than half of all the students have a background of undergraduate studies in arts or sciences, while approximately one-quarter were engineering students as undergraduates. Three-quarters began their graduate training immediately after receiving their Bachelor's degrees and the remaining quarter following military or work experience.

Because of the diverse backgrounds of the School's students and the need for a common understanding of the environment and functions of management, much of the first-year program for each of the School's professional degrees is predetermined. Once this foundation is acquired, the student, with the approval of his adviser, may choose from a wide range of courses in building a purposeful program or "concentration" fitted to his needs and aspirations. Reflecting the multidisciplinary nature of the executive function, second-year programs are flexible and broad in scope and embrace not only the offerings of the School but also those of other parts of the University.

The programs of the School are not confined to studies for the professional Master's degrees. Work for the degree of Doctor of Philosophy (Ph.D.) is also offered. In addition, the School conducts several development programs for experienced executives and sponsors a number of research activities. Further, the School's interest in advancing the art

and science of administration is expressed in the *Administrative Science Quarterly* and other publications. These programs and publications are described in greater detail in subsequent sections of this *Announcement*.

The School admitted its first students in 1946. It became an independent graduate school at Cornell in 1955, and its doctoral program was started that year. The Sloan Institute of Hospital Administration was also established as an integral part of the School in 1955.

The School is housed in Malott Hall, which was completed during the spring of 1964. This building was designed to meet the specialized requirements of graduate education in administration. It houses the Eastwick Library, a center for student activities, faculty and administrative offices, and lecture, seminar, and case-discussion rooms.

## Education for Management

Today's executive in business, government, or hospital and medical care administration must have competence in many disciplines in order to understand both the complexities of the external environment in which he operates and the internal workings of the organization of which he is a part. The continued development of science and technology, the rapid growth of our population, and the ever-changing nature of the international environment are among the factors which are significantly altering the scope and character of management decision making and imposing new responsibilities upon administrators at all levels. New developments in quantitative analysis are accompanied by a revolution in information processing, made possible by high-speed computers. On another front, rapid advances in the behavioral sciences are suggesting new approaches for management to employ in organizing human effort and in arriving at policy decisions.

While the knowledge and analytical ability which a successful executive must possess will be developed in part from the constant challenge and stimulation of experience, education in business or public administration can establish a sound basis for acquiring such knowledge and analytical ability. Graduate education for management can also help crystallize career objectives and improve mobility and discretion in the choice of employment. In the last analysis success will be determined by the student's own efforts to develop his abilities and potentialities. Graduate study in business and public administration will expand his opportunities. The realization of those opportunities rests with the student.



## II. MASTER'S DEGREE PROGRAMS

### Approach and Content

The School's program for the Master of Business Administration or the Master of Public Administration degree requires two years of study and the completion of sixty credit hours of course work. Much of the first year is taken up with core courses which introduce the student to the broad range of disciplines relevant to administration and provide him with the necessary background for more specialized studies. By contrast, the second year is devoted almost entirely to elective courses chosen by the student, in consultation with his adviser, to meet his own particular career interests and objectives.

*Flexibility.* Contributing to a high degree of flexibility in the Master's degree programs of this School are: 1) the possibility of exemption from core courses in areas in which the student possesses an adequate background, 2) the availability of a wide range of elective courses in the School's curriculum, and 3) the opportunity for the student enrolled in the School to take a portion of his studies in other colleges and schools of Cornell University.

A student with a strong undergraduate background in one or more of the subjects included in the core curriculum may exempt a core course requirement on the basis of successful completion of an examination in the subject matter covered by the course. Exemption examinations are administered immediately prior to fall term registration. The student who passes an exemption examination does not thereby receive credit toward his degree, but the number of elective courses which he may take is increased and he is able to move more quickly into work in his special areas of interest.

The student is asked to choose his elective course with the guidance of his faculty adviser and with some purposeful pattern in view. Although no "major" is formally required, there is a wide range of fields of concentration, described in the following pages.

In working out his elective course program, the student is often encouraged to enroll in courses offered in other divisions of the Uni-

versity. Of particular interest are the graduate courses of the Departments of Economics and Government of the College of Arts and Sciences; the School of Industrial Engineering and Operations Research of the College of Engineering; the Department of City and Regional Planning of the College of Architecture, Art, and Planning; the College of Agriculture; and the School of Industrial and Labor Relations.

*Method of Instruction.* Teaching methods vary with the subject matter and with the preferences of the instructors. The case method, the lecture-discussion approach, and the seminar method are all extensively employed. Cases are introduced in an effort to acquaint the student with the complexities of real management situations requiring analysis, decision, and the development of a course of action. The lecture-discussion approach is used to integrate reading assignments and class materials. Most advanced courses are offered as seminars, in which individual study and research are required and ideas can be exchanged at length.

*Changes in Curriculum.* The School regularly reviews its curriculum with the aim of maintaining its effectiveness and its responsiveness to the needs of a changing world. A major revision of curriculum for all programs of the School is now in process. Some of these changes may yet be reflected during the 1970-71 year with the majority of changes to be implemented in 1971-72.

## Business Administration

The School's program in business administration is designed to provide an educational foundation for responsible business leadership. Organizational behavior and administrative relationships are examined with the aid of contributions from the behavioral sciences. The uses and limitations of quantitative approaches to managerial problems are explored. A foundation in economic analysis is presented in order to equip the student with analytical tools of proven value in decision making and to provide him with a better understanding of the environment in which business operates. The functions of marketing, operations management, and finance are investigated, and an effort is made to instill in the student an appreciation of the interrelationships of these functions and an understanding of the company-wide planning process. The political and economic foundations of the United States business community and the nature and impact of important public policies are also explored.

## The Core Program in Business Administration

A large portion of the first year of study for the M.B.A. is devoted to completing a series of core courses in organizational theory and behavior, managerial accounting, quantitative methods, computer programming, economic analysis for management, analysis of environmental issues, and the functional areas of marketing and finance. Operations management may be elected during the spring semester of the first year by those students with special interests in the field. If not taken during the spring semester of the first year, operations management must be taken during the fall semester of the second year. The structure of the first-year curriculum is indicated on the chart below. Detailed descriptions of core courses are presented in the following sections on pp. 33-39.

### FIRST-YEAR BUSINESS ADMINISTRATION PROGRAM

Fall Semester	Spring Semester
120. Organization Theory and Behavior	126. Marketing
122. Managerial Accounting	128. Corporate Financial Management
123A. Quantitative Methods for Management I      123B. Introduction to the Computer	123C. Quantitative Methods for Management II
124. Economic Analysis for Management I	125. Economic Analysis for Management II
129. Issues in the Environment	Elective Course

Course 200, Business Policy, and course 127, Operations Management, if not elected during the first year, are required for M.B.A. candidates in the first term of the second year. In addition, students are asked to complete at least one course dealing with business-government relations during the second year. (For a list of courses which fulfill this requirement, see p. 35.)

### Work beyond the Core

During his first year the M.B.A. candidate may enroll in at least one elective course. With the exception of the three requirements noted just above, his second-year program may be made up of courses selected according to his particular career focus and needs. To assist the student in developing a purposeful pattern of courses for his work beyond the core program, the following fields of concentration have been defined:

*Industrial Accounting.* This concentration is designed to lead to careers in business or governmental accounting and in financial or general management. Its requirements are flexible and depend on the student's preparation prior to entering the School and on his vocational objectives. A typical program in this field includes second-year courses in finance, managerial economics, and computer applications as well as in intermediate, advanced, cost, and tax accounting.

*Professional Accounting.* This concentration, which is designed to prepare the student for a career in public accounting, meets the academic requirements for the Certified Public Accountant certificate in New York State. The regulations of the New York State Education Department specify that the C.P.A. candidate must be a graduate of an educational institution offering an accounting curriculum registered by that Department. He must have completed the following minimum semester credit-hour requirements in his academic program: sixty in liberal arts and sciences, twenty-four in accounting, nine in economic analysis, nine in finance, four in business law, and at least fourteen other business electives. These requirements may be met by combining undergraduate course credits with those received in this School. A student who plans to fulfill the academic requirements for the New York C.P.A. certificate must take the following courses: 300, Intermediate Accounting; 301, Advanced Financial Accounting; 302, Cost Accounting; 303, Seminar in Financial Policy and Managerial Accounting; 305, Federal Taxation and Decision Making; 308, Law of Business Associations; and 309, Advanced Business Law. He must also take Hotel Accounting 183, Auditing, which is offered by the School of Hotel Administration. He should also elect courses 304, Seminar in Financial Accounting, and 950, Information Systems in Organizations. For the student who has no prior work in accounting and who elects to take the C.P.A. concentration, one core course may be omitted and 305, Federal Taxation and Decision Making, may be used to meet the business-government relations course requirement. The core course to be omitted must be approved by the Academic Standards Committee. Because careful scheduling is necessary if C.P.A. course requirements are to be met, students contemplating the C.P.A. program are strongly urged to consult with a member of the accounting staff at the outset of their work in the School. (*Note: For students with high academic records, six-week internships in public accounting firms may be arranged during the second year of study.*)

*Finance.* This concentration is designed to provide a thorough understanding of the role of finance in administrative and decision-making processes and to familiarize the student, in some depth, with the mechanisms and operations of the financial system and the intricate interrelationships between business and government in the realm of finance. The program in business finance presents an integrated treatment of the operational aspects of business and investment finance, the functions of financial institutions and capital markets, and the basic economic and legal framework of financial organizations. This concentration meets the needs of students who look forward to specialized careers in the financial management of business and to careers in commercial, savings, and investment banking, in financial counseling, and in investment management.

*International Business Operations.* Students interested in careers in international business operations may develop a field of concentration based on courses offered in this School and elsewhere in the University (see p. 46). In addition, the School offers a number of courses in the international development concentration which are relevant for students planning to work abroad, especially in the developing areas (see p. 46). Supplemental course work can be taken in the Department of Government and the Department of Agricultural Economics. For students with well-defined geographic interests, language and area studies offerings are also available.

*Managerial Economics.* This concentration is designed for students seeking careers either in general management or as professional economists in industry or in government. The rapidly expanding application of economic analysis in decision making is creating wider opportunities for men trained in its use both in line management posts and in staff positions in large industrial corporations, banks, insurance companies, investment firms, merchandising operations, and many departments of the federal and state governments. The student who elects this concentration should have had some previous training in economic studies, especially economic theory, and should possess some background in mathematics. His program may emphasize either a qualitative or a rigorously quantitative approach, but a basic understanding of both is needed and must be demonstrated. Thus the student is expected to develop a firm grasp of the economic and institutional framework of business behavior and of government policies that affect business performance. He is also required to develop competence in the use of basic mathemati-

cal and statistical tools. In carrying out his program the student may focus in depth on the analysis of problems associated with the functions of finance, marketing, or business management, or he may elect to concentrate on the more general issues of government operations and public policy. In either case, with the consent of his adviser, he may call upon the varied resources of the University to complement and supplement courses in this School.

*Marketing.* This concentration provides the student with an understanding of the operational and policy aspects of the marketing function. The role of marketing in identifying and developing demand for products and services and in facilitating the orderly movement of goods through the productive stages to consumers is examined in detail. The dynamics of demand, channels of distribution, competitive behavior, sales forecasting, advertising strategy, marketing measurement, and pricing and product development policies are among the subjects emphasized. The analytical tools of economics, behavioral science, and operations research are considered throughout the marketing concentration and the increasingly international character of marketing is recognized both through specialized offerings and within established courses. Elective courses enable the student to experience the full dimensions of the decision-making process in a marketing setting and to apply analytical methods to marketing problems and opportunities currently before marketing executives.

*Personnel Management.* The objectives of this concentration are the following: to develop an understanding of personnel administration as a management function and of its relationship to other management activities; to familiarize the student with the policies, methods, and techniques utilized in the process of personnel administration; to develop the capacity to analyze personnel problems, select the most effective means of dealing with them, and plan appropriate courses of action; and to explore current trends and research in the field of personnel administration and human relations. Courses and seminars in this field deal with such topics as motivation, supervision, communications, selection, training, compensation, discipline, performance review, promotion, transfer, development, safety, and employee services and benefits. In addition to the courses and seminars in personnel management and human relations offered by this School, students interested in this field may also take advantage of a wide range of graduate courses related to personnel management in other divisions of the University. Of particular note are

the graduate courses of the School of Industrial and Labor Relations in collective bargaining, labor union history and administration, industrial training, labor market economics, industrial psychology, selection and placement, social security, wage and salary administration, job analysis, and human relations.

*Production and Operations Management.* This concentration is designed to provide a thorough comprehension of the major economic problems of production and operations management, together with the analytical techniques most effective in their solution. Courses deal with such topics as process and equipment selection, product planning, aggregate production and work-force scheduling, production and inventory control, distribution systems, project control, job-shop scheduling, and quality control. Students develop an understanding of the effectiveness and the limitations of analytical techniques such as linear programming, classical methods of optimization, dynamic programming, computer simulation, critical path methods, heuristic programming, and statistical analysis. Students interested in this field are encouraged also to take course work in the closely related areas of managerial economics and quantitative analysis.

*Quantitative Analysis for Managerial Decision Making.* This concentration is designed to develop skill in the use of mathematics and statistics for solving managerial problems. Work in this field is offered by the School in cooperation with the School of Industrial Engineering and Operations Research of the College of Engineering, and several courses are given jointly. Students electing this concentration may develop programs, with the assistance of their advisers, which include courses drawn from the School's offerings in operations research, computer applications to business, and managerial economics. They may also elect courses in other parts of the University, including the Departments of Mathematics and Economics in the College of Arts and Sciences and the School of Industrial Engineering and Operations Research. The facilities of the Computing Center are available for the use of students both in course work and in approved research projects.

*Transportation.* For students interested in careers in transportation, courses are offered, normally for second-year students, in the special features of transportation activities. With respect to railroads, motor carriers, airlines, and shipping firms, emphasis is placed on the features of pricing, service, operations, organization, finance, and public policy

peculiar to each. Students take advanced work in supporting business subjects and in the field of public regulation of industry.

*Special Programs.* In addition to the fields of concentration noted above, special concentrations may be developed to meet a student's needs in other aspects of business administration, such as *Agricultural Management* and *Organizational Theory and Behavior*.

## Public Administration

The objective of the graduate program in public administration at Cornell is to prepare its Master's degree candidates for effective participation in public affairs. The fulfillment of opportunities existing in American society and the solving of problems that plague it represent crucial challenges to public policy. The responses to these challenges by public agencies depend upon their being led by trained personnel who can create and execute effective policies, analyze and evaluate complex ends-means relationships, and work within a political environment.

The M.P.A. curriculum is designed for young men and women who seek the knowledge and skills which are requisites for professional achievement as public employees or in such private capacities as consultants. The curriculum combines study in essential areas of administration, economics, and politics with elective concentrations that draw upon a wide range of relevant graduate study fields. Individuals are thus prepared for their initial postgraduate job. At the same time, they are provided with the appropriate intellectual foundation for long-term performance and development that may span various types of employment at national, state, local, or international levels. Study alternatives enable individuals to focus on policy areas as diverse as urban affairs and overseas economic development, on staff functions such as financial and budgetary analysis, or on combinations of both.

Education for a career in public affairs should provide the student with an awareness of the political processes of representative government and an appreciation of the decision-making and managerial processes of public agencies. It should also equip him with an understanding of the broad spectrum of public policy issues and a thorough knowledge of the intricacies of at least one major public policy area. Finally, it should develop in the student the analytical ability which is essential to successful policy formulation and execution.

## The Core Program in Public Administration

A large portion of the first year of study for the M.P.A. is devoted to completing a series of core courses in organizational theory and behavior, managerial accounting, quantitative methods, computer programming, economic analysis for management, and analysis of environmental issues. All candidates for the public administration degree will also take courses 130, National Government: Institutions, Processes, Problems; 131, Operations of the Intergovernmental System; 132, The Administrative Process; and a course in business-government relations. (For a list of the other courses which fulfill this requirement, see p. 35.) The structure of the first-year curriculum is indicated on the chart below, and detailed descriptions of the core courses are presented on pp. 33-39. These core courses introduce the student to the several disciplines essential to the practice of public administration and provide him with the basis for advanced work in his particular field or fields of interest.

### FIRST-YEAR PUBLIC ADMINISTRATION PROGRAM

Fall Semester	Spring Semester
120. Organization Theory and Behavior	131. Operations of the Intergovernmental System
122. Managerial Accounting	132. The Administrative Process
123A. Quantitative Methods for Management I      123B. Introduction to the Computer	123C. Quantitative Methods for Management II
124. Economic Analysis for Management I	125. Economic Analysis for Management II
129. Issues in the Environment	Elective

## Work beyond the Core

During his first year the M.P.A. candidate may enroll in an elective course in his special field or fields of interest, and during his second year, with the exception of the four requirements noted just above, his entire program may be made up of courses selected according to his particular career focus and needs. In addition to the courses offered by this School in public administration, public policy, and related fields, the student's elective program often involves work in the foreign area study programs, the Department of City and Regional Planning of the College of Architecture, Art, and Planning; the School of Industrial and

Labor Relations; or in various departments of the College of Arts and Sciences.

As an important complement to their academic work, public administration students are strongly urged to obtain employment in public agencies during the summer between the two years of the M.P.A. program. The School's faculty and staff assist the student in finding a summer position which relates closely to his career plans. The experience provided by such employment has been found most helpful in contributing to a thorough understanding of the nature of governmental operations, in developing a focus for the student's second-year program, and in guiding his career choice.

To assist the student in developing a purposeful pattern of courses for his work beyond the core program, the following fields of concentration have been defined:

*Economic Analysis and Public Policy.* This concentration prepares students for careers on the economic staffs of federal, state, or local governmental agencies. Varying emphases are possible. A student may focus his attention on monetary and fiscal policies and their roles in contributing to high levels of employment, price stability, economic growth, and a satisfactory balance-of-payments picture. Alternatively, he may specialize in problems in the public regulation of business enterprise or in the field of economic planning at the national or community level. Students electing this concentration often take some of their work in the Department of Economics in the College of Arts and Sciences, and they may also enroll in courses offered in other parts of the University.

*General Public Administration and Policy Formulation.* This concentration recognizes the continuing need for broad-gauged administrators who are characterized not by a high degree of specialization in a single field but rather by a comprehensive understanding of the nature of governmental operations. Organizational theory, management analysis, policy formulation, and decision theory are emphasized. The student is prepared for work in general administration or in budget analysis or organization and methods (O&M) analysis.

*International Development.* Designed for students interested in careers with international agencies and governmental activities abroad, this concentration is built on a wide range of international courses throughout the University, including offerings of this School. In addition to the



School's courses in the theory of the developmental process, development administration, contemporary nationalism, and American operations abroad, work may be taken in international economics, agricultural economics, rural sociology, anthropology, and government. Credit may be given for advanced work in language, and students interested in public service abroad are urged to develop a fluent knowledge of one foreign language.

Cornell University's interest in the field of international development is reflected in several campus programs and overseas commitments. Cornell's Center for International Studies administers a substantial Ford Foundation grant for the support of international studies, brings distinguished visitors to the campus throughout the year, and arranges frequent seminars and discussions on international affairs. The University offers programs in Southeast Asian, South Asian, Chinese, and Latin American studies, and National Defense Education Centers have been established in support of these area programs. Work is also offered in African and Soviet studies, and there are special programs in International Population and International Agricultural Development. The University administers several government contracts and foundation grants involving the development of research and teaching institutions overseas. (Students interested in this field should consult pp. 46-49 and 89 and refer to the discussion of International Business Operations on p. 21.)

*Metropolitan and Urban Affairs.* The emergence of large urban and metropolitan areas as the dominant environmental pattern in the United States has posed urgent challenges for public administrators at all levels of government. This concentration is concerned with challenges as broadly varying as civil rights, mass transportation, and health care. It also deals with the new tools and approaches which are being developed to contend with urban issues. Students select their advanced courses not only from this School but also from courses presented in the Department of City and Regional Planning and in other parts of the University. This concentration prepares students for work in urban planning and policy staffs, urban renewal operations, city management, or state and federal agencies concerned with urban problems.

*Organizational Theory and Behavior.* Here the student focuses his attention on the theory of bureaucratic organization, the application of the behavioral sciences to the field of public administration, and the interrelationships of politics and administration. Students interested in

careers in government, politics, or research and consulting will find highly relevant new theoretical concepts and analytical approaches. Group dynamics, group problem solving, and the different methods of employee accommodation to large-scale organizations are but three of the many areas studied in which empirical research has enriched the literature of management.

*Special Programs.* In addition to the fields noted above, special concentrations may be developed to meet a student's needs in other aspects of public administration or public affairs. For example, a concentration may be arranged in *National Security Administration*, which includes work in civil-military relations, coordination of defense and foreign policy, coordination of the separate military services and functions, and the interdependence of national security and domestic policy. Special concentrations may also be developed in *Science, Technology, and Public Policy* and in other fields as well.

## Hospital and Health Services Administration

Great changes are taking place in systems and facilities for the provision of medical care in the United States. These changes are accompanied by a manpower shortage in many health fields, and there are challenging careers ahead for men and women entering the fields of hospital and medical care administration, mental health services administration, and health planning.

With the aid of a substantial grant from the Alfred P. Sloan Foundation, the Sloan Institute of Hospital Administration was established as an integral part of the Graduate School of Business and Public Administration in 1955. Since that time a two-year Master's degree program has been offered for students interested in administrative and planning careers in the health field. Students may enter this program as candidates for either the M.B.A. or the M.P.A. degree.

The first academic year, which is illustrated in the following chart, includes those core courses which are common to both the M.B.A. and the M.P.A. program. In addition, health administration students take an introductory course in hospital and medical care organization and in clinical medicine and public health concepts. Health administration students who are candidates for the M.B.A. are required to take the core courses in finance and business policy but not in operations management or marketing. Candidates for the M.P.A. are required to take the

course in issues of public policy and administration, which is required of all M.P.A. candidates, but not the two-term sequence in management of public agencies. All health administration students who are candidates for the M.B.A. are required to complete at least one course concerning questions of business-government relations. Course 458, Health and Welfare Policy: Foundations and Strategies, meets this requirement.

### FIRST-YEAR HEALTH ADMINISTRATION PROGRAM

Fall Semester	Spring Semester
120. Organization Theory and Behavior	Elective
122. Managerial Accounting	140. Introduction to Hospital and Medical Care Organization
123A. Quantitative Methods for Management I	123B. Introduction to the Computer
124. Economic Analysis for Management I	123C. Quantitative Methods for Management II
129. Issues in the Environment	125. Economic Analysis for Management II
	141. Introduction to Clinical Medicine and Public Health

In addition to the introductory core courses for students in this program, a substantial range of additional courses relating to hospital and health services administration is available in the School. Subjects covered by these courses include health economics, quantitative models in the health field, evaluation of community health services, legal aspects of hospital administration, policy and planning in hospitals and health agencies, mental health and administration, sociology of community health care, seminar in health research, political economy of medical care services, and the health planning process. The elective course of the first year and much of the student's second-year program will be devoted to these.

A concentration leading to careers in comprehensive health planning is also available. In addition to the core requirements listed on p. 38, students taking this new concentration must also elect one approved course in each of six content areas. These areas are: demography-ecology, social organization and change, political processes, planning processes, mental and environmental health, and community health planning.

The summer between the two academic years is devoted to an administrative residency. With the cooperation of the New York Hospital-Cornell Medical Center, residencies are arranged in selected hospitals

and other health care agencies in the New York City area where the student can gain experience under the guidance of particularly well qualified administrators. In order to provide further direct contact with the nature of hospital operations and health affairs, frequent field trips are made both to nearby hospitals and community health agencies.

*Note:* A special brochure entitled *Graduate Study in Hospital and Medical Care Administration at Cornell* may be obtained by writing to the Sloan Institute of Hospital Administration, Graduate School of Business and Public Administration, Malott Hall, Ithaca, New York 14850.

## Law and Administration

The School offers a combined program with the Cornell Law School in legal and administrative studies, in which the student may obtain the Master's degree, in either Business or Public Administration, and the J.D. degree in four years instead of the five which would be required if each were taken separately. This combination is of interest to students preparing for careers in such areas as tax accounting, corporation law, or legal practice in government.

Normally, the first year's work is taken entirely within the Graduate School of Business and Public Administration and the second entirely within the Law School. In the third year the work is divided between the two schools, and in the fourth year it is taken entirely within the Law School. The student completes the requirements for the Master's degree at the end of the third year and the requirements for the law degree at the end of the fourth.

A student, to be admitted to the full combined program, must meet the admissions requirements of both schools. He should apply for admission to both schools and be accepted by their respective admissions committees prior to entrance into the first year of the program. A student who decides to apply for the program after starting his residence in the Graduate School of Business and Public Administration should discuss his plans with both schools as soon as possible. No assurance can be given, however, that such a student will be permitted to undertake the combined program.



### III. THE CURRICULUM

In the following pages the courses offered by the School are listed and described. Core courses are listed first. Elective courses are then presented under the following headings: accounting, business law, finance, hospital and health services administration, international business and development, managerial economics and economic policy, marketing, organizational behavior and personnel, production and operations management, public policy and public administration, quantitative analysis, information processing, transportation, miscellaneous, research, and service courses.

Only those courses which are offered by the Graduate School of Business and Public Administration are described here. The student should note, however, that there are many courses in other portions of the University—including the Departments of Economics, Government, Psychology, and Sociology in the College of Arts and Sciences, the School of Industrial and Labor Relations, the School of Industrial Engineering and Operations Research in the College of Engineering, and the Department of Agricultural Economics in the College of Agriculture—which may be of interest to him. For information on the nature and content of these courses, the student should consult the *Announcements* of these other schools and colleges of Cornell.

#### The Core Program

##### All Students

120. ORGANIZATION THEORY AND BEHAVIOR. First term. Credit three hours. Mr. Lodahl, Miss MacColl, Mr. Smith, and Mr. Kover.

Theories and empirical research on human behavior in business, public and medical care organizations are studied, and their management applications are explored. Problems of internal structure are examined, such as specialization and division of labor, hierarchy and authority, informal organization, and structural variations in organization. Dynamics of organizational behavior are also treated under such topics as leadership and supervision, motivation and the social structure of work groups, and communication and control processes. The course is presented through readings and through discussion of theory and empirical research.

122. **MANAGERIAL ACCOUNTING.** First term. Credit four hours. Messrs. David A. Thomas and Hofstedt.

In the first part of this course the principles and procedures underlying financial statements are introduced. Financial transactions are studied and alternative accounting treatments are analyzed. Tools for analysis of financial statements and the uses and limitations of ratios and other quantitative measures are introduced. The second part of the course concentrates on accounting information useful for managerial action. The objective is to develop an ability to recognize the uses and limitations of the accounting information available to management, and to apply the information in decision situations.

123A. **QUANTITATIVE METHODS FOR MANAGEMENT I.** First term. Credit two hours. Messrs. Kinard and L. Joseph Thomas.

This course is designed to introduce the student to the basic mathematical and statistical methods that are becoming increasingly useful to the manager. The mathematical topics covered in the first semester are elementary functional relationships, differential and integral calculus, and an introduction to probability theory.

123B. **INTRODUCTION TO THE COMPUTER.** First term. Credit one hour. Mr. Kinard.

This course introduces the student to the computer through instruction using a simple programming language. Exercises and problems requiring use of the computer are employed.

123C. **QUANTITATIVE METHODS FOR MANAGEMENT II.** Second term. Credit three hours. Mr. Dyckman.

This course is oriented toward decision making, stressing the Bayesian approach. Emphasis throughout is placed on the logic of the various quantitative approaches and on their integration and application to management problems.

*Note:* In order to fulfill the core requirement for quantitative methods for management, students may substitute course 600, Introduction to Probability Theory, for course 123A, and course 601, Introduction to Statistical Theory, for course 123C. These courses are described below under the "Quantitative Analysis" heading.

124. **ECONOMIC ANALYSIS FOR MANAGEMENT I.** First term. Credit three hours. Mr. Tollison.

This course investigates the structure and operation of the American economic system. Attention is given to the role of market structures and the price system in the allocation of resources, but the primary focus is on the determination

of national income and employment, the maintenance of high levels of economic activity, and the stimulation of economic growth without inflation. Monetary and fiscal policies are studied with particular reference to their institutional settings, their impact on the business community, and the limitations imposed by considerations of the balance of payments. Throughout the course emphasis is placed on the effects of economic and public policy changes on the business firm and the ways in which businessmen may adapt to such changes.

**125. ECONOMIC ANALYSIS FOR MANAGEMENT II.** Second term. Credit three hours. Messrs. McAdams and McClain.

The purpose of this course is to explore the ways in which the economic analysis of data, internal and external to the firm, may improve management decision making. Economic problems associated with the formulation and administration of business policies are explored. Attention is given to the effects of price and income changes on product demand and factor supply, the use of forecasts, the study of price and product policies in imperfect market structures under conditions of uncertainty and risk, and the direction of capital investments. Opportunity cost and incremental analytical techniques are employed to help identify relevant costs for various decisions. Both quantitative and qualitative tools of analysis are studied. Case analyses provide a basis for applying the concepts encountered to specific administrative problems.

**129. ISSUES IN THE ENVIRONMENT.** First term. Credit three hours. Messrs. Bent, Brown, Carter, Kelman, Kover, and Miss MacColl.

In the first part of this course, students are confronted with major ideologies which have shaped and are shaping the institutions of American society. Basic assumptions of the radical, liberal, and libertarian schools of thought are presented. The nature of these ideologies is further explored by working out their analyses of current societal problems: pollution, law and order, housing, race, and other similar issues. Emphasis is placed on recognizing value assumptions which underline various approaches to social issues and the logical consequences of these assumptions. No particular school of thought is espoused; rather, the student is encouraged in the development of his own. In the second part of the course, cases and case discussions are used to develop the student's analytical ability in unstructured problem recognition and definition. The cases used involve major issues in contemporary American society. Emphasis on analysis and significance of individual and institutional values is continued.

*Note:* In addition to the seven courses listed above, all students—regardless of their degree candidacy—will be required to complete at least one course concerning questions of public policy and business-government relations. Selection may be made from the following: 202, Business Enterprise and Public Policy; 377, Competitive Behavior and Public Policy, both described in the section on “Managerial Economics and Economic

Policy"; 305, Federal Taxation and Decision Making, described in the section on "Accounting"; 575, Transportation: Rates and Regulations, described under the "Transportation" heading; and 458, Health and Welfare Policy: Foundations and Strategies, listed under "Hospital and Health Services Administration."

## M.B.A. Candidates

126. **MARKETING.** Second term. Credit three hours. Messrs. Edelstein and Rao.

This introductory course is designed to acquaint the student with the perspectives and problems of the marketing manager and the role of marketing in the multiproduct business firm. The course is divided into two sections. The first is concerned with the environment of the firm, including the economic, sociological, psychological, and demographic factors affecting demand; marketing institutions; and government-business relations. The second deals with the management problems of product planning, channels of distribution, pricing, promotion, and competitive strategy. In approaching the solution to these problems, attention will be directed to the contributions of the social sciences, marketing research, and management science.

127. **OPERATIONS MANAGEMENT.** First and second terms. Credit three hours. Messrs. L. Joseph Thomas and McClain.

This course introduces major economic decision problems of production and operations management: selection and configuration of facilities, size and location of plants, aggregate production and work-force scheduling, multiplant allocation of product, large-scale project control (PERT), job design, production standards, production and inventory control, quality control, and short-run job-shop scheduling. Problems are analyzed through the use of traditional intuitive rules, schematic methods, incremental analysis, differential and integral calculus, linear programming, computer simulation, heuristic programming, and critical path methods. Emphasis is placed on the effectiveness and the limitations of quantitative techniques in the decision-making process. The inter-action of production problems with those of other functional areas is also considered.

128. **CORPORATE FINANCIAL MANAGEMENT.** Second term. Credit three hours. Messrs. Bierman, Hass, and Stone.

The student is introduced to the principles and practices of business finance by developing theory and analyzing cases applying that theory. The first section of the course deals with the analysis of financial information and the problems of managing and financing short-term assets. The following section considers the cost of different long-term financing instruments and the effect of the mix of these securities employed on the entity's cost of capital. The interaction

between the financing and investment decision is then explored. Other topics covered are the buy-lease decision, dividend policy, and investment risk analysis. *Prerequisites:* courses 122 and 123A or the equivalent.

**200. BUSINESS POLICY.** First term. Credit four hours. Mr. Jones.

This is an integrating course which examines the role of the chief executive in policy formulation and administration. Through analysis of cases, the student is encouraged to develop a useful approach to the formulation and advocacy of business policy. Early in the course, attention is directed to sizing up situations, formulating policies, discovering opportunities, assessing risks, and planning programs of action. The focus then shifts to organizing administrative personnel and putting plans into action. Next, a series of cases is explored which emphasizes problems of measuring, controlling, and motivating administrative personnel. The cycle is completed by considering follow-up and reappraisal of policies formulated earlier. The course concludes by examining some of the additional dimensions which grow out of international operations and consideration of public responsibility. *Prerequisite:* open to second-year M.B.A. students and to others with consent of the instructor.

## M.P.A. Candidates

**130. NATIONAL GOVERNMENT: INSTITUTIONS, PROCESSES, PROBLEMS.** First term. Credit three hours. Mr. Rettig.

This course consists of two major elements. First, it considers the major institutions of the federal government—President, Congress, public agency—and the central processes which link them together, articulation and representation of the public interest, formulation of policy, resource allocation, and implementation of policy. Second, it seeks to evaluate critically the effectiveness of federal government performance in policy implementation, especially as the national government interacts with the federal system in domestic social policy.

**131. OPERATIONS OF THE INTERGOVERNMENTAL SYSTEM.** Second term. Credit three hours. Mr. Flash.

As a complement to courses 130 and 132, this course is designed to provide the student with an essential understanding of the operating nature of American federalism. It explores the relationships between the policies and programs of federal, state, and local institutions. Intensive analysis is made of the political, administrative, and substantive forces that influence the relationships and that determine the specifics of such developments as revenue sharing, decentralization of decision making and operations, and the emergence of regional organizations. Within the context of urban growth, consideration is given to planning, program analysis, and budgeting. Where appropriate, intergovernmental relationships operating in actual cases or situations are examined.

132. THE ADMINISTRATIVE PROCESS: PROBLEMS OF ADMINISTRATION IN A DEMOCRACY. Second term. Credit three hours. Mr. Bent and Miss MacColl.

This course views American administration from the perspective of the administrator. Beginning with democratic and organization theory as applied to the public sector, it goes on to consider problems of responding to and acting upon the external environment (social, governmental, and political) and such internal management problems as information handling and decision making, financial management and control, manpower utilization and employee relations.

*Note:* Candidates for the M.P.A. degree must complete a course in business-government relations. (For a list of courses which fulfill this requirement, see *Note*, p. 35.)

## Hospital and Health Services Administration Students

140. INTRODUCTION TO HOSPITAL AND MEDICAL CARE ORGANIZATION. Second term. Credit three hours. Mr. Battistella.

Health services are described and analyzed against the backdrop of recent political, social, and economic developments in the United States and Western Europe. For purposes of organization and understanding of forces for change, health services are viewed as a social system—the Medical Care System—organized along structural-functional lines. Alternative methods of organizing and financing health care services are examined in an effort to evaluate the capacity of the medical care system to respond to pressures generated by changing disease patterns and rising expectations for medical care. The roles and responsibilities of various institutions and professional groups are examined, with particular emphasis on the hospital as the central institution in the provision of community medical care. The process of community planning for health and welfare services is studied, and the relationship of the hospital to that process is analyzed.

141. INTRODUCTION TO CLINICAL MEDICINE AND PUBLIC HEALTH. Second term. Credit three hours. Dr. Samson.

This course familiarizes the student with the principal diseases of modern life and demonstrates how these conditions are controlled in individuals and in communities. Major emphasis is given to those conditions which directly affect the management of hospitals. Consideration is given to the training of physicians, medical and surgical specialists, nurses, and other personnel; the nature of specialized hospital equipment and other facilities for diagnosis and treatment; and the principal procedures used by physicians in diagnosis and treatment in hospitals and in their offices. Major public health problems of various parts of the contemporary world are discussed, and visits are made to nearby hospitals and medical centers at appropriate points in the course.

*Note:* Hospital administration candidates for the M.B.A. are expected to enroll in course 128, Finance, and course 200, Business Policy, but not in marketing or operations management.

Hospital administration candidates for the M.P.A. must complete a course in business-government relations. (For a list of courses which fulfill this requirement, see *Note*, p. 35.)

## Elective Courses

### Accounting

300. INTERMEDIATE ACCOUNTING. First term. Credit three hours. Mr. Hofstedt.

This course involves a review of accounting concepts and procedures with particular emphasis on the reasoning behind methods of measuring and recording such items as depreciation, inventory flows, and revenues. The implications of accounting theory and practice for the measurement of income and financial positions are investigated. The uses and limitations of accounting data presented in published financial reports for financial analysis, including ratio analysis, are considered. The course gives the student an opportunity to study the concepts of financial accounting in the context of current issues and practices. *Prerequisite:* course 122 or equivalent.

301. ADVANCED FINANCIAL ACCOUNTING. Second term. Credit three hours. Mr. Hofstedt.

This course, a continuation of course 300, also deals with advanced topics of financial accounting. Among the specialized situations covered are consolidated statements, multinational operations, and price level changes. The student is encouraged to develop an ability to cope with a variety of different situations requiring evaluation and reporting of financial results. *Prerequisite:* course 300 or consent of the instructor.

302. COST ACCOUNTING. First term. Credit three hours. Mr. Kinard.

This course concentrates on the controller's function in the decision-making activities of the firm. Attention is given to cost analysis, cost information systems, and cost reports as they are relevant to the decision-making process. Topics covered include responsibility accounting, break-even analysis under uncertainty, capital budgeting, joint costs, and PERT-cost and relevant costing. *Prerequisites:* courses 122, 123A, B, C, 124, and 125 or consent of instructor.

303. SEMINAR IN FINANCIAL POLICY AND MANAGERIAL ACCOUNTING. Second term. Credit three hours. Mr. Bierman.

This course deals with a variety of problems of managerial decision making. Many of the situations involve the use of accounting information and internal

reporting systems (and measurement techniques). A large portion of the course is concerned with capital budgeting decisions (evaluating investment proposals) and financial policy decisions. The financial decisions are approached (where feasible) from a model building analytical point of view. Among the financial decisions considered are dividend policy, credit, cash management, stock reacquisitions, stock options, warrants, cost of capital, and capital structure. *Prerequisite*: open to second-year students only.

**304. SEMINAR IN FINANCIAL ACCOUNTING.** Second term. Credit three hours. Mr. Bierman.

This course is concerned with the theory of income determination and asset and liability measurement. Economic concepts of income and problems of measurement are explored with reference to their applicability to the manager and financial analyst. *Prerequisite*: course 300 or consent of the instructor. [Not offered in 1970-71.]

**305. FEDERAL TAXATION AND DECISION MAKING.** Second term. Credit three hours.

This course deals with three aspects of federal taxation: the major provisions of the internal revenue code, the impact of the code on business decision making, and public policy considerations. Emphasis is given to the taxation of individuals and corporations. Financial and tax accounting procedures are contrasted. *Prerequisite*: course 122 or equivalent.

## Business Law

**308. LAW OF BUSINESS ASSOCIATIONS.** First term. Credit four hours. Mr. Bugliari.

This course is an introduction to the basic purposes and logic of the law as it applies to business enterprises and their operations. The fields of personal property, contracts, agency, partnerships, corporations, and real property are emphasized. A combination of text and case study is used. The course is required of all students in professional accounting and is strongly recommended for students whose area of specialization is finance.

**309. ADVANCED BUSINESS LAW.** Second term. Credit four hours. Mr. Bugliari.

This course considers the law pertaining to bailments, sales, secured transactions, bankruptcy, negotiable instruments, insurance, and trusts and estates. Both text and case materials are employed. *Prerequisite*: course 308 or consent of the instructor.

## Finance

426. FINANCIAL MANAGEMENT. First term. Credit three hours. Mr. Stone.

This course is taught from the viewpoint of various financial officers of the firm including the treasurer, controller, financial planner, and members of the financial staff. It consists of a mixture of readings, cases, and lectures; the use of quantitative methods is emphasized. Topics include problems in the areas of capital structure, merger and acquisitions, forecasting, working capital management, and the effects of taxation on corporation decision making. *Prerequisite:* course 128.

427. INVESTMENT MANAGEMENT. Second term. Credit three hours. Mr. Stone.

Emphasis in this course is on methods of security analysis, including both technical and fundamental analysis. A variety of quantitative techniques to aid the investment manager are surveyed. The development of investment plans for various classes of investors is considered, and investment performance criteria are developed and analyzed for mutual, trust, and pension funds. Risk analysis is treated. Other topics include the organization and functioning of underwriting firms, methods of security distribution, the operation of security markets, brokerage activities, investment counseling, and investment trust management. *Prerequisite:* course 128.

428. THE PUBLIC ECONOMY. Second term. Credit three hours. Mr. Tollison.

This course deals with various microeconomic problems in public finance and nonmarket decision making. Primary attention is given to the general theoretical problems of public goods and externalities, the impact of fiscal institutions on fiscal choice, and economic theories of democratic process. *Prerequisite:* consent of the instructor.

429. THE ECONOMICS OF SECURITIES MARKETS. First term. Credit three hours. Mr. West.

This course analyzes the institutions and operations of securities markets in the United States. Specific topics covered include: 1) the analysis of the mechanisms by which securities markets bring buyers and sellers together, establish prices, and execute transactions; 2) the determinants of transactions costs; 3) the relationship between speculative activities and securities price movements; and 4) the behavior of stock market prices. Particular emphasis is given to the markets for corporate equities, United States government securities, and municipal bonds. Most analyses are presented in the form of a simple non-computerized simulation model. *Prerequisite:* course 128.

430. MONEY AND BANKING. Second term. Credit three hours. Mr. West.

Monetary factors influencing the level of national income, the rate of interest, and the price level are examined in this course. The traditional roles of com-

mercial banks, the Federal Reserve, and the Treasury in affecting the demand and supply of money are investigated. Attention is focused on the extent to which growth of nonbank financial intermediaries and recent international monetary developments have altered these roles. Issues in the formation of policies for monetary stabilization are studied.

**433. SEMINAR IN ORGANIZED MARKETS.** First term. Credit three hours.

Organized markets are those in which buying and selling are done only by professionals acting as brokers or trading for their own account. Examples are the New York Stock Exchange, the Chicago Board of Trade, and the government bond market. This course offers a comparative study of several such markets, considered as economic institutions. Examples of topics that may be considered are the economic and historical conditions under which organized markets originate, reasons for differences in institutional structure among such markets, the role of professionals who trade for their own account, factors determining the demand and supply of liquidity, transaction costs, government regulation of organized markets, the random walk theory, and the response of market participants to new information. Except incidentally, the course does not consider methods of estimating the intrinsic value of the assets traded on such markets. Students are expected to become thoroughly familiar with the institutional arrangements of at least one organized market and to prepare a seminar report on at least one topic or problem common to several organized markets. *Prerequisite:* consent of the instructor. [Not offered in 1970-71.]

**434. CURRENT PROBLEMS IN CORPORATE FINANCE.** Second term. Credit three hours. Mr. Smidt.

The objective of this course is to provide students with experience in applying theoretical concepts of finance and analytical techniques to a series of important problems in corporate finance. The course relies heavily on the use of comprehensive cases presented by members of the faculty and actual business problems presented by visitors working in the field of corporate finance. The problems considered are drawn from the areas of capital budgeting, working capital management, short-term financing, capital structure analysis, dividend policy, and mergers and acquisitions. *Prerequisite:* course 128.

## Hospital and Health Services Administration

*Note:* The two core courses offered in this field are listed and described on p. 38.

**142. THE SOCIAL PSYCHOLOGY OF HOSPITALS.** Second term. Credit three hours. Mr. Smith.

The aim of the course is to provide future administrators, planners, and researchers with skill in analyzing the human problems in hospitals, a knowledge

of the social-psychological dynamics involved, and the sensitivity to deal with them intelligently. Specific topics include analysis of professionalism, role conflicts within the hospital, the sick role, illness behavior, and the management of institutional change. Some field work experience designed to enrich and reinforce the course content will be included.

**450. EVALUATION OF COMMUNITY HEALTH SERVICES.** First term. Credit three hours. Mr. Brown.

This course allows students the opportunity to apply their knowledge concerning the organization and provision of health services in an actual community setting. In cooperation with a community group such as a county health planning council, the students undertake an evaluation of the area's medical care services in relation to the comprehensive health needs of the population. A report is prepared, and students are afforded the opportunity to present their findings and recommendations to interested citizens in the community. Special attention is given to the methods of community health evaluation and new approaches to community health care delivery systems.

**451. PSYCHIATRIC INSTITUTIONS: ADMINISTRATION AND PRACTICE.** Second term. Credit three hours. Drs. Daly and Johnson.

The purpose of this course is to review with the student the current perceptions of, and prescriptions for, psychiatric problems. This is accomplished by an explication of the histories and philosophies of the care and cure of patients, an exposition of clinical syndromes, and an examination of the contemporary forms of treatment and practice in their institutional settings—the mental hospital (public and private), psychiatric units in general hospitals, outpatient clinics, private practice, community mental health centers, and in-programs of prevention. The contributions of diverse sciences, technologies, and arts to the organization of theory and practice are emphasized throughout the course.

**452. SOCIOPOLITICAL ASPECTS OF COMMUNITY HEALTH SERVICES AND PLANNING.** Second term. Credit three hours. Messrs. Battistella and Brown.

This course is designed to provide the student with an introduction to social and political theory and research useful for the formulation and delivery of community health services. The course emphasizes two major areas. The first concerns the significance of sociocultural and social-psychological factors for the initiation and utilization of health services. Specific topics covered include disease and its interpretation, sick role theory, volitional-stage patient behavior, and the role of health care facilities and treatment patterns in bringing about behavioral change. The second major area emphasized in the course is that of the structure and dynamics of community decision making and planning. Key topics in this area are community power structures and pathways to social change. Particular emphasis is given to the interrelationship between abstract concerns and practical affairs.

**453. LEGAL ASPECTS OF HOSPITAL ADMINISTRATION.** First term. Credit two hours. Mr. Bugliari.

This course introduces those principles of the law which are specifically applicable to hospitals. Topics considered include the liability of hospitals and their staff and personnel for injuries to patients, medical records and disclosure of information, consent to medical and surgical procedures, responsibility for the patient's personal property, collection of bills, medical staff privileges, pharmacy, labor law, and confidential communications.

**454. POLICY AND PLANNING FOR HEALTH CARE.** First term. Credit three hours. Mr. Van Ness.

This course examines the decision-making processes of health care, whether physical, mental, or environmental, as they relate to the development of public and private health policies. Comprehensive health planning as an instrument of change is described and analyzed within the context of contemporary health affairs. Attention is given to the interrelationships of policy and planning within the larger sociopolitical framework.

**455. SEMINAR IN HEALTH RESEARCH.** First term. Credit three hours. Mr. Smith.

The primary objective of the course is to increase the student's ability to evaluate research reports and other studies, to assess their relevance for the field, and to formulate his own problems in a manner conducive to scientific investigation. An examination is made of the contributions of the social sciences and other disciplines to an understanding of current problems in the health field and in hospital administration in particular.

**457. HEALTH ECONOMICS.** First term. Credit three hours. Mr. Kelman.

This course considers the provision of medical care as an economic activity. Individual, family, and national expenditures for medical care are studied in relation to the various factors which influence them, including supply and demand, unit costs, utilization rates, traditional and evolving patterns of distribution, and changing medical technology. Major emphasis is given to the problem of the rising costs of hospital care and to the actual and potential role of administration in helping to control them. The principles underlying commercial health insurance, nonprofit prepayment and service plans, and health programs under social security and public welfare are analyzed in detail. Government programs of health care in this country, existent and proposed, are analyzed and compared with experiences with similar programs in foreign countries.

**458. HEALTH AND WELFARE POLICY: FOUNDATIONS AND STRATEGIES.** First term. Credit four hours. Mr. Battistella.

The major objectives of this course are the identification and analysis of salient ideological currents influencing the development of social policy in the United

States and the construction of a framework for understanding and coping with complex policy issues. Health and welfare issues are seen as reflecting alternative solutions to the broader institutional problems of allocation (economics), control (politics), and normative behavior (morality). Because it serves to establish goal parameters and means of goal attainment, ideology is viewed as the main-spring force of institutionalized systems for the provision of health and welfare services. The basic tenet of the course is that health and welfare policy is deeply rooted in the value system of society.

459. POLITICAL ECONOMY OF MEDICAL CARE SERVICES. Second term. Credit three hours. Mr. Kelman.

This course examines the implications of the American political economic system in the delivery of medical care services in the United States. The first part of the course develops a neo-Millsian ideology of American political economic institutions. The second investigates in detail the American medical care system in light of the ideology developed in part I, and the final section analyzes ideology and the delivery of medical care in Cuba.

460. QUANTITATIVE MODELS IN THE HEALTH FIELD. First term. Credit three hours. Mr. McClain.

The course examines the potential application of quantitative methods in the health field. Particular attention is given to problems in the areas of hospital administration and comprehensive health planning. Class members will be expected to play an active role in discussions dealing with the abstracting of real situations into models for analysis and with interpretation of the results.

461. BIOMEDICAL RESEARCH AND DEVELOPMENT AND THE DELIVERY OF HEALTH SERVICES. First term. Credit three hours. Mr. Rettig.

This course deals with 1) the development, organization, and activity of the National Institutes of Health, with special attention to the politics of resource allocation; 2) the impact of NIH-funded biomedical research and development on medical schools and universities; 3) an intensive examination of two of the following current issues: the development of bioengineering, the development of artificial organs, and the social implications of modern genetics; and 4) the mechanisms linking research and development to delivery of health services.

462. SEMINAR IN HOSPITAL AND HEALTH SERVICES ADMINISTRATION. Second term. Credit three hours. Staff.

Employing a variety of methods (case studies, visiting scholars and practitioners, and field trips to regional health facilities), students will be given an opportunity to explore a number of major managerial-economic issues and topics associated with the administration of hospitals and health care agencies, for example, executive leadership in diffuse power settings, trade-off decisions in multiple

goal organizational settings, program planning and evaluation, managerial information systems, and externalities and social responsibility. To promote a better relationship between theory and practice, each student will be expected to complete a term project dealing with a management problem based on data from a health facility in central New York State.

464. FIELD STUDIES IN HEALTH ADMINISTRATION AND RESEARCH. First and second terms. Credit three hours. Staff.

Students interested in developing administrative and program planning research skills will be given an opportunity to evaluate an on-going phase of health care agency activity in the light of sound administrative practice and principles of good medical care. In planning and carrying out the research, students work closely with a skilled practicing administrator and with faculty of the Graduate School of Business and Public Administration.

465. SEMINAR IN COMPREHENSIVE HEALTH PLANNING. Second term. Credit three hours. Messrs. Riordan, DeFries, and Brown.

Designed especially for students in city and regional planning, sociology, and the Sloan Institute of Hospital Administration, this is an integrative seminar on comprehensive health planning. By focusing on contemporary issues the course attempts an interdisciplinary approach to the study of planning, organization, and delivery of health services and tries to demonstrate the relations between theoretical and practical aspects of comprehensive health planning. Social, economic, and political considerations of the health planning endeavor as well as technical and organizational developments are analyzed and discussed from a conceptual and pragmatic standpoint. Wherever possible, health planning comparisons with other countries are drawn from the literature.

*Note:* For requirements in the new concentration in comprehensive health planning see p. 30.

## International Business and International Development

624. INTRODUCTION TO INTERNATIONAL ECONOMIC RELATIONS. Second term. Credit three hours. Mr. Willett.

This course is designed to provide theoretical, empirical, and institutional knowledge necessary for an understanding of the operation of the international economic system and of major issues concerning the foreign economic policy of the United States. Topics covered include the theory of international trade and factor movements, commercial policy, regional economic integration and customs unions, balance-of-payments policy and the international monetary system, international aspects of economic development, and economic relations between the developed and developing nations. Particular attention this year will be given to the growing importance of the multinational corporation and

to current proposals for reform of the international monetary system. *Prerequisite:* course 124.

**625. INTERNATIONAL BUSINESS POLICY.** Second term. Credit three hours.

As a sequel to course 200, this course stresses the problems of planning and organizing worldwide operations. Utilizing business-policy concepts of strategy formulation and implementation developed in course 200, the student explores case problems in multinational companies. Discussion centers on general managers who coordinate all functional activities required for profit responsibility at either headquarters or subsidiary levels. The course affords the student an opportunity to gain further experience in applying the approaches developed in course 200 in situations rendered more complex by virtue of such additional considerations as exchange problems, tax policies, nationalistic pressures, and differences in language, currency, laws, and culture. Of particular concern is the difficulty of devising effective means of managing decentralized operations on a global scale. *Prerequisite:* course 200 or consent of the instructor. [Not offered in 1970-71.]

**627. AMERICAN BUSINESS OPERATIONS ABROAD.** First term. Credit three hours. Mr. Bent.

This is an introductory course in international business which surveys the various problems facing American business operated outside the United States. The topics of discussion include the effect of the overseas environment on American business, selected organizational and administrative problems of international business, and the impact of United States government policies and regional agreements on American overseas business operations. *Prerequisite:* course 120 or consent of the instructor.

**628. SEMINAR IN INTERNATIONAL BUSINESS AND ECONOMIC POLICY.** Second term. Credit three hours. Messrs. Bent and Willett.

This course brings to the campus fifteen to twenty business, banking, and government executives and academic experts to discuss operational aspects of international business, policies of the United States and foreign governments affecting international trade, and American development. The class meets two times each week; discussions with the guest lecturers are held on Monday and are followed later in the week by a critique and background preparation for the next week's lecturer. *Prerequisite:* consent of the instructor.

**629. ADMINISTRATION OF PUBLIC OPERATIONS ABROAD.** Second term. Credit three hours. Mr. Bent.

This course considers the politics and administration of United States government overseas operations. Specific attention is given to the Departments of Defense and State, the Agency for International Development, and the United States Information Agency. The planning, coordination, and evaluation of foreign aid policy are studied along with the role of Congress in determining

objectives and assessing results. Certain recipient countries are selected in order to study the problems of implementation and the effects of foreign aid on political, social, and economic development. *Prerequisite:* course 120 or consent of the instructor.

630. SEMINAR IN IDEOLOGY AND POLITICAL CHANGE (Government 545). Second term. Credit four hours. Mr. Ashford.

The philosophical and ideological roots of nationalist thought in developing countries are examined. Particular attention is given to the modification and elaboration of nationalism in response to the achievement of independence and the growing commitment to rapid development. The major approaches to the study of nationalism are critically examined. [*Not offered in 1970-71.*]

631. SEMINAR IN POLITICAL DEVELOPMENT AND SOCIAL CHANGE (Government 537). First term. Credit four hours. Mr. Ashford.

This seminar introduces problems of political and administrative reorganization in rapidly changing nations. Analytical problems of identifying trends and critical relationships are considered, and a critical assessment is made of several different approaches to generalizations about rapid change in developing countries. The seminar presents materials useful to students considering careers in United States public and private agencies overseas and international organizations and to those interested in research in developing countries.

632. SEMINAR IN ADMINISTRATION AND DEVELOPMENT. Second term. Credit four hours. Messrs. Ashford and Dotson.

This course is designed as a sequence to the seminar in the developmental process (course 631). It gives particular attention to several schemes for the analysis of administrative behavior in developing nations. The seminar considers the administrative problems resulting from increased functional specialization in both the public and private sectors of national affairs and also the problems of diffusing and decentralizing administrative chores to lower levels and over wider geographic areas. *Prerequisite:* course 631 or a comparable interdisciplinary course. [*Not offered in 1970-71.*]

633. COMPARATIVE PUBLIC ADMINISTRATION. First term. Credit three hours.

Public administration systems of the United States, England, and Turkey are analyzed with the use of political and sociological concepts. Typical predeterminants of modern bureaucracy are reviewed and used to determine the comparative level of administrative development in the societies concerned. The influence of selected social institutions and values on the bureaucracy in each country is determined, including such critical variables as the governmental system (for example, separation of powers), class structure, educational philosophy and system, attitudes toward authority, and stage of political and economic development. Students prepare papers analyzing the influence of such variables in one of the societies considered. [*Not offered in 1970-71.*]

635. THE ENVIRONMENT OF THE ECONOMIC ACTIVITY IN POSTWAR EUROPE (Economics 327). First term. Credit four hours. Mr. Hohenberg.

This course considers economic growth and change in postwar Europe, giving special emphasis to the business system and the role of the state. Topics taken up include the sources of economic growth; the role of management, labor, and consumers; planning vs. competition; integration and trade; liberalization; the impact of the United States; and regional development. The course concentrates on Western Europe. *Prerequisites:* economics 101, 102 or equivalent.

636. SPECIAL TOPICS IN INTERNATIONAL FINANCE (Economics 666). Second term. Credit three hours. Messrs. Levin and Willett.

This seminar, run jointly with the Department of Economics, provides a forum for discussion at an advanced level of selected topics in international finance. The student will be expected to present a paper on a topic of his choice within the fields of international and monetary economics. The selection of the topics to be covered will be flexible depending upon the interests of the participating students and faculty. In connection with the seminar a number of speakers will be brought to the campus to discuss recent policy and research developments. *Prerequisite:* consent of the instructor.

## Managerial Economics and Economic Policy

202. BUSINESS ENTERPRISE AND PUBLIC POLICY. Second term. Credit three hours. Mr. Hutchins.

This course is an integrating study of the interrelations among individuals, business firms, and governments in American society. It focuses attention on the problems of exercising socially responsible business leadership and on the nature and objectives of selected public policies impinging on business. The more important topics covered are management and the individual, or the philosophy of the business society; management's responsibilities to the organization, including certain problems of posture and practices; management's relations with rivals, especially problems of monopoly and competition and the antitrust laws; management's responsibilities to customers, particularly with respect to promotional practices; the special responsibilities of those businesses affected with a public interest, such as transportation companies; the unusual problems of managements entrusted with roles in the national defense, especially in connection with radical innovation and technological development; the positions of firms receiving subsidies designed to promote public objectives, such as shipping enterprises; and finally management's role in the foreign relations of the United States, particularly with respect to trade, investment abroad, and foreign policy. Lectures and cases are used.

375. ECONOMIC AND BUSINESS HISTORY. First term. Credit three hours. Mr. Hutchins.

This course focuses on the evaluation of economic organization and on the development of the role of the business firm therein. The primary emphasis is

on the U.S. since 1750, although some attention is given to earlier times and to European origins and developments. The analysis of the development of business organization, administration, and policy proceeds in part by means of historical case studies. Attention is paid to the relations between business policies and the rise and fall of firms and industries and to the interactions of business and public policies.

**377. COMPETITIVE BEHAVIOR AND PUBLIC POLICY.** First term. Credit three hours. Mr. Tollison.

This course is concerned with problems posed by public policies designed to assure acceptable market performance in the public interest. The focus of analysis is the formulation and administration of the antitrust laws in imperfect markets in the presence of dynamic change in industrial organizations and market structures. Attention is also given, on a more selective basis, to problems of public regulation of industry raised by important changes in their technological and competitive environment. Case analyses and class discussion are emphasized. *Prerequisite:* Open to second-year students and to others with consent of the instructor.

**379. ECONOMIC EVALUATION OF CAPITAL INVESTMENT PROJECTS.** First term. Credit three hours. Mr. Smidt.

This course deals with the economic evaluation of proposed capital investment projects. Theoretical literature and case studies of particular projects are considered, with a view to providing the student with a reasonable background for practical work in project evaluation and for independent research on the many unsolved analytical problems in this field. Illustrative of the topics considered are the following: the selection of the best project in a group of mutually exclusive alternatives, criteria for determining the total size of an investment budget, methods of allowing for uncertainty about project outcomes, and the effect on project selection of the financial environment in which an organization operates. Capital project evaluation is of practical significance to private business firms, to nonprofit organizations, and to local and national governmental bodies. The main analytical techniques apply with only slight modifications in all of these institutional contexts, and an analysis of the financial environment of any one type of institution requires a consideration of the inter-relationships among the various institutions. *Prerequisite:* Open to second-year students and to others with consent of the instructor.

**380. MANAGERIAL ECONOMICS WORKSHOP.** Second term. Credit three hours. Mr. McAdams.

This course, given by a group of interested faculty members, deals with topics of mutual interest to students and faculty as determined at the first organizational meeting of the course. The range of possible topics includes advanced approaches to investment analysis, specific studies and cases in the managerial use of regression analysis, dynamic programming as a management tool, break-

even analysis under conditions of uncertainty, an approach to pricing of computer time as an example of utility pricing, capital budgeting in nonprofit industries, methods of subsidization as influences on decision making, and Markov processes for analysis of management problems.

425. WELFARE ECONOMICS AND ECONOMIC WELFARE. First term. Credit three hours. Mr. Kelman.

This course seeks first to examine the area of welfare economics and second to investigate its appropriateness as a mode of analysis and a basis for policy formation. Topics in the first part of the course include welfare maximization, marginal cost pricing, and income distribution theory. In the second part of the course topics to be discussed include the social basis of economic wants, some topics in public finance theory, externalities, and oligopoly as a major instrument in the manipulation of both the supply and demand sides of the economic environment.

## Marketing

475. MARKETING OPERATIONS. First term. Credit three hours. Mr. Rathmell.

The administration of the marketing function is the main focus of this course. Organization, staffing and supervision, market potential determination and sales forecasting, coordination of marketing and other functions of the firm, and public regulation of marketing are the major topics considered. *Prerequisite*: 126 or consent of the instructor.

476. MARKETING RESEARCH. First term. Credit three hours. Mr. Edelstein.

Marketing research is concerned with the identification of information needs for marketing decisions and the subsequent data collection, analysis, and reporting techniques appropriate for various areas of application. Techniques include sampling, questionnaire design, experimentation, scaling, and the use of mathematical models. As part of the course requirements, groups of students conduct empirical studies which include all phases of a typical marketing research project. *Prerequisites*: courses 123 and 126.

478. ADVERTISING MANAGEMENT. Second term. Credit three hours. Mr. Hughes.

This course is designed to develop the student's ability to recognize advertising opportunities, to determine goals, to allocate advertising effort through the most efficient media, and to evaluate the effectiveness of this effort. Since this is a course in strategy, not in tactics, discussions of copy, layout, art, and typography are omitted. Reading assignments stressing concepts and methodology are followed by cases that provide an opportunity to apply advertising principles. The last third of the course includes discussions of the regulation of advertising, social and economic effects, and new developments such as advertising experi-

ments, mathematical models, and computer applications. *Prerequisite:* course 126 or consent of the instructor. [Not offered in 1970-71.]

480. MARKETING STRATEGY. Second term. Credit three hours. Mr. Rathmell.

This course considers the role of product, pricing, promotion, and channel and physical distribution in the development of a firm's integrated marketing program. The contributions of marketing research and operations analysis are stressed. Cases are used extensively to evaluate and compare alternative courses of action. Team reports are submitted to a business enterprise on problems of marketing strategy with which it is currently concerned. *Prerequisite:* course 126 or consent of the instructor.

481. SEMINAR ON CHANGE IN MARKETING. First term. Credit three hours. Mr. Rathmell.

This course is concerned with the effect of environmental change on marketing, innovation in marketing to meet external change, and long-term planning. Conventional theory and concepts are challenged concerning their relevancy. New approaches to demand, product mix, and organization are considered. *Prerequisite:* course 126 or consent of the instructor.

482. SEMINAR IN MARKETING AND THE MANAGEMENT SCIENCES. Second term. Credit three hours. Mr. Rao.

The purpose is to explore the present and future implications for marketing management of developments in the social and management sciences. Principal emphases are placed on improving understanding of the nature and complexity of marketing decision areas through examination of relevant quantitative models, developing criteria for evaluating the utility of such models and associated measurements for marketing management, and assessing the nature of interaction between the changing environment of marketing decision making and the continuing developments in the management sciences and computer-based information systems. Students are expected to assist in directing the seminar and are required to present papers or projects. *Prerequisites:* course 126 and consent of the instructor.

483. CONSUMER BEHAVIOR. First term. Credit three hours. Mr. Edelstein.

An interdisciplinary approach is used to achieve an understanding of the complexity of buying behavior and the purchase decision in both the consumer and industrial markets. The buyer is analyzed at the individual level in terms of learning, motivation, perception, and cognition. The social influences on buying behavior of family, reference groups, class, and culture are discussed, as are economic influences. Industrial buying behavior is considered in the context of organizational variables. Alternative recent models of the buying process are discussed, compared, and extended, providing a focus for the introduction of the concepts listed above. *Prerequisites:* course 126 or consent of

the instructor; parallel enrollment in (or prior completion of) course 476 is suggested.

**484. MULTIDIMENSIONAL MEASUREMENT AND SCALING.** First term. Credit three hours. Mr. Rao.

This seminar introduces the student to techniques for measuring and analyzing perceptions, attitudes, and preferences leading to behavior, particularly as observed in the marketplace. In addition to covering current linear multivariate models and nonmetric methods for scaling and data analysis, directions for new research in the field are explored. The participants as a group are required to design and implement a viable research project. In addition, every student is required to prepare a proposal for research design and analysis of any substantive problem of his interest. *Prerequisite:* consent of the instructor.

**485. PUBLIC AND SERVICE MARKETING.** Second term. Credit three hours. Mr. Rathmell.

This course is designed to apply accepted marketing concepts and practice to nonprofit private and public institutions and agencies. Additionally, the distinctive characteristics of service marketing are explored and the marketing of specific services (financial, health care, and utilities, for example), are considered. *Prerequisite:* course 126 or consent of the instructor.

## Organizational Behavior and Personnel

**121. PERSONNEL ADMINISTRATION AND HUMAN RELATIONS.** First and second terms. Credit three hours. Mr. Brooks.

The objective of this course is to develop an understanding of the policies, methods, and techniques, utilized in personnel management and human relations as management functions. Specific attention is given to problems of recruitment, selection, training, compensation, motivation, communications, service and benefit programs, performance evaluation, management by objectives, safety, discipline, and community relations. The capacity to analyze problems, select the most effective means of dealing with them, and plan appropriate courses of action is developed through case examples. Attention is also given to analysis of trends in personnel management.

**500. HUMAN RELATIONS IN ADMINISTRATION.** Second term. Credit three hours. Mr. Lodahl.

In this course a critical examination is made of the ideas and research findings underlying various approaches to human relations problems in complex organizations. The aim is to develop insights into the human and social elements of organizational behavior through both discussion and participation in classroom exercises. Topics covered include motivation and morale, perception and reactions to others, selection and appraisal, role behavior, communication, attitude measurement, organizational development and change, group dynamics, and

leadership. The relevance of recent research studies in these areas is discussed, and the class itself serves as a learning laboratory for some areas of interest. *Prerequisite:* course 120 or equivalent.

**502. ORGANIZATIONAL BEHAVIOR AND ADMINISTRATION.** First term. Credit three hours. Mr. Brooks.

Cases, concepts, and research findings in organizational behavior and administration are covered in this course. Human problems in administration, methods of diagnosing situations, group behavior, intergroup reactions, and organizational change are analyzed. *Prerequisite:* course 121.

**503. BUSINESS AND INDUSTRIAL PERSONNEL.** Second term. Credit three hours. Mr. Brooks.

This course is concerned with the advanced study of selected areas of personnel administration. The role of action research is stressed. Individual and group research projects are emphasized. In addition, readings, case studies, and guest speakers are utilized. *Prerequisite:* course 121. Enrollment limited to twenty-four students.

**902. SEMINAR IN ORGANIZATION THEORY.** First term. Credit four hours.

This course involves a systematic assessment of the current state of knowledge about complex organizations. The basic approach is interdisciplinary, but somewhat greater emphasis is placed on organizations as integrated structures than on organizations as environments for individual behavior.

**907. SPECIAL TOPICS IN ORGANIZATIONAL THEORY AND BEHAVIOR.** Second term. Credit three hours.

This course is devoted to an examination of the theory and practice of sensitivity (T-group) training as applied to a variety of organizational and educational settings. For a part of the term, use is made of various experimental methods of learning, including the T-group, participation-observation exercises, and other recent innovations in this type of training. During the remainder of the term the theoretical and practical issues underlying application of these methods are examined in detail. Participation of both Master's degree and Ph.D. candidates is welcomed.

*Note:* Students interested in this field may also elect course 451, *Psychiatric Institutions: Administration and Practice*, described on p. 43.

## Production and Operations Management

**525. PROBLEMS AND TECHNIQUES IN PRODUCTION MANAGEMENT.** First term. Credit three hours. Mr. L. Joseph Thomas.

Major economic decision problems in production management are examined. Various methods of analysis are used, including traditional intuitive rules, sche-

matic models, and quantitative techniques. Problem areas considered include size and location choices, process and equipment selection, aggregate production planning and scheduling, production and inventory control, distribution systems, project control, assembly-line balancing, sampling inspection and quality control, and process control. Techniques studied include calculus, linear programming and extensions, dynamic programming, computer simulation, critical path methods, heuristic programming, and statistical analysis. *Prerequisite*: course 127 or consent of the instructor.

**526. CASE STUDIES IN PRODUCTION AND OPERATIONS MANAGEMENT.** Second term. Credit three hours.

Case studies illustrating decision problems in production and operations management are analyzed with the use of techniques studied in prerequisite courses. Areas covered include aggregate scheduling, job-shop scheduling, equipment replacement, inventory and production control, and plant size and location. Students have team responsibilities for case analysis and presentation. Emphasis is placed on the awareness and resolution of difficulties encountered when one attempts to apply theoretical models to actual decision situations. *Prerequisites*: courses 127 and 525 or consent of the instructor. [Not offered in 1970-71.]

*Note*: Students interested in this field may also elect courses 602 and 604, Operations Research I and II, described on p. 58.

## Public Policy and Public Administration

**553. THE POLITICS AND ECONOMICS OF METROPOLITANISM.** First term. Credit three hours. Messrs. Carter and Tollison.

This course entails a study of the efforts and obstacles in coming to grips with the social, political, and economic problems of metropolitan areas. The course begins as a survey of metropolitan issues and concentrates on a series of selected topics using case materials. *Prerequisite*: consent of the instructor.

**554. SEMINAR IN URBAN GOVERNMENT AND ADMINISTRATION.** First term. Credit three hours. Mr. Flash.

Consideration of economic, sociological, and technological developments provides a background for an analysis of urban government operations and issues in an era of metropolitan growth and change. The following areas are studied: 1) the politics of urban government, 2) structuring and functioning of urban governmental institutions, 3) problems of reorganization, intergovernmental relations, and public leadership, and 4) governmental responses to critical issues such as urban renewal, transportation, integration, and education. For the future administrator, planner, and researcher, the course provides understanding of issues, patterns of analysis, and familiarity with relevant literature.

555. ISSUES OF PUBLIC POLICY AND ADMINISTRATION. Second term. Credit three hours. Mr. Flash.

This course, conducted as a seminar, is designed to permit the individual to integrate in a meaningful way the component parts of his overall M.P.A. program. Through extensive readings, case review, and field as well as library research, the individual can undertake intensive analysis of major questions of public policy. Such questions may be substantive or managerial in nature; they may be relevant to local, state, federal or international operations; and they may focus upon interactions among economic, technological, and political forces. Consideration can be given to such factors as executive-legislative-interest group relationships, bureaucratic politics, intergovernmental coordination and relationships between political leaders and professional experts. Presumably the student's analysis project is consistent with his elected concentration. Seminar sessions focus upon joint consideration and discussion of comparable aspects of individual or group projects. Faculty members serving as advisers to individual students provide guidance in the development of the seminar project and participate in selected seminar discussions. *Prerequisite:* enrollment limited to second-year M.P.A. degree candidates and, with the instructor's permission, Ph.D. candidates.

556. SEMINAR IN PUBLIC ADMINISTRATION. First term. Credit three hours.

The purpose of this seminar is to develop both an understanding of and a point of view toward some of the major problems of public administration which are dealt with briefly or not at all in required course work. Topics vary from year to year in accordance with the needs and interests of the students. Last year the course stressed problems in large-scale organization theory and practice in government, decision systems and theory, the analysis of political power, and the impact of ideology on public administration in the United States. Other topics are agreed on in class and may include such problems as loyalty and security, ethics and conflicts of interest, the impact of separation of powers on administration, and intergovernmental relations. *Prerequisite:* course 120 or consent of the instructor. [Not offered in 1970-71.]

559. SCIENCE, TECHNOLOGY, AND PUBLIC POLICY. Second term. Credit three hours. Mr. Rettig.

This course deals with three themes: 1) the interaction of the scientific and technological communities with the political-governmental system; 2) the use of science and technology for public purposes, especially those of domestic social policy; and 3) the control of the secondary and tertiary effects of science and technology.

561. THE INTERNATIONAL FLOWS OF SCIENCE AND TECHNOLOGY. First term. Credit four hours. Mr. Esman.

The course deals with scientific and technological transfers between the industrialized and the less developed countries. These flows occur through agencies

such as bilateral assistance programs, foundations, universities, international organizations, and international business enterprises. The course entails a study of choices of technology; the instruments of transfer; technological adaptation problems; the recipient countries' institutionalization and biological, physical and social technologies; and the implication of technology transfer for economic growth, social change, political integration, and international cooperation. *Prerequisite*: consent of the instructor.

562. COMPARATIVE LOCAL GOVERNMENT (Government 544). Second term. Credit four hours. Mr. Ashford.

This course involves a comparative analysis of how ecological, attitudinal, and policy factors at the local level relate to national policies in both developed and undeveloped nations. *Prerequisite*: consent of the instructor.

750 and 751. INTEGRATIVE SEMINAR: CORNELL CAREER EDUCATION AWARDS PROGRAM. First and second terms. Credit three hours each term. Mr. Flash and staff.

This seminar is designed to integrate the study programs of the participants in the Cornell Career Education Awards Program (see p. 88). Its primary focus is on the impact of major substantive, political, and administrative developments on public policies. During the first term, consideration is given to the significance of quantitative analysis in decision making in large-scale programs, to the dimensions of micro- and macroeconomic analysis, and to the nature of the interdependence between the nation's public and private organizations. The content and operation of the seminar during the second term are geared to the interests of the program participants and are, hence, in large measure designed by them during the course of the fall term. Normally the participants collaborate in an analysis of particular problems such as regional economic development and intergovernmental relations. Members of the School faculty and other faculty join in conducting portions of the seminar, and scholars and practitioners from outside the campus are invited to participate in particular sessions.

## Quantitative Analysis

456. SEMINAR IN QUANTITATIVE METHODS. Second term. Credit three hours.

The material in this course is an extension and continuation of the work begun in course 123. Topics covered are drawn from the following: further work in probability, Monte Carlo techniques, sampling methods, procedures for estimation and prediction, statistical inference, econometric models, and topics in decision theory. The course stresses the logic of methods and provides a less mathematically oriented basis for courses 602 and 604 than do courses 600 and 601. *Prerequisite*: course 123 or consent of the instructor. [Not offered in 1970-71.]

600. INTRODUCTION TO PROBABILITY THEORY (Industrial Engineering 9460). First term. Credit four hours.

This course deals with definitions of probability and basic rules of probability theory, random variables, probability distributions, and expected values. Included are important special distributions and relations among them, and elementary limit theorems. Stochastic processes and Markov chains are introduced, and their applications in the construction of mathematical models for administrative decisions are considered. *Prerequisite:* calculus. (*Note:* This course may be substituted for course 123A in the core requirements.)

601. INTRODUCTION TO STATISTICAL THEORY (Industrial Engineering 9470). Second term. Credit four hours.

This course considers the application of statistical theory to problems associated with the analysis of data. Involved are principles of statistical inference, estimating the value of unknown parameters of probability distributions and the testing of hypotheses concerning these parameters, and elements of statistical decision theory. An introduction to correlation theory and curve fitting by least squares is included. *Prerequisite:* course 600 or equivalent. (*Note:* This course may be substituted for course 123A in the core requirements.)

602. OPERATIONS RESEARCH I (Industrial Engineering 9522). First term. Credit three hours.

This course deals with model design, methodology of operations research, linear programming, the transportation problem, the assignment problem, the dual theorem, parametric linear programming, integer programming, nonlinear programming, dynamic programming, and introduction to inventory theory. Emphasis is placed on comprehensive problems and case studies.

604. OPERATIONS RESEARCH II (Industrial Engineering 9523). Second term. Credit three hours.

This course deals with decision making under risk and uncertainty, game theory, reliability theory, replacement theory, queuing (including standard birth and death processes and nonstandard models), applications of queuing theory, models for production and inventory control, and simulation models. Operations Research I and II are not expected to provide an exhaustive treatment; rather they will examine the broad range of operations research problems and the standard techniques used to approach them. *Prerequisite:* course 600 or consent of the instructor.

## Information Processing

949. INTRODUCTION TO INFORMATION PROCESSING SYSTEMS. First term. Credit three hours. Mr. Lyons.

This course provides a technical survey of computer-based information processing systems. The first part of the course will deal with the organization and

design of hardware and software systems with emphasis on monitor, compiler, and assembler software systems. The second part of the course will be devoted to specific business applications of computer systems such as data base management, searching and sorting, and information retrieval. Several programming languages will be used in the course. *Prerequisite:* course 123B or the equivalent.

950. INFORMATION PROCESSING SYSTEMS IN ORGANIZATIONS. Second term. Credit three hours. Messrs. Kinard and Lyons.

This course considers information processing systems from the point of view of the administrator. Topics include the methodology of information systems design, the impact of information systems on organization structure and process, and the trends in information processing. A variety of materials and approaches are used in the course including lectures, cases, speakers, and student projects.

951. ECONOMIC EVALUATION OF INFORMATION PROCESSING SYSTEMS. Second term. Credit three hours. Messrs. Kinard and Lyons.

This course is designed to provide managers with the technical and economic sophistication necessary to evaluate alternative computer-based information processing systems. The value of information to the user of an information processing system and the cost of processing information are both considered. *Prerequisite:* course 949 (BPA), course 401 (Computer Science) or the equivalent.

## Transportation

575. TRANSPORTATION: RATES AND REGULATIONS. First term. Credit three hours. Mr. Hutchins.

This study of American transportation is focused on economic organization, public policy, and the rate-making process. The emphasis is on the theory and practice of rate making in an environment complicated by fixed, joint, and common costs; by competition among differing modes of transport; and by complex patterns of regulation. Although primary attention is given to railroad economics and policies, other modes are considered from time to time. Cases are used. Among the topics discussed are rates and the location of industry and trade, the theory of rates, the development and current content of United States inland transportation policy, the construction of rate systems, problems in competitive marketing, new types of rates and services, certain detailed problems of regulation, and the complexities of intercarrier relations within a national transportation system.

576. TRANSPORTATION: STRUCTURES, OPERATIONS, AND POLICIES. Second term. Credit three hours. Mr. Hutchins.

This course is a continuation of course 575 (which is a desirable, but not essential, prerequisite). Attention is focused first on the features of industrial organization in merchant shipping, air transportation, and domestic surface

transportation (rail, truck, and barge), with special emphasis on market structures, business conduct, and relevant public policies. In this connection various problems of inter- and intramodal relations are discussed, including consolidations, finance, and public promotion. The second portion of the course is devoted to problems of business administration in transportation under the headings of carrier organization, operations, finance, and general policy. In this part of the course cases and illustrations are drawn from all of the modes of transportation, and discussion is based on the earlier studies of industrial organization in the several modes.

## Miscellaneous

775. INITIATION AND DEVELOPMENT OF BUSINESS ENTERPRISES. First term. Credit three hours. Mr. Hass.

Students are provided with relevant background for initiating and developing a business enterprise. Topics covered include the search for and choice of business activity, the legal and tax aspects of the form of business organization, the obtaining of initial financing and the funds necessary for growth, and the choice of location. The *modus operandi* include lectures by the instructor, other members of the School's faculty, and business executives who are currently operators of small business enterprises or whose firms recently passed through this stage on the way to becoming large. In addition, case studies are used and there is field work (each student studies at least one operating small business). This course is concerned primarily with obtaining the first dollar of profit and laying the foundation for growth.

## Research

010. DIRECTED READING AND RESEARCH. Either term. Credit hours are adjusted to the work load assumed by the student.

Research is carried on under the supervision of staff. Registration is limited to second-year students who have the approval of their advisers and of the faculty members involved. The student may carry on research in fields of special interest in either business or public administration.

905. SEMINAR IN RESEARCH METHODS. Second term. Credit three hours.

This course acquaints the student with research methodology relevant to all doctoral majors within the field of business and public administration. Substantial time is devoted to the questions of problem formulation, selection of appropriate research models, means of obtaining valid data, and techniques of information analysis. The course treats behavioral measurements and statistical problems and develops the student's ability to evaluate research projects before and after their implementation. *Prerequisite*: Statistics. Primarily intended for doctoral students.

908. RESEARCH SEMINAR FOR DOCTORAL CANDIDATES. First term. Credit three hours.

This seminar provides students with an opportunity to study recent research in administration and to develop research papers under faculty guidance. The area of study varies from year to year to reflect student interests and to allow wide faculty participation. Students present research proposals to the seminar for discussion and report research results as their studies progress throughout the term. The research work provides an opportunity to explore possible dissertation topics. *Prerequisite:* Consent of the instructor. (*Note:* Students interested in health research should consider course 455, Seminar in Health Research, listed under "Hospital and Health Services Administration.")

## Service Course

112S. MANAGERIAL ACCOUNTING. Second term. Credit four hours.

In developing the principles and procedures underlying general financial statements, varieties of financial transactions are studied. Alternative accounting treatments are analyzed for recording of sales, purchases, depreciation of long-lived assets, inventory, stockholders' equity, and bonds. An intensive review of compound interest is undertaken in connection with bonds. After the techniques of recording transactions have been studied, the tools for analysis of financial statements are introduced. This analysis leads to a study of financial reports, including consolidated income, position, and funds statements. Attention is then directed to the preparation of accounting information useful for managerial action. The subjects covered include classifications of costs, manufacturing overhead analysis, cost systems (job order, process, and standard), variance analysis, inventory control, budgeting, break-even analysis, variable (direct) costing, cost control reports, distribution cost analysis, capital budgeting, measuring performance, and accounting problems resulting from a changing price level (including common dollar accounting). The objectives are to build skills in preparing accounting information, to develop an ability to recognize the uses and limitations of the accounting information available to management, and to apply the information in decision situations. *Course 112S is offered specifically for undergraduates and is not normally open to M.B.A. and M.P.A. candidates.*

The courses and curricula described in this *Announcement*, and the teaching personnel listed therein, are subject to change at any time by official action of Cornell University.



## IV. ADMISSIONS AND STUDENT AFFAIRS

Each year approximately 180 new students enter the Graduate School of Business and Public Administration at Cornell. Admissions standards and procedures are explained in the first section below. The following sections describe costs, financial assistance, and student activities and services.

### Admissions Standards and Procedures

#### Eligibility

Admission to candidacy for the M.B.A. or the M.P.A. is limited to persons holding baccalaureate degrees from recognized colleges, universities, or technical schools in this country or abroad or to persons who can give evidence of successful completion of equivalent studies. While the individual's undergraduate academic record is of primary importance as an indicator of his ability to undertake graduate work in business or public administration, several other factors are taken into account. Reports concerning the applicant's intellectual and personal development as an undergraduate are considered, as is the indication of his inherent ability provided by the admissions tests referred to below. Employment experience, military service, and extracurricular activities are also weighed in the admissions review process. All of these factors are considered significant in assessing the applicant's capacity and motivation for graduate work in the School and for his later performance as a responsible and creative executive.

*It is the policy of Cornell University actively to support the American ideal of equality of opportunity for all. No student shall be denied admission or be otherwise discriminated against because of race, color, creed, religion, or national origin.*

#### Undergraduate Preparation

In light of the specialization inherent in professional education at the graduate level and in subsequent professional careers, candidates

are urged to pursue as broad an education at the undergraduate level as their curricula allow. Undergraduate courses in business administration do not enhance a candidate's eligibility for admission, nor do they necessarily assure satisfactory academic performance in this School.

Although no specific undergraduate courses are required for admission, it is recommended that students planning to enter the School include in their undergraduate programs courses in economics, American government, behavioral sciences, and mathematics. Recent years have seen a rapid increase in the use of computers and quantitative techniques in business and government. Therefore, a year of calculus at the undergraduate level is strongly suggested for all students. Those wishing to acquire more than the minimum exposure to the quantitative aspects of management should consider including in their undergraduate programs, in addition to at least a year of calculus, courses in linear algebra, probability theory, statistical theory, and computer programming.

## Application Procedure

A completed application for admission to the M.B.A. or M.P.A. program consists of the following:

- 1) The application itself, completed on forms available from the Office of Director of Admissions and Student Affairs, Graduate School of Business and Public Administration, Malott Hall, Cornell University, Ithaca, New York 14850. Candidates who wish to be considered for grant assistance must complete a separate application for financial aid.

- 2) A nonrefundable application fee of \$20 payable to Cornell University.

- 3) A report of test scores on the Admission Test for Graduate Study in Business. Applicants for M.P.A. candidacy may substitute test scores on the aptitude portion of the Graduate Record Examination. These tests are administered throughout the United States and in many major cities of the world by the Educational Testing Service. Inquiries and applications for taking the tests should be addressed to the Educational Testing Service, Princeton, New Jersey 08540. While the tests are administered four times each year, applicants should note that the November examinations are often most convenient for the School and for the candidate. Applicants are responsible for arranging to have their test results sent directly to the School. (*Note:* Applicants for the combined program in administration and law may substitute the Law Aptitude Test, the results

of which will be supplied to this School by the director of admissions of the Cornell Law School.)

4) A transcript sent directly to the School by the registrar of each institution attended by the candidate beyond the secondary level.

5) Two letters of reference on forms supplied by the School, preferably from persons who have taught the applicant and know him well.

Interviews are not required of prospective Master's degree candidates. They are often helpful in informing a student about the School and its programs, and may assist in appraising a student's eligibility for admission. Applicants should not feel compelled to visit the School unless time and distance permit it.

## Admissions Timetable

New students are normally permitted to enter the School only at the beginning of the fall term in September. Admission in February is permitted only in unusual circumstances because of the integrated and sequential nature of the School's core program. Applications for admission to the School should be filed as early as possible during the academic year preceding that for which admission is sought and in any event should be completed by April 1. Although the School occasionally acts favorably on applications received after April 1, opportunities for admission are somewhat reduced after that date. Applicants are notified of their acceptance or nonacceptance as promptly as possible after their admissions folders have been completed.

## International Students

A candidate for admission from another country must meet the same standards which are applied to applicants from the United States and its territories. Not only must he be prepared academically to undertake a rigorous program of studies, but he must also be proficient enough in English to follow lectures closely, to participate actively in discussions, and to absorb a heavy program of reading and required papers and examinations. While the foreign applicant need not pay the \$20 application fee (unless he applies while living in the United States or Canada), he must otherwise complete the procedure outlined above. Foreign applicants whose native tongue is not English, and who have not received a university degree in a native English-speaking country, are also required to take the Test of English as a Foreign Language, administered through-

out the world several times a year by the Educational Testing Service, Princeton, New Jersey 08540, U.S.A. Applicants should correspond directly with the Educational Testing Service to arrange for this test.

## Nondegree Candidates

The School accepts a very limited number of qualified students who, because of special circumstances (e.g., one year's leave of absence from employment or a one-year fellowship for a foreign student) are not candidates for degrees. Admissions standards and procedures in such cases are the same as those for degree candidates.

In 1966 the School also instituted a nondegree program for mid-career executives, described in the section Cornell Career Education Awards Program on p. 88. Further information is available in a special brochure which may be obtained from the School.

## Combined Programs

The long-standing tradition of cooperation among the various units of Cornell enables the School to join in offering combined degree programs with several of the other schools and colleges on the Ithaca campus. Formal combined degree programs have been established with the College of Agriculture and the College of Engineering. Combined degree programs can also be arranged for students enrolled in the College of Architecture, the School of Industrial and Labor Relations, and the School of Hotel Administration. Admission to these programs is limited to particularly promising candidates, and careful planning is required if a successful integration of the work for the two degrees is to be achieved. Accordingly, Cornell students who are interested in completing the first-year requirements for the M.B.A. or M.P.A. degree during their last year of undergraduate studies in the schools and colleges listed above are advised to meet with the School's director of admissions and student affairs before the end of the first semester of the year preceding their last full undergraduate year.

## Costs and Financial Assistance

### Tuition and Fees

The charge for tuition in the Graduate School of Business and Public Administration is currently set at \$1,025 per semester, and the General



Fee of \$275 is also payable each semester. Tuition and fees thus total \$2,600 for the full academic year. (*Note:* New students who have not previously been enrolled at Cornell are also required to pay a \$35 matriculation fee upon entering the University. For additional information about the rules of payment at Cornell, see the *Announcement of General Information*, which may be obtained from the Visitor Information Center, Day Hall, or by writing to Cornell University Announcements, Day Hall, Ithaca, New York 14850.)

*Tuition or other fees may be changed by the Board of Trustees at any time without notice.*

### Living Costs

Living costs cannot be stated with the same degree of certainty as regular University charges, because they are dependent to a great extent

on the individual's tastes and circumstances. However, experience indicates that a single student now spends approximately an average of \$677 for room, \$655 for board, \$82 for insurance, and an additional \$590 for books, clothing, entertainment, and other personal items each year. Total costs, including tuition and fees but excluding transportation, generally come to about \$4,600 for the full academic year for the single student and \$6,000 for the married couple without children. The approximate expense for each child is \$300 for the ten-month academic year.

## Fellowships, Scholarships, and Grants

Fellowships, scholarships, and grants-in-aid are available for students enrolled in the School. Fellowships and scholarships are awarded on the basis of both scholastic ability and financial need, while grants-in-aid are smaller awards based solely on need. Applications for financial aid are separate from admission applications and may be obtained from the director of admissions and student affairs. *Both admission and financial aid applications must be complete by March 1 for candidates to receive financial aid consideration.* Completion necessitates receipt at the School of all required supporting documents as well as the application form. In addition to the general funds of the University which are made available for scholarship purposes, the following special awards may be noted:

*The Bache and Company Scholarship*, in finance.

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

*The John W. de Forest Memorial Fellowship*, awarded to a Canadian citizen who is a candidate for either the M.B.A. or the M.P.A. degree.

*The du Pont Graduate Fellowship in Business Administration*, awarded to an M.B.A. candidate with an undergraduate degree in a physical science or engineering.

*The Chuji Kabayama Fellowship*, awarded to a candidate from Japan.

*The Deane W. Malott Fellowship of the Owens-Corning Fiberglas Corporation*, in honor of Mr. Malott, President Emeritus of Cornell University.

*The Martin McVoy Fellowships and Scholarships* (with preference given to members of Alpha Delta Phi).

*The Neal Dow Becker Scholarship Fund Awards.*

*The Price Waterhouse Foundation Scholarship*, for study in accounting.

*The Michael R. Riordan Memorial Scholarship*, awarded to a candidate from the undergraduate divisions of Cornell.

*The Alfred P. Sloan Foundation, Incorporated, Fellowships and Scholarships*, for study in hospital administration.

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

*The Theodore P. Wright Fellowship of the Cornell Aeronautical Laboratory*, awarded to a student with undergraduate training in engineering.

Public Health Service Traineeships for study in hospital and medical care administration and comprehensive health planning.

General funds from which scholarships are awarded are provided by the following companies: *Goldman, Sachs and Company; Smith, Barney and Company*.

*Opportunities for Minority Group Students in Business Education and Management*.

Several leading business firms are cooperating with the School in providing fellowships for minority group students wishing to pursue the M.B.A. program. Firms sponsoring the program this year are *American Airlines, Inc.; Chase Manhattan Bank; Mobil Oil Corporation; and S. C. Johnson & Sons, Inc.* Information about the awards may be obtained from the School's director of admissions and student affairs.

*The Council for Opportunity in Graduate Management Education (COGME)* exists to provide financial assistance to outstanding minority group candidates wishing to pursue graduate study in management. The basic funding for COGME is provided by the Alfred P. Sloan Foundation. Students wishing to pursue any of the School's Master's degree programs are eligible to apply for these fellowships. The fellowships provide tuition plus 60 percent of a student's expenses in the first year and tuition plus 20 percent of expenses in the second year. Married and single students may apply. A two-year commitment of support is made to a fellowship recipient, and the School assists students in obtaining necessary loan support to cover remaining expenses.

The School participates in the COGME program with nine other graduate schools of management. Separate admission application must be made to each school in which a candidate is interested. Upon acceptance by any member school, a candidate is then considered for a

COGME award. If an award is received, the candidate may then take it to any member school at which he has been accepted.

COGME applications may be obtained from the School's director of admissions and student affairs or by corresponding directly with the Council for Opportunity in Graduate Management Education, 213 Uris Hall, Graduate School of Business, Columbia University, New York, New York 10027.

The majority of award decisions are made during late March or early April of an academic year. It is thus important that candidates complete applications for admission well before this time.

Award amounts are based on need. Award eligibility is based on personal factors as well as academic merit; attention is paid to accomplishments in an applicant's own cultural environment, his motivation, personal growth potential, and potential for contribution to a management role in business, government, or community organizations.

## Loans

The University's Office of Scholarships and Financial Aid in Room 105, Day Hall, administers University and National Defense Education Act loan funds. The Office may also recommend students for long-term loans through community banks under the guaranteed-interest loan programs available in most states.

The W. K. Kellogg Foundation has established a loan fund for students in the hospital administration program. This fund is also administered through the Office of Scholarships and Financial Aid.

With rising educational costs and continued limitations on financial aid grant resources, the School has encouraged increasing numbers of students to borrow to supplement expenses. With requisite need and availability of loan funds, as much as \$1,500 can be borrowed during a single academic year.

## Composition of the Student Body

A large number of the School's students come from the Northeast and Middle Atlantic States, but other regions of the United States and more than fifteen foreign countries are also represented in the student body each year. More than half of the School's students did their undergraduate work in the liberal arts and sciences, roughly 25 percent were engineering students, and about 7 percent majored in business admin-

istration. The undergraduate colleges and universities represented in the current student body are listed in the table on p. 72.

## Student Activities

As a supplement to academic programs of the School, a range of activities is organized and administered by the student body. The objectives of these programs include the development of a professional attitude among students and the promotion of closer student-faculty relationships. The several activities described below also afford excellent opportunities for interested students to develop their organizational and administrative talents.

### The Student Association

The student activities program is carried on under general sponsorship of the Student Association, with the guidance of its Executive Council. The president, vice president, secretary, and treasurer of the Association are elected each February by the entire student body for one-year terms, and a representative from the first-year class is elected in September to serve until February. The remaining members of the Council are the appointed chairmen of various subsidiary committees and organizations. The Association's Social Committee sponsors frequent informal gatherings during the year. A fee of \$10 covers membership in the Association for the two years of residence at the School.

### The Management Forum and Supper Club

Over the course of the year, several prominent individuals from the world of business and public affairs are brought to the School to speak before students, faculty, and their guests. Some of the sessions with visiting speakers are presented by the Management Forum at a late morning hour set aside for that purpose. In other instances the guest speakers address the Supper Club at an evening gathering.

### B&PA, Incorporated

Short-term loans are made available to members of the student body by this nonprofit organization. The disposition of its funds, which have been accumulated through gifts, subscriptions, and earnings, is governed by the student and faculty members of its board of directors.

# Institutions of Higher Learning Represented in the 1969-70 Student Body

## *Colleges and Universities in the United States*

Albany College of Pharmacy  
 Alcorn A & M College  
 Alfred University  
 Arizona, University of  
 Baldwin-Wallace College  
 Boston College  
 Bowdoin College  
 Brandeis University  
 Brown University  
 Bucknell University  
 Buffalo, University of  
 California, University of  
 Canisius College  
 Carnegie-Mellon University  
 Case Western Reserve University  
 Cincinnati, University of  
 City College of New York  
 Claremont Men's College  
 Clark University  
 Clarkson College of Technology  
 Colby College  
 Colgate University  
 Columbia University  
 Cornell College  
 Cornell University  
 Dartmouth College  
 Davidson College  
 Delaware State College  
 Denison University  
 Denver, University of  
 DePauw University  
 Dillard University  
 Drexel Institute of Technology  
 Elmira College  
 Fairfield University  
 Fordham University  
 Georgetown University  
 Georgia, University of  
 Goshen College  
 Grinnell College  
 Hamilton College  
 Harvard University  
 Hobart College  
 Howard University  
 Illinois, University of  
 Illinois Institute of Technology  
 Indiana University (Bloomington)  
 Indiana University of Pennsylvania  
 Iona College  
 Iowa State University  
 Kenyon College  
 Lafayette College

Lehigh University  
 LeMoyné College  
 Long Island University  
 Macalester College  
 Manhattan College  
 Marquette University  
 Maryland, University of  
 Massachusetts, University of  
 Miami University  
 Michigan, University of  
 Michigan State University  
 Middlebury College  
 Minnesota, University of  
 Montana State University  
 Mount Union College  
 Nazareth College  
 New York University  
 Nichols College  
 North Carolina, University of  
 Norwich University  
 Notre Dame, University of  
 Oakland University  
 Ohio Wesleyan University  
 Oklahoma University  
 Oregon State University  
 Pennsylvania State University  
 Pennsylvania, University of  
 Princeton University  
 Purdue University  
 Queens College  
 Rensselaer Polytechnic Institute  
 Rochester, University of  
 Rutgers University  
 St. Bonaventure University  
 St. John's University  
 St. Joseph's College  
 St. Lawrence University  
 Scranton, University of  
 South Carolina, University of  
 Tabor College  
 Trinity College  
 Union College  
 Vanderbilt University  
 Virginia, University of  
 Washington University (Missouri)  
 Washington, University of  
 Wellesley College  
 Westminster College  
 Williams College  
 Wisconsin, University of  
 Wooster, College of  
 Xavier University  
 Yale University

## *Foreign Institutions*

Aix en Provence, University of  
 Cambridge University  
 Catholic University of Chile  
 Catholic University of Louvain  
 Faculté des Sciences Economiques  
 Federal University of Bahia  
 Hitotsubashi University  
 Indian Institute of Technology  
 Institute of Chartered Accountants  
 (England)  
 Institute Tech. Y de Estudios Super.  
 de Monterrey  
 Keio University  
 Louvain, University of

Lycée Chateaubriand  
 Lycée St. Louis, Paris  
 Manitoba, University of  
 McGill University  
 Oxford University  
 Politecnico di Milano  
 Queens University  
 Salford University  
 San Beda College  
 Saskatchewan, University of  
 Technion-Israel, Institute of Technology  
 Tokyo, University of  
 Universidad Católica de Valparaíso  
 Universidad del Pacífico

## Wives' Club

More than 30 percent of the students attending the School are married. Their wives have formed an informal group which sponsors an interesting and varied program of activities throughout the year. The Wives' Club also works closely with the Social Committee of the Student Association.

## AIESEC

AIESEC, the Association for the International Exchange of Students in Economics and Commerce, is an independent, nonprofit international organization established and operated by students from more than forty-three countries. Since 1956 the Graduate School of Business and Public Administration has sponsored AIESEC on the Cornell campus. AIESEC students interested in Area Studies may meet with business people and political leaders of developing nations and become involved in their political, sociological, and economic problems. For those interested in the economic aspects of a developing country, there is the opportunity to play a role in solving the problems of development, either in a private enterprise or a government agency. AIESEC places special emphasis on personal experience for the student working in a foreign business. The participant is also offered the opportunity to work, train, and live in a foreign culture.

## Student and Alumni Services

### Housing

Although many students prefer to live in private dwellings or apartments, University housing is available for both single and married students. Sage Graduate Center, in the heart of the Cornell campus, provides housing and dining facilities for single students who are candidates for advanced degrees in any field, and the University maintains three modern housing developments for married students with both one- and two-bedroom apartments available. Applications for University-operated housing should be made through the Department of Housing and Dining Services, Day Hall, Cornell University, Ithaca, New York 14850. Information regarding off-campus accommodations is available from the Off-Campus Housing Office in the Department of Housing and Dining Services. (*Note: Rooms in Sage Graduate Center are assigned from July 1 to August 15 in order of the date of receipt of application.*)

## Dining Arrangements

The University operates a wide range of dining facilities which are convenient both to housing accommodations and to Malott Hall, the home of the Graduate School of Business and Public Administration. Meals are served regularly in Willard Straight Hall (the student union building), Sage Graduate Center, Martha Van Rensselaer Hall, Stocking Hall, Noyes Student Center, and Noyes Lodge (a student facility located on Beebe Lake, not far from the School).

## Student Counseling

Each student is assigned to a faculty adviser for academic counseling. Advisory relationships are informal, however, and students are urged to consult widely with members of the faculty on matters relating to their education and future plans. The School's director of admissions and student affairs and the director of placement and alumni affairs are also available for counseling purposes. The International Student Office in Day Hall maintains a staff to assist in meeting the special counseling needs of students from other countries. Foreign students are urged to avail themselves of this service and to call upon the staff of the International Student Office for assistance on such matters as living quarters and other aspects of their needs in Ithaca. It is suggested that foreign students write to the director of the International Student Office before they come to Ithaca or call upon him when they arrive.

## Placement

To assist graduates in exploring and selecting among various employment possibilities, the University and the School operate an extensive placement program. Under the aegis of the University's Career, Summer Plans, and Placement Center, a large number of representatives of business organizations and governmental agencies come to the campus each year. The School's director of placement and alumni affairs coordinates a program in which many business and government representatives interview prospective graduates of this School in Malott Hall.

## Alumni Services

The Business and Public Administration Alumni Association maintains liaison between the School and more than 1,650 graduates associated with private and public organizations in this country and overseas. The

Package	5,238
Kitchen Cab	804
Light Fix	35
Earthwork	275
Mason + Carpent	7,500
Plumbing	1,000
Electrical	850
Paint	200

Hand 3,166



School's alumni assist in various activities of the School, including serving as guest lecturers in advanced seminars, providing case materials, and interviewing for the School's admissions program. The placement program of the School is at the disposal of the School's alumni.

### Further Information

Prospective students are urged to consult Cornell University's *Announcement of General Information* for details regarding health requirements and services, vocational testing and guidance, the use of motor vehicles, and University-wide social and cultural activities. Copies of that *Announcement* may be obtained from the Visitor Information Center, Day Hall, or by writing to Cornell University Announcements, Day Hall, Ithaca, New York 14850.

## V. DOCTORAL AND RESEARCH PROGRAMS

### Approach and Content of the Doctoral Program

Studies for the Ph.D. degree in the Field of Business and Public Administration are designed to prepare candidates for careers in teaching and research. Accomplishment is judged not primarily by the fulfillment of assigned courses but rather by the development of the depth of understanding essential to the advancement of knowledge. Course credits as such are not accumulated, but the candidate must complete a study program worked out by his Special Committee. The requirements for the Ph.D. degree are established and administered by the Graduate School of Cornell University. Business and Public Administration is one of a number of Fields of study offered by the Graduate School. A prospective student should therefore obtain the *Announcement of the Graduate School: Social Sciences* and study it carefully.

The candidate for the Ph.D. degree in Business and Public Administration is required to select a major subject in this Field and two minor subjects. For his Special Committee, which directs his studies, he selects faculty members representing those subjects. The major subject must be selected from either Group I or Group II as detailed below. The first minor must be selected from the group not used for the major, with exceptions as indicated below:

### Major and Minor Subjects

#### Group I

- Managerial Economics
- Organizational Behavior and Theory
- Quantitative Analysis for Administration\*

#### Group II

- Accounting
- Business Policy

\* These two subjects may not be taken together as major and first minor.

Finance  
Business and Public Policy  
International Development  
Marketing  
Transportation Economics and Policy  
Medical Care Organization and Administration  
Production and Operations Management\*  
Public Administration  
Administration of Higher Education (Minor subject only)

It is recognized that some candidates electing a major subject in Group II may wish to take a first minor in a basic discipline offered in another Field of the Graduate School. This is permitted whenever the proposed subject meets the test of being a basic discipline reasonably related to the student's major subject. Also, some candidates electing a major subject in Group I may wish to take their first minor in an applied subject offered in another Field. This is also permitted in cases where the candidate can demonstrate that the change is relevant to his career objectives. To secure uniform administration of these exceptions the Field requires that all substitutions in Groups I and II be approved by the chairman of the Committee on Advanced Degrees.

The Field requires that the first minor be relatively extensive, and that it demand a level of competence equivalent to that expected of majors. The second minor may be selected from the above subjects or from another Field. If the first minor is not taken outside this Field, a student may be encouraged to take the second minor in another Field, provided that this minor is relevant to his program. An outside minor is normally taken either in an underlying discipline or in an area of applied knowledge related to the program of this Field.

A short description of the major subjects in the Field of Business and Public Administration follows:

### Group I

*Managerial Economics* concentrates on economic analysis for decision making. A candidate may study the problems of the total economy, of industries, or of the firm, and may do so within the context of any particular study area, such as international economic relations, economic development, business-government relations, money and banking, invest-

\* These two subjects may not be taken together as major and first minor.

ment project analysis, or transportation. He is expected to develop a thorough grasp of relevant economic theory and institutions and a basic understanding of both qualitative and quantitative analysis.

*Organizational Behavior and Theory* focuses on social- and behavioral-science approaches to the study of human activity in organizational settings. The major concern is with regularities, differences, and relationships in human behavior directed toward purposive ends. Systematic observation, theoretical analysis, and empirical investigation are stressed. A fundamental grounding in at least one of the basic behavioral disciplines is required.

*Quantitative Analysis for Administration* stresses the modern developments in the uses of mathematical and statistical tools and computer technology for the solution of managerial problems, including decision making under uncertainty.

## Group II

*Accounting* involves the study of the theory and practice of developing financial data for the two ends of enabling management to control and plan the development of the enterprise and of enabling others to appraise its condition.

*Business Policy* involves the study of the business corporation, and particularly of the strategy developed to meet various problems, both internal and external. A substantial knowledge of the functional areas of marketing, production, finance, and personnel and labor relations, and of accounting and control is essential.

*Finance* focuses on the financial structures and requirements of corporations and on the problems of developing and maintaining sound financial condition. It also deals with the organization and behavior of financial markets of various types, and on influence of public policies at home and abroad on these markets and on corporate finance. A knowledge of accounting is essential.

*Business and Public Policy* involves the study of the three-way relationship among individuals, business firms, and government. Emphasis may be either on the United States or a foreign area. A substantial knowledge of the political and economic background of public policies is essential. Emphasis is placed on the impact of public policies and regulation on business and of business policies on government. The problems of

developing socially desirable policies in both the public and private sectors are also stressed.

*International Development* emphasizes the study of the problems of developing effective public and business institutions in developing parts of the world, with special emphasis on problems of administration, public and private, both indigenous and American, in such areas. A good background in one or more of the basic disciplines of economics, government, sociology, or anthropology is highly desirable for this subject area.

*Marketing* involves the study of how the analytical tools derived from economics, psychology, sociology, and operations research can be applied in the development of operational and policy aspects of the marketing function.

*Transportation Economics and Policy* is the study of the economics of an important business function influencing the geographical structure of economic life, and of the associated problems of carriers, shippers, travelers, and governments.

*Medical Care Organization and Administration* comprises the study of the complex problems of public policy and administration associated with the organization, financing, and delivery of personal health services. Health systems are studied employing a systems framework. Public and private health care arrangements are examined at micro and macro levels.

*Production and Operations Management* concentrates on the major economic decision problems involved in production and operations management. Various analytical techniques are used, and their effectiveness and limitations are explored.

*Public Administration* involves an interdisciplinary approach to the study of governmental policies, policy formulation, power relationships, administrative behavior, basic management functions such as personnel and finance, and the broad environment of public affairs. The student is expected to gain competence in bureaucratic and organizational theory, and in the methods of the social sciences.

*Administration of Higher Education* (minor subject only) focuses on the use of behavioral, economic, and quantitative methods of analysis and of such applied subjects as accounting and finance in dealing with the peculiar problems of the large American university.

Candidates for advanced degrees with majors in other Fields may elect minors in this Field provided that they have sufficient preparation to do

the graduate work involved. Twelve to fifteen hours of work are normally required as a minimum for a minor, depending on the degree sought and the extent of a candidate's preparation.

## Requirements

Shortly after the candidate enrolls, a Qualifying Examination, usually both written and oral, is given in order to determine whether he is properly prepared to continue in the subject areas he has selected. The Qualifying Examination also serves as a basis for the Special Committee to assist the student in working out his program of study. A comprehensive examination is given on the major and minor subject areas after the candidate has had adequate preparation therein, ordinarily after four terms of residence have been completed. The comprehensive examination is always given in two parts, written and oral. A thesis is required and is prepared under the direction of a Committee member. After a manuscript has been approved in substance by the Committee, an oral thesis examination is given.

A Ph.D. candidate may be required to demonstrate proficiency in one or more foreign languages. The language or languages, if any, and the degree of proficiency are determined by the student and the Committee. These decisions are based on the potential usefulness of the language to the student in his research and future scholarly activities.

A minimum of six terms of full-time residence beyond the Bachelor's degree is a requirement for the doctorate, but under certain circumstances residence credit may be received in whole or in part for graduate work done elsewhere for the M.B.A. or M.P.A. degree or in other relevant graduate programs. Such transfer of credit may be allowed by the Graduate School on recommendation of a student's Special Committee after matriculation, but it is by no means automatic. Ordinarily two terms of residence credit toward the doctorate are granted for the completion of a four-term professional Master's program. However, a candidate for the M.B.A. or M.P.A. degree at Cornell, if he so elects during the first year, may be placed under the direction of a special committee within the School and will then follow a more research-oriented program than is usual in the Master's program. By so doing he may receive up to three terms of residence credit toward the doctorate upon completion of the M.B.A. or M.P.A. degree. In such instances a Master's thesis and a comprehensive oral and written examination are required.



*McGraw Tower and John M. Olin Library.*

## Admissions and Financial Assistance

Applications for admission to the doctoral program should be made on the forms of the Graduate School of Cornell and should be sent to the Graduate School, Sage Hall. They should clearly indicate in the appropriate place a major interest in the Field of Business and Public Administration. All applicants, whether from the United States or abroad, are required to take either the Graduate Record Examination (Aptitude Test) or the Admission Test for Graduate Study in Business. These tests are given several times a year in the United States and abroad. For information about the examinations, candidates should write to the Educational Testing Service, Princeton, New Jersey 08540.

Eligibility for admission is determined on the basis of the quality of an applicant's academic record, the suitability of his prior work for the intended program, his career objectives, his test scores, and the opinions expressed in letters of recommendation. In general, students without prior work in the appropriate disciplines and in the institutional environment should take a professional degree first, or otherwise make up their deficiencies. Students having strong undergraduate preparation in one or more of the social sciences can proceed directly to graduate work in this field but should plan to remedy any deficiencies with respect to the various aspects of administration. Candidates with undergraduate work in business or public administration may be prepared to enter the doctoral program, but they will often be required to develop a more adequate foundation in the social sciences. Thus, while preparation for graduate study in important segments of the student's program is necessary, the possession of a Master's degree, though common, is not essential.

The School has funds available for the support of Ph.D. candidates through fellowships and assistantships, primarily the latter. These are awarded on a competitive basis to both new and continuing candidates, with renewals based on the student's academic performance. In addition to the fellowships and assistantships offered by the School, a number of University fellowships and scholarships are available and are awarded in a general competition which closes in February.

Further information on admissions and financial aid may be secured by writing to the Office of the Director of the Doctoral Program, Graduate School of Business and Public Administration, Cornell University, Ithaca, New York 14850.

## Research Programs

Through its research program the School seeks a combination of related objectives: the advancement of basic knowledge, the utilization of that knowledge in teaching programs, and the further encouragement of both faculty and graduate students in the use of research for decision making and other administrative purposes.

The School has stressed empirical studies of business firms, governmental agencies, hospitals, and similar enterprises. Here management is observed in interaction with its environment, and research is focused on the ways in which objectives are determined, resources acquired and

controlled, and activities coordinated. This approach not only breaks new ground in organizational analysis but also provides a base for theory. Studies of this type have included a large-scale analysis of the social origins, training, and career patterns of federal governmental executives, a community power structure survey, an analysis of state capital budgeting policies and procedures in the United States, a survey of banking policies with regard to the handling of cash and marketable securities, studies of hospital organization and operation, an examination of the policy formulation processes of various business enterprises, a broad inquiry into organizational and economic trends in the field of agricultural industries, and an analysis of the top-level decision-making process in the National Aeronautics and Space Administration. Other ongoing research efforts concern the development of capital budgeting in both business and government, the study of executive personality, the comparative analysis of the effects of centralization and decentralization in two large concerns, the development of concepts of managerial accounting, an investigation of the economics of the steel industry in Western Europe, work on the modernization and political development of the less developed parts of the world, empirical study of employee job attitudes and motivation, and work on the integration and use of behavioral-science findings in organizational activity.

The School maintains close association with Cornell offices and departments concerned with social and organizational research, particularly the Office of Computer Services, the facilities of which are available to students in the School. The research program provides a number of stipends as well as training and dissertation opportunities for advanced graduate students.

## Publications

Since 1956 the School has published the *Administrative Science Quarterly*, a scholarly journal concerned with advancing the basic understanding of administration through empirical investigation and theoretical analysis. The *Quarterly* contains articles, book reviews, and abstracts relating to administration in several types of enterprises and environments, including business, governmental, hospital, military, and educational. Special issues of the *Quarterly* are published occasionally. Inquiries relating to the *Administrative Science Quarterly* should be sent to the editor, in care of this School.



*Panel discussion in Bache Amphitheatre.*

The School also publishes books and monographs on various aspects of administration and policy.

## Library Resources

The Eastwick Library of the Graduate School of Business and Public Administration now contains more than 102,000 volumes on the administrative process and on various aspects of business and public affairs. The Library, which is housed in Malott Hall, has comfortable facilities for readers, including a large number of open and locked carrels. The Library maintains files of periodicals, journals, financial and advisory services, government publications, and selected company reports.

A reference collection is maintained and professionally staffed to provide direct assistance to students in the solution of academic and research problems.

In addition to the library of the School, the John M. Olin Graduate Research Library and other Cornell libraries, notably that of the School of Industrial and Labor Relations, are also open to students of the School. The government documents collection of the University Libraries is one of the largest in the country. Altogether the library holdings of the University total over 3,600,000 volumes, making Cornell one of the major library research centers in the United States.

## VI. SPECIAL PROGRAMS

The School develops and conducts institutes, seminars, conferences, and other types of special training programs to meet the needs of business organizations, governmental agencies, and hospitals and health organizations. These programs are tailored to the requirements of the participating groups and vary in length from a few days to several weeks. They are usually conducted on the University's Ithaca campus, thereby gaining the full advantage of resident faculty participation, libraries, and University housing arrangements. Current programs are described below.

### Cornell Executive Development Program

The Executive Development Program offers an intensive six-week seminar designed to contribute to the continuing education of executives for management. Participants are brought together with professors and business and government leaders to explore management's task in the face of accelerating technological change and mounting social, economic, and political demands. The program was established by the Graduate School of Business and Public Administration in 1953. Since that time more than 1,000 executives have participated in the annual sessions.

The method of the program is to engage each participant in a broad study of the role of management for the purpose of increasing that awareness so important to effective and responsible executive leadership. The program is designed, accordingly, to facilitate an examination of the expanding consequences of executive decisions and the broader considerations governing company policy. Each participant is encouraged to take a company-wide viewpoint, and to search out and apply financial and economic standards in the formulation and appraisal of company policies. He is stimulated to become more sensitive to the elements of effective organization and more enlightened ways of enlisting human effort, and to heighten his awareness of environmental factors which affect management's ability to control the firm's future and which impose new responsibilities on the exercise of authority. The case method of instruction is employed extensively. For those who wish to participate on a voluntary basis, special sessions are conducted on decision making

under uncertainty, executive reading, and applying operations research to business.

The nineteenth annual Executive Development Program will begin in late June 1971. Applications should be submitted by March 1, 1971.

### Health Administrators Development Program

The Health Administrators Development Program offers to a selected group of experienced administrators and planners a four-week course of lectures, readings, and discussions dealing with a broad spectrum of trends and issues affecting their responsibilities. Health leaders from all parts of the United States, Canada, and overseas are brought together in stimulating contact with resident and visiting faculty members chosen for their ability to contribute to a better understanding of medical care policy, comprehensive health planning, administrative and technological development and international health care trends.

The fourteenth annual Health Administrators Development Program will be offered in June and July 1971.

### Agribusiness Executives Program

The Agribusiness Executives Program is an intensive two-week educational program presented specifically for management personnel serving the agricultural sector of the economy. It is designed to help managers in their efforts to keep abreast of the rapidly changing nature of the agricultural industries. The program focuses on long-range planning as an aid to sound decision making.

The eighth annual Agribusiness Executives Program will be offered during the summer of 1971.

### Cornell Career Education Awards Program

Cornell University conducts a nine-month, nondegree, educational program for a limited number of midcareer executives from federal, state, and local governmental agencies. This undertaking is sponsored by the United States Civil Service Commission and is coordinated by the Graduate School of Business and Public Administration. Similar programs are in operation at six other universities.

The purpose of the program is to provide a link between the individual's employment experience to date and his long-term career interest. Its emphasis is on intellectual breadth rather than job-related specificity.

In selecting courses appropriate to their respective needs and aspirations, participants avail themselves of study opportunities and develop close associations with appropriate faculty members throughout the University. They participate in a special seminar designed to integrate their individual study programs into a sophisticated exploration of selected public policy issues.

Further information concerning this program is set forth in a special brochure which may be obtained by writing to the School.

## Food Distribution Program

A cooperative program in food distribution, carried on by the College of Agriculture and the Graduate School of Business and Public Administration, is designed to provide full-time academic training for those already employed in the food manufacturing and distribution industry and for students who wish to combine a study of the fundamentals of business administration with a study of food distribution. Three types of training are offered: 1) "special" student training, usually for one year, for those who are not interested in becoming candidates for degrees, 2) four-year undergraduate degree training for those who desire broad training with specialization in the food distribution field, and 3) graduate work leading to the Master's and Doctor's degrees for qualified students who have Bachelor's degrees. Students in the Graduate School of Business and Public Administration may elect this program as a field of concentration during their second year of study.

Special students and four-year undergraduate students register in the College of Agriculture. Candidates for the graduate degrees register in the Graduate School and take their major in agricultural economics. The National Association of Food Chains has made available a number of fellowships of \$1,500 each for employees in the food industry. Further information may be obtained by writing to Professor Wendell Earle, Food Distribution Program, Warren Hall, Ithaca, New York 14850.

## International Programs

Over the last several years the School's faculty has become increasingly committed to participation in projects with an overseas focus. These projects serve the twin objectives of assisting in the development of foreign institutions and generating expanded opportunities for international studies in the School.

From 1962 through 1969, the School participated in the development of a program in business administration at the Middle East Technical University (METU) in Ankara, Turkey. Under a contract financed by the Agency for International Development of the Department of State, eighteen members of the staff of METU came to Cornell and other universities for degree programs in business administration, and eleven professors have served in Ankara for periods ranging from one to three years.

A student-faculty exchange program has been inaugurated with Louvain University, Belgium. In the fall of 1969 two students of this School enrolled in the Department of Applied Economics of Louvain in a one-year program leading to the License degree. Similarly, two Belgians came to this School to work for the M.B.A. degree. Each institution pays for the tuition, fees, and maintenance of the visiting students. Prior to beginning their academic work at Louvain, the Cornell students spend three months in Europe working for a Belgian firm or taking intensive French language instruction. All students of this School may apply for the exchange, with the selection based on academic average, language skill, and interest in studying and living abroad for one year.

During the past five years the School has cooperated in the establishment of programs in management at the University of the West Indies. Several Cornell professors have participated in four-week management development programs in Trinidad, and shorter programs have also been held. Members of the School's faculty are serving as consultants to officers of the University of the West Indies. Graduates of this School and other divisions of the University are engaged in teaching and research in Trinidad, and several students with an interest in management from Trinidad have received advanced degrees at Cornell.

### Program on Science, Technology, and Society

Cornell has instituted an interdisciplinary Program on Science, Technology, and Society to stimulate teaching and research on the interaction of science and technology and contemporary society. New research and teaching efforts have been and are being initiated, and the program lends support in the coordination of the activities in the area.

Among the topics considered are science, technology, and national defense; world population and food resources; legal and moral implications of modern biology and medicine; national policy for the develop-

ment of science; sociology of science; and the ecological impact of developing technology.

Courses, seminars, workshops, special studies, and research programs are or will be employed in implementing the program. Faculty and students from all the schools and colleges at Cornell are invited to participate.

Professor Richard A. Rettig of the Graduate School of Business and Public Administration teaches in the Program and serves as the School's coordinator for the Program.

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