RECORD OF
HE UNIVERSITY OF NORTH
AROLINA AT CHAPEL HILL

MBER 21, 1972

1973-1974 ISSUE

THE GRADUATE SCHOOL OF BUSINESS ADMINISTRATION

RECORD OF
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DECEMBER 21,1972 NUMBER 783

RECORD OF THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

THE ONE-HUNDRED AND
SEVENTY-NINTH SESSION

THE GRADUATE
SCHOOL OF BUSINESS ADMINISTRATION

Announcements for the Session
1973-1974

THE UNIVERSITY OF NORTH CAROLINA

Sixteen Constituent Institutions

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The University of North Carolina was chartered in 1789 and opened its doors to students in 1795. It has been governed by a Board of Trustees chosen by the Legislature and presided over by the Governor. During the period 1917-1972, the Board consisted of one hundred elected members and a varying number of ex-officio members.

By act of the General Assembly of 1931, without change of name, it was merged with The North Carolina College for Women at Greensboro and The North Carolina State College of Agriculture and Engineering at Raleigh to form a multicampus institution designated The University of North Carolina.

In 1963 the General Assembly changed the name of the campus at Chapel Hill to The University of North Carolina at Chapel Hill and that at Greensboro to The University of North Carolina at Greensboro and, in 1965, the name of the campus at Raleigh to North Carolina State University at Raleigh.

Charlotte College was added as The University of North Carolina at Charlotte in 1965, and, in 1969, Asheville-Biltmore College and Wilmington College became The University of North Carolina at Asheville and The University of North Carolina at Wilmington respectively.

A revision of the North Carolina State Constitution adopted in November 1970 included the following: "The General Assembly shall maintain a public system of higher education, comprising The University of North Carolina and such other institutions of higher education as the General Assembly may deem wise. The General Assembly shall provide for the selection of trustees of the University of North Carolina . . . ." In slightly different language, this provision had been in the Constitution since 1868.

On October 30, 1971, the General Assembly in special session merged, without changing their names, the other ten state-supported senior institutions into the University as follows: Appalachian State University, East Carolina

University, Elizabeth City State University, Fayetteville State University, North Carolina Agricultural and Technical State University, North Carolina Central University, North Carolina School of the Arts, Pembroke State University, Western Carolina University, and Winston-Salem State University. This merger became effective on July 1, 1972.

The Board of Trustees became the Board of Governors and the number was reduced to thirty-five members (thirty-two after July 1, 1973) elected by the General Assembly. It is "responsible for the general determination, control, supervision, management, and governance of all affairs of the constituent institutions." However, each constituent institution has a local board of trustees of thirteen members, eight of whom are appointed by the Board of Governors, four by the Governor, and one, the elected president of the student body, whose principal powers are exercised under a delegation from the Board of Governors.

Each institution has its own faculty and student body, and each is headed by a chancellor as its chief administrative officer. Unified general policy and appropriate allocation of function are effected by the Board of Governors and by the President with other administrative officers of the University. The General Administration office is located in Chapel Hill.

The chancellors of the constituent institutions are responsible to the President as the chief administrative and executive officer of The University of North Carolina.

CALENDAR OF EVENTS
1973-1974

SUMMER SESSION, 1973

First Term

May 31, Thursday	Registration for first term.
June 1, Friday	First day of classes.
June 8, Friday	Last day for submitting an application for a degree and an application for admission to candidacy for the master's degree for the August Commencement. Last day for submitting an application for degree for the doctoral degree.
June 15, Friday	Examination for reading knowledge in English will be given in 223 Greenlaw, Department of English. Students should register to take the exam by June 11 in 204 Greenlaw.
June 26, Tuesday	Last day to drop a course.
July 3, Tuesday	Last day of classes for first term.
July 5-6, Thursday-Friday	Final examinations in courses for the first term.

Second Term

July 9, Monday	Registration for the second term.
July 10, Tuesday	First day of classes.
July 17, Tuesday	Doctoral dissertations and master's theses for candidates for the August Commencement must be filed in the Graduate School by this date.
July 28, Saturday	Written examinations for the master's candidates for the August Commencement may not be taken after this date.
August 3, Friday	Last day to drop a course.
August 4, Saturday	Last day for final oral examinations for the master's or doctoral degrees for graduation in August.
Augist 10, Friday	Last day of classes for second term.
August 13-14, Monday-Tuesday	Final examinations in courses for the second term.

FALL SEMESTER, 1973

August 27-29 Monday-Wednesday	Registration for the fall semester.
August 30, Thursday	Class work begins.
August 31, Friday	Examination for proficiency and reading knowledge in English will be given at 5:00 P.M. in 101 Greenlaw, Department of English. Students should register to take the exam by August 28 at 204 Greenlaw.
October 19, Friday	Last day for submitting an application for a degree and an application for admission to candidacy for the master's degree for the December Commencement. Last day for submitting an application for degree for the doctoral degree.
November 21, Wednesday	Thanksgiving recess begins at 1:00 P.M.
November 23, Friday	Last day to drop a course.
November 26, Monday	Classes resume in all departments at 8:00 A.M.
November 30, Friday	Doctoral dissertations and master's theses for candidates for the December Commencement must be filed in the Graduate School by this date. (No typing extension will be given for this graduation.
December 1, Saturday	Written examinations for master's candidates for the December Commencement may not be taken after this date.
December 7, Friday	Classes for fall semester end at 6:00 P.M.
December 8, Saturday	Last day for the final oral examination for the master's or doctoral degrees for graduation in December.
December 11-20, Tuesday-Saturday Monday-Thursday	Examinations in courses.

SPRING SEMESTER, 1974

January 8, Tuesday	Registration fr the spring semester.
January 9, Wednesday	Class work begins.
January 18, Friday	Examination for reading knowledge in English will be given at 5:00 P.M. in 223 Green-

	law, Department of English. Students should register to take the exam by January 15 at 204 Greenlaw.
January 25, Friday	Last day for submitting an application for a degree, and an application for admission to candidacy, for the master's degree, for the May Commencement. Last day for submitting an application for degree for the doctoral degree.
March 11, Monday	Spring recess begins at 8:00 A.M.
March 18, Monday	Classes resume in all departments at 8:00 A.M.
March 22, Friday	Doctoral dissertations and master's theses for candidates for the May Commencement must be filed in the Graduate School by this date.
April 11, Thursday	Last day to drop a course.
April 13, Saturday	Written examinations for the master's candidates for the May Commencement may not be taken after this date.
April 25, Thursday	Classes for spring semester end at 6:00 P.M.
April 27, Saturday	Last day for final oral examinations for the master's or doctoral degrees for graduation in May.
April 29-May 8, Monday-Saturday Monday-Wednesday	Examinations in courses.
May 12, Sunday	Commencement.

Special Deadlines for Applications for Admission

July 1, 1972	Last day for submitting application for admission to the Fall Semester.
November 1, 1972	Last day for submitting application for admission to the Spring Semester.
February 1, 1973	Last day for submitting application for most graduate appointments.
May 19, 1973	Last day for submitting application for admission to the First Term of the Summer Session.
June 23, 1973	Last day for submitting application for admission to the Second Term of the Summer Session.

Testing And Registration Dates For ETS Foreign Language Examinations

1973-1974

Examination Date	Oct. 27	Jan. 19	April 27	June 15
Penalty Date (Late date for receipt of Registration form without $3.00 penalty fee)	Oct. 2	Dec. 26	April 2	May 21
Closing date (Last Date for guaranteed registration or for changes in registration)	Oct. 9	Jan. 1	April 9	May 28

*These are tentative dates, subject to change.

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1. The Chancellor, the Provost, and the Director of Libraries are ex officio members of the Board.
2. Terms expire December 31 of years indicated.

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3. The Chancellor and the Provost are ex officio members of the Board. The Associate Dean of the School serves as Secretary of the Board.

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4. Resigned, August 31, 1972.
5. Absent on leave, September 1, 1972 through August 31, 1973.
6. Absent on leave, September, 1972 through August 31, 1973.
7. Resigned, August 31, 1972.

BASHEER A.M. KHUMAWALA, Ph.D., Assistant Professor of Business Administration
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8. Resigned, December 31, 1972.
9. Resigned, August 31, 1972.
10. Absent on leave, September 1, 1972 through August 31, 1973.

RICHARD MICHAEL SCHEFFLER, Ph.D., Assistant Professor of Economics
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11. Resigned, August 31, 1972.

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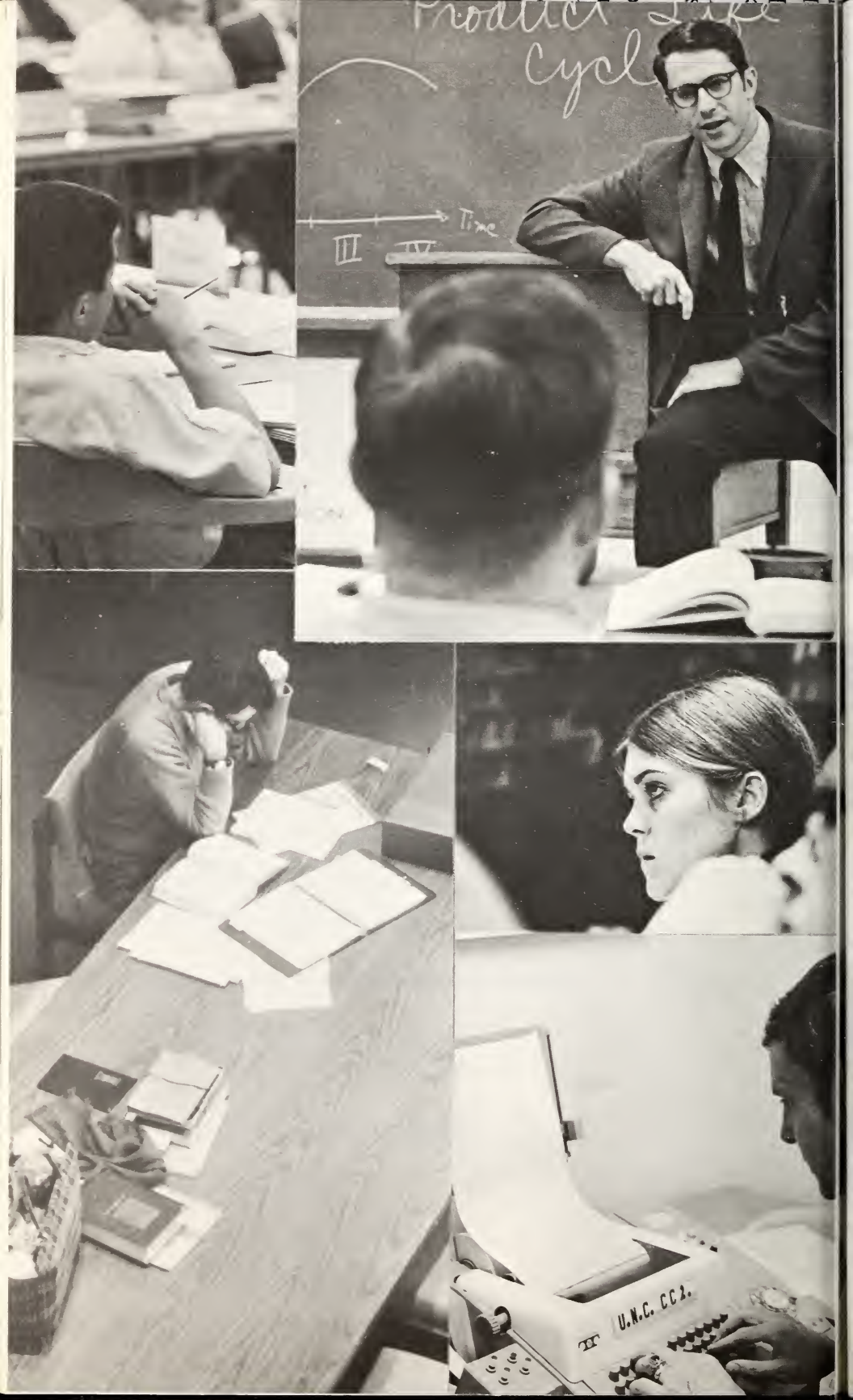
Walter E. Heller M.B.A. Scholar

HERBERT A. TRIPP, B.A.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INTRODUCTION

THE UNIVERSITY

The Graduate School of Business Administration at Chapel Hill shares an important heritage in the rich history of the first state university to open its doors to students.

Provided for in the North Carolina Constitution of 1776 and chartered by the General Assembly of 1789, The University of North Carolina at Chapel Hill laid the cornerstone of its first building in 1793. On February 12, 1795, the new institution admitted its first student, thereby becoming the first state university to begin instruction, and later to send its students out into the nation bearing a state university diploma.

By September, 1972, 177 years later, The University of North Carolina at Chapel Hill had a student enrollment in excess of 18,000 and a full-time and part-time faculty of more than 1,500.

The heavily wooded campus, situated at the edge of Chapel Hill, the small, but internationally recognized university community, covers an area of more than 1,700 acres. Its myriad trees, brick walks, and gravel paths range over a rolling terrain interspersed with brick buildings of predominantly Georgian architecture, functional in purpose, and practical in arrangement.

Instructional, research, residence, and auxiliary facilities for more than seventy departments comprising fourteen and schools are provided.

The University Library, one of the largest in the Southeast, contains a collection of two million volumes. Its distinguished Southern Historical Collection and Rare Book Room serve as important adjuncts to the Business Administration-Social Science Division and other collections.

A tradition of excellence in undergraduate instruction, with emphasis on the broad spectrum of liberal arts education, has established a sound base for graduate and professional studies. Interdisciplinary and inter-departmental cooperation have provided new approaches to traditional curriculum patterns.

GRADUATE STUDIES

Graduate studies at Chapel Hill are a logical outgrowth of the history of the University. An interest in research has from the beginning been a part of that history. To foster the spirit and practice of investigation was a fulfillment of the injunction in the Constitution of North Carolina that "all useful learning shall be duly encouraged and promoted in one or more universities."

Officials of the University, prior to its opening in 1795, manifested the desire to promote scientific research in physics and astronomy by purchasing appropriate scientific equipment in 1792. The same desire was evident in 1824 when President Caldwell was sent to Europe to purchase books and additional scientific apparatus.

As early as 1854 the catalogue of the University carried an announcement of graduate work in courses. In 1876, the catalogue announced the requirements for the master's degree, and the next issue carried an announcement of regulations governing the degrees of Master of Arts, Master of Science, and Doctor of Philosophy. Several graduate degrees were awarded before the turn of the century, the first Ph.D. being conferred in 1883. It was not until 1903 that a separate Graduate School with a dean was established.

All Master's degrees offered by the University and the degrees of Doctor of Philosophy, Doctor of Education, and Doctor of Public Health are administered by the Graduate School of the University.

BUSINESS ADMINISTRATION

Having offered courses of instruction in economics and business administration subjects for many years, the University in 1919, established the School of Commerce. In 1923, early in the life of that organization, the School of Commerce was accepted into membership in the American Association of Collegiate Schools of Business, the official accrediting agency in the field of collegiate education for business. In 1950, the name of the School was changed to the School of Business Administration, and in 1962 the School was authorized to designate its graduate program as the Graduate School of Business Administration.

The Graduate School of Business Administration, through the Graduate School of the University, offers programs leading to the degrees of Master of Business Administration and Doctor of Philosophy.

The Department of Economics, through the Graduate School of the University, offers work leading to the degrees of Master of Arts and Doctor of Philosophy. Persons wishing information about the graduate programs in economics should consult the **Graduate School Catalogue,** which may be obtained by writing to the Department of Economics or the Graduate School.

Administrative offices of the Graduate School of Business Administration are located in Carroll Hall, one of the modern buildings which comprise the School. Constructed in 1952, Carroll Hall, Hanes Hall, and Gardner Hall house modern classrooms, seminar rooms, faculty offices, and large and small auditorium facilities for both graduate and undergraduate students. The School's four-story graduate center completed in 1971 provides superior facilities for graduate study, including a graduate reading room, seminars, study carrels, and six teaching amphitheaters designed to facilitate discussion and exchange of ideas in classes of as many as sixty-five students. Time-sharing computer terminals located at the School connect with the IBM System/360, model 75 located on the campus at the Computation Center and with the IBM System/370, model 165 located at the Triangle University Computation Center in the Research Triangle Park.

THE CURRICULUM

At Chapel Hill the patterns of higher education for business have evolved from the interaction of three factors—tradition, innovation, and an awareness of the future. The result is a thoughtful approach to graduate business education.

As a component of a university with a 170-year-old tradition for excellence in liberal arts instruction and research, the Graduate School of Business Administration has remained acutely aware of the importance of a broad background for its students in those disciplines traditionally associated with the arts, humanities, and physical and social sciences.

The curriculum at Chapel Hill has traditionally been based on a student-professor relationship designed to permit a maximum exchange of ideas. Although varied approaches to instruction are utilized, involving the use of cases, simulation, lectures, discussion groups, and seminars with visiting professors, a thread of free and informal exchange persists inside and outside the classroom.

Innovation, too, characterizes the School's approach to course design and content. Building upon the essentials of thoughtful instruction, the Graduate School of Business Administration has experimented imaginatively in interdisciplinary and interdepartmental research, with a resultant impact on course content. As a result, computer-oriented courses in management simulation are offered, together with varied exposures to quantitative methods, as well as operations research and other related areas designed to develop analytic and decision-making skills.

A pervasive concern for the future is evidenced by the development of an integrated curriculum which emphasizes the basic tools of analysis and their application to the process of making decisions rather than a review of current business practices. Inherent in the School's approach to graduate education for business is the conviction that universities can contribute most meaningfully to this process by teaching in those areas of knowledge that provide the theory and principles for sound business practices. Specialized processes and techniques are more properly and better taught by the businesses themselves or acquired through practical experience.

To augment this curriculum and philosophy of instruction, a distinguished and representative faculty has been gathered from throughout the country.

THE MASTER OF BUSINESS ADMINISTRATION

The professional graduate program leading to the Master of Business Administration degree is designed for persons who aspire to executive positions in business. In structure and content, the MBA Program reflects the principle that effective management requires the ability to view the organization as an integrated whole, operating within a larger economic, political, and social environment. The MBA Program emphasizes the analysis of business problems, the determination of business policy, and the cultivation of the skills and judgment involved in responsible management. Because current enrollment is 225 students, MBA education at Chapel Hill is able to stress the student's personal development through structured and informal contacts with the faculty.

The MBA Program is designed for persons with bachelors degrees in liberal arts, social and natural sciences, engineering, and business. There are three major requirements for admission: (1) a generally superior undergraduate record as evidenced by an official transcript from an accredited college or university; (2) a satisfactory score on the Admissions Test for Graduate Study in Business administered by the Educational Testing Service of Princeton, New Jersey; and (3) three supporting letters of recommendation from professors or employers.

MBA's follow an integrated two-year curriculum that allows specialization in the second year. The nature of the first year curriculum requires that students enter the MBA Program only in the fall semester. Candidates for the MBA degree are normally expected to further their understanding of business through first-hand work experience during the summer between the first and second years of the Program.

The First Year

The first-year curriculum is comprised of 17 interlocking "learning modules" of varying length. Students develop competence in each of the functional areas of business – accounting, finance, marketing, and operations management, as well as a basic understanding of quantitative decision tools, organizational behavior, theory of the firm, and macroeconomics. The year-long course in Integrative Management taught by the case method helps students draw together materials from their on-going coursework and apply them to

business problems. Written and oral reports are evaluated by members of the English and Speech Departments, as well as by faculty members of the Business School.

Upon successful completion of the first year, students receive credits in the following courses:

BA 200	Quantitative Methods I
BA 201	Quantitative Methods II
BA 230	Production Management
BA 250	Human Behavior in Management
BA 260	Marketing Management
BA 270	Management and Financial Accounting
BA 280	Financial Management
BA 297	Integrative Management and Business Communication
Econ 288	Managerial Economics
Econ 289	Stabilization and Economic Growth

The Second Year

Each second-year student chooses six electives that enable him to focus on one or two business areas, or to continue to develop his background as a generalist. Field project electives are offered which enable the student to apply his developing expertise to the solution of an actual business problem. Required courses in the second year are:

Fall Semester

BA 220	Comparative Management
BA 294	Business and Society
BA 232	Management Information Systems (eight-week module)

Spring Semester

BA 295 Business Policy

BA 298 Management Simulation (Computer Game)

There is no foreign language requirement and no thesis. An oral examination may be required at the discretion of the faculty.

Where appropriate to the student's program, permission may be granted to take as electives graduate courses from other divisions of the University. For the candidate who plans to continue beyond the MBA Program in the Doctoral Program, selection of second-year electives may be tailored to the requirements of the Ph.D. curriculum.

An opportunity exists for a select number of MBA candidates to earn both a Master of Business Administration degree and a Juris Doctor degree in four years. Selection for this program requires admission to both the MBA Program and the University of North Carolina Law School.

Application forms and a brochure containing detailed information about the MBA Program may be obtained by writing the Director of Admissions of the MBA Program, The Graduate School of Business Administration, The University of North Carolina, Chapel Hill, N. C. 27514.

THE DOCTOR OF PHILOSOPHY

The doctoral program is designed primarily for students who desire to pursue a career in research and teaching. The degree of Doctor of Philosophy is conferred upon those who have completed the prescribed course of study, have demonstrated a comprehensive knowledge of Business Administration by satisfactorily completing the doctoral examinations, and have evidenced, through a dissertation, their capacity for independent research, advanced study, and analytical thinking.

GENERAL DEGREE REQUIREMENTS

The requirements for the doctorate degree in business administration are as follows:

Prerequisite Courses

The following work must be offered prior to admission to the Program or satisfactorily completed while in residence:

1. Basic work, at the level of the M.B.A. Program in Accounting, Finance, Human Behavior, Marketing, and Production

"New Carroll" — Center for Graduate Studies in Business

2. Intermediate Economic Theory, both microeconomics and macroeconomics
3. Elementary Statistics
4. Elementary Calculus

The Fundamentals of Business Administration

The following courses or their equivalents must be offered by each candidate:

BA 300	Quantitative Methods in Management I
BA 307	Seminar in the History of Management Thought
BA 350	Organization Theory

Areas of Concentration

A minimum of nine semester hours is required in one of the following areas of concentration:

Accounting	Operations Management
Finance	Organizational Behavior
Marketing	Quantitative Methods

The doctoral programs in these areas are outlined on pages 29-35.

Supporting Courses

Eighteen semester hours of supporting coursework are required, of which six semester hours must be Economics 188, Microeconomic Theory, and Economics 189, Macroeconomic Theory.

Statistics

Each candidate must offer two courses in statistics approved by his advisor and by the Director of the Doctoral Program.

The Doctoral Examination

The Doctoral Examination consists of two parts: a comprehensive written examination in the candidate's area of concentration, taken during the final semester of course work; and a comprehensive oral examination involving the candidate's total program.

The Dissertation

The dissertation represents a thorough investigation of a definite problem, and derives its value from the scholarly and workmanlike manner in which it is organized and presented, from its contribution to learning, and from the development of mental power displayed by the writer. The subject chosen for the dissertation should deal with some area or problem of business administration. A prospectus of the dissertation must be approved by the student's dissertation committee before any substantial amount of work on the dissertation is done.

Two copies of the dissertation must be presented to the Graduate School by the deadline date published in the Calendar of Events, and at least one week prior to the final oral examination. The dissertation must comply with the rules of form for theses prescribed by the Administrative Board of the Graduate School. Each of the two required copies must be accompanied by an abstract.

The dissertation committee will administer a final oral examination, which will cover the field of the dissertation, and which may also include any other material as determined by the committee. No dissertation shall be accepted unless it secures the approval of the dissertation committee.

Publication of the dissertation by means of microfilm is required by the Graduate School. To provide for this, the University has entered into an agreement with University Microfilms, Ann Arbor, Michigan. This firm will, in all cases, make and file a negative copy of each dissertation. It will also deposit one positive copy in the Library of Congress, and will publish an abstract of each dissertation in **Dissertation Abstracts.** The fee for binding and microfilming the dissertation will be $40.00.

Residence Requirements

The minimum residence requirement for a doctoral degree is four semesters and a student must earn at least one academic year (two semesters) of residence credit in continuous resident study on the Chapel Hill campus.

Teaching or Research Experience

As a part of the requirements for the degree each candidate is expected to perform for two semesters of service in teaching and research.

AREAS OF DOCTORAL CONCENTRATION

Accounting

Graduate courses in Accounting are offered by Professors Baskin, Bazley, Brummet, Clarke, Langenderfer, Reynolds, Robey, Terrell, Terrill, and Wyman.

Candidates in the Ph.D. Program study the significant accounting literature and develop an understanding of the controversial issues that are the inevitable consequence of the expanding objectives and changing structure of the accounting field. Valuable insights are gained by study in a variety of areas which are on the frontier of accounting thought, including many of the candidates' own choosing.

A high degree of competence and a depth of perception are expected of the candidate in the operation decision areas of organizations as well as in accounting theory and practice, quantitative methods, economics, behavior, and research methodology. The program emphasizes the use of accounting data in decision areas and the expansion and refinement of a body of accounting theory that will contribute to financial measurement and communications.

A candidate usually participates in from three to six of the courses and seminars listed below. Complete descriptions of these courses appear on pages 75, 78, 79, and 80.

BA 270 Financial and Management Accounting

BA 271 Advanced Financial Accounting Problems

BA 272 Advanced Financial Accounting Theory

BA 273 Management Accounting Theory and Practice

BA 277 Tax Factors in Business Decisions

BA 372 Seminar in Current Accounting Issues

BA 374 Seminar in Concepts of Business Income

BA 376 Seminar in Research in Accounting

BA 377 Seminar in Taxation

BA 399 Seminar in Accounting

Many supporting courses in business administration and related disciplines, including various areas of the behavioral sciences are available for the candidate's election. Courses elected should allow the candidate to develop a comprehensive view of the field of accounting and its relationship to other disciplines.

Finance

Graduate courses in Finance are offered by Professors Avera, Cohan, Dearborn, Kreps, Latane, Phillips, Pringle, and Wyman.

The Ph.D. Program in Finance is designed to provide candidates with the capabilities necessary for a career in teaching and for conducting research in finance for an academic institution, governmental organization, or private enterprise. The program affords an opportunity to acquire a thorough familiarity with the current state and underlying foundations in financial theory in the areas of managerial finance, portfolio management, and financial institutions and markets. To accomplish the objective, the student will need to achieve a reasonable degree of sophistication in the support areas of quantitative methods, statistical analysis, and micro-economic and macro-economic theory, and to develop the ability to apply the principles and precepts of these subjects to the finance area. In addition, he is expected to acquire an appreciation of the problems frequently found in realistic business-financial situations and to demonstrate an ability to apply and adjust his theoretical background in seeking solutions to such problems. The Program in Finance is flexible to the extent that students have an opportunity to take courses in areas or disciplines of individual interest.

Generally, Finance majors are expected to take the following courses:

BA 380 Theory of Financial Management

BA 386 Seminar in Portfolio Management (Economics 386)

BA 385 Seminar in Research in Finance (non-credit)

A student may be advised, depending upon his academic background or interests to take one or more of the following Finance courses:

BA 381 Theory of Financial Management II

BA 387 Quantitative Methods in Finance

BA 388 Seminar in Financial Markets

Complete descriptions of Finance courses appear on page 70.

Marketing

Doctoral courses in Marketing are offered by Professors Headen, Hughes, Littlefield, Russ, and Tillman.

The Ph.D. Program in Marketing is designed to prepare students for teaching and research in an academic institution, government organization, or a private business. The program stresses the development of a high degree of competence in all the general areas of marketing as well as a more thorough grounding in one or more of the sub-areas, such as marketing strategy, promotion, distribution, consumer behavior, or others. Important tools for an understanding of marketing and its applications are provided through offerings of the School of Business Administration and other University departments in behavioral science, quantitative methods, computer techniques, research methods, and the functional areas of business.

The student is required to take three or four of the following courses, depending upon his background. Complete descriptions of these courses appear on page 78.

BA 360 Seminar in Marketing I

BA 361 Seminar in Marketing II

BA 363 Seminar in Market Communication and Stimulation

BA 366 Seminar in Distribution Management

BA 368 Seminar in Marketing Research Methodology

He is also expected to take supporting courses drawn from business administration, economics, journalism, sociology, psychology, political science, information science, public health, or other areas of the University which are relevant to his particular interests.

Operations Management

Graduate courses in Operations Management are offered by Professors Elvers, George, Khumawala, Kottas, Levin, and McLaughlin.

Operations Management is concerned with the efficient and effective design, planning, and management of processes or systems, private or public, which provide goods, services or information. In methodology it seeks both theoretic and pragmatic solutions to situations involving a synthesis of technology, quantitative methods, and behavioral science.

While this area certainly includes the study of production activity and its interface with the other functional areas of the manufacturing firm, Operations Management also extends into fields outside of the industrial environment. Its techniques of critical and quantitative assessment can provide objective insights into the administration of many professional and technical areas, including banks, hospitals, institutions of learning and government departments.

With a mastery of the basic disciplines of quantitative analysis and behavioral science supplying sound framework for decision, the students in the Operations Management Program are guided to apply optimal, heuristic, and simulation approaches on the basis of their potential contribution to the solution of a particular situation within a given organization. These approaches may range from a simple break-even study to a lengthy total-system analysis, or an original optimal control model utilizing the limits of current computer technology. The program provides an opportunity for individual work to gain competence in a wide variety of techniques and areas of application in a practical administrative setting.

The student is required to complete four of the courses listed below. Complete descriptions of these courses appear on page 77.

BA 330 Theory of Operations Management I

BA 331 Theory of Operations Management II

BA 334 Applications in Operations Management

BA 337 Advanced Topics in Operations Management

BA 338 Seminar in Operations Management

Specialists in Operations Management elect supporting courses from the areas of quantitative methods, organizational behavior, operations research, system analysis, computer and information science, statistics, mathematics, economics, or any of the functional areas of business.

Organizational Behavior

Graduate courses in Organizational Behavior are offered by Professors Adams, Bell, Calhoon, Jerdee, Moffie, and Rosen.

The Ph.D. Program in Organizational Behavior is designed to integrate the behavioral and management sciences within a systems framework. The advantages of interaction among the behavioral and management sciences have been increasingly recognized in schools of administration concerned with complex systems of interdependent social, technological and organizational forces. Therefore, in addition to the courses in Organizational Behavior and other offerings in the Graduate School of Business Administration, this program draws upon a university-wide range of graduate resources in the behavioral, quantitative, and management sciences.

A distinctive aspect of the program is its focus on the application of organization theory to a wide range of organizational problems. The faculty's diverse formal training and continuing relationships with a variety of business, public, and university organizations provide candidates with essential opportunities for field work and research.

Doctoral courses in Organizational Behavior are listed below. Complete descriptions of these courses appear on pages 77-78.

BA 351 Individual Behavior in Organizations

BA 352 Interpersonal and Intergroup Behavior in Business Organizations

BA 353 Social-Technical Systems

BA 354 Organizational Design and Development

BA 355 Methods in Organizational Behavior Research

BA 356 Seminar in Organizational Behavior

BA 357 Seminar in Personnel Management

Supporting courses, fitting candidates' needs and interests, are grouped into two broad categories: courses oriented to the behavioral area, such as psychology, sociology, and labor economics; and courses primarily methodological or quantitative in character, including operations research, management science, information science, and statistics. Students may elect courses in both categories or specialize in one.

Quantitative Methods

Graduate courses in Quantitative Methods are offered by Professors Blau, Crabill, DesJardins, Evans, and Rubin.

The Ph.D. Program in Quantitative Methods reflects an imaginative approach to the objective of providing students with a sound theoretical background in the analytical techniques employed in formulating and solving decision problems in business, government organizations, and educational institutions. A graduate of this program will typically enter a career in academic teaching and research or accept a position on a technical research staff. An important characteristic of the program is the flexibility available to the student. He may choose either an applied or theoretical dissertation topic, and in addition, he may supplement the required core of functional business and economics courses with additional elective courses that suit his particular objectives.

Courses in Quantitative Methods are listed below. Complete course descriptions appear on pages 72-73, and 76-77.

BA 205 Dynamic Programming

BA 206 Quantitative Decision Methods

BA 208 Simulation Theory

BA 226 Linear Programming

BA 227 Advanced Mathematical Programming

BA 302 Current Research in Management Science

BA 303 Advanced Topics in Management Science

BA 309 Introduction to Inventory Theory

BA 310 Network Flows and Scheduling Theory

Supporting courses are available from the offerings in business administration, computer and information science, economics, mathematics, operations research and systems analysis, statistics, or other areas of special interest to the individual.

Additional information about the rules governing graduate study is available in **The Graduate Handbook,** which may be obtained by writing The Graduate School, University of North Carolina, Chapel Hill, N. C. 27514.

Application forms and additional information regarding the Ph.D. Program may be obtained by writing the Director of The Doctoral Program, The Graduate School of Business Administration, The University of North Carolina, Chapel Hill, N. C. 27514.

GENERAL DEGREE REGULATIONS

ADMISSION

Students of all races are equally welcome in the University of North Carolina. Persons of all racial backgrounds may apply for and accept admission, confident that the policy and regular practice of the institution will protect them from discrimination.

Applicants who hold the bachelor's or master's degree from recognized colleges or universities accredited by a regional or general accrediting agency will be considered for admission to the Graduate School of Business Administration upon the presentation of official credentials. For admission to a graduate program, a student must have a generally superior undergraduate record. In cases of insufficient preparation in Business Administration and Economics, prerequisite courses which do not carry graduate credit will be prescribed. Appli-

cants for admission are required to take the Graduate Record Examination or the Admission Test for Graduate Study in Business and to submit an official report of the results.[1]

Provisional admission may be granted to applicants who do not meet all of the formal requirements. Such students may qualify as candidates for higher degrees, with the approval of the Administrative Board of the Graduate School of The University of North Carolina at Chapel Hill, after satisfactorily completing whatever prerequisite or additional work may have been assigned, and after demonstrating, through records in graduate courses taken in one or more terms of residence in the Graduate School of Business Administration, that they are qualified to do advanced work.

An applicant admitted to the Graduate School of the University reserves his place by making a $100.00 initial tuition deposit, as outlined on page 49.

Applications for admission to the Graduate School of Business Administration, accompanied by full credentials in the form of transcripts of academic records, and payment of a $10.00 nondeductible, nonrefundable application fee, must be filed in the office of the Dean of the Graduate School of the University **by July 1 for the fall term, and December 1 for the spring term.**

FOREIGN STUDENTS

Since its founding The University of North Carolina at Chapel Hill has admitted students from many different lands and is proud of the international character of the student body. It wishes to maintain this tradition and welcomes inquiries from foreign students. Admission to the Graduate School of Business Administration, however, is of a very selective nature and applicants from abroad are expected to present the same high qualifications as those required of applicants from the United States.

Admission to the School does not imply financial assistance of any kind unless a definite commitment has been made. Since the School is seldom able to offer any kind of financial assistance to foreign students, they should be prepared

1. Information on this test including application blanks may be obtained from the Graduate School of Business Administration of The University of North Carolina at Chapel Hill or by writing the Educational Testing Service, Princeton, New Jersey.

to meet all of the expenses from their own funds or from government sources. While foreign students are considered for scholarships on the same basis as U. S. citizens, this aid is extremely limited. All foreign students should arrange the financing of their proposed graduate program prior to leaving home.

It is necessary that all applicants be able to understand rapid, idiomatic English as spoken in lecture and group discussions by individuals of widely varying accents of this country. The student from abroad must be able to express his thoughts quickly and clearly in spoken and written English, as well as to read it with ease. The quantity and quality of academic work required by the Graduate School of Business Administration cannot be accomplished without such mastery of the English language **before** arrival on the campus.

ADMISSION TO CANDIDACY

Admission to the Graduate School of Business Administration is not tantamount to admission to candidacy for a graduate degree. Formal application for **admission to candidacy** must be submitted to the Administrative Board of the Graduate School of the University on the appropriate forms supplied by that office. This application may not be filed earlier than the first week of the second semester of residence. It must be approved, for a master's degree, at least four months before the degree is conferred; in the case of the doctorate, approximately eight months in advance. Approval of the application is dependent on the work of the student in the Graduate School prior to the time the application is filed; on the certification by the major department that the student is qualified to continue advanced work with a program planned in satisfaction of the requirements for the degree; on the presentation of certificates of proficiency in the foreign languages required for the degree; and on the removal of any special conditions imposed by the Graduate School of Business Administration or the Graduate School of the University.

It should be noted that this distinction between admission to the Graduate School of Business Administration and admission to candidacy for the degree does not necessarily involve any extension of the time required for the degree. Properly qualified students will register at once, with the approval of the departments concerned, for advanced courses, and all advanced courses completed according to the rules for graduate work will be credited toward the degree.

THE UNIVERSITY YEAR [2]

Two semesters of approximately seventeen weeks each and two summer terms of approximately six weeks each constitute the University year. In all of these terms graduate courses are offered and students may register at the beginning of any term.[3] The rules for admission and the requirements for advanced degrees in the Summer Session are the same as in the regular academic year.

ACADEMIC REGULATIONS

The following regulations of the graduate faculty should be observed.

1. Undergraduates in this institution who plan to undertake graduate study in Business Administration, and who in the last semester of residence are required to take less than fifteen semester hours of work to fulfill all requirements for the bachelor's degree, may be allowed to enroll in certain courses with the idea of later obtaining graduate credit, provided the student is not registered for more than fifteen semester hours for any purpose, and provided permission is received from the Dean of the Graduate School of the University. It will be the duty of the Dean of the Graduate School of the University to inform the instructor of the student's plan and to request of the instructor that work of a graduate character is to be accomplished by the student. Before credit will be allowed, the report from the instructor at the end of the course must certify that the student has performed work of graduate standard. The maximum amount of credit to be obtained in this way is that of twelve semester hours.

Aside from credit earned according to the arrangement described in the immediately preceding paragraph, graduate credit may be received only on such courses as are taken after the student has been duly admitted to the Graduate School of the University or on such courses as may be approved for transfer from other universities. (See Regulation No. 5, page 41.)

2. Credit for graduate work to be applied in satisfaction of requirements for the master's degree, not to exceed six semester hours, may be transferred to the Graduate School of Business Administration. Such transfer must be recommended by the chairman of the student's graduate committee and is

2. See Calendar of Events.
3. The nature of the first-year curriculum of the MBA Program requires that students enter only in the fall semester. See page 23.

subject to the approval of the Adminstrative Board of the Graduate School of the University. This transfer does not reduce the minimum residence period.

3. Graduate students are subject to the same rules regarding faithfulness in performance of assigned tasks and regarding examinations and credit as students in other departments of the University. But graduate work presupposes a greater amount of time for research in the library or the laboratory; and the student, being more mature, is thrown more upon his own responsibility. For these reasons excessive registration is not permitted. The basic idea of graduate work is a more intense specialization and a more active investigation than is necessary or wise in undergraduate instruction. The Administrative Board will not count, toward a higher degree, credits acquired by students who are doing work toward a higher degree in any other graduate or professional school at the same period of time, unless such work was undertaken by authorization of the Graduate School of the University.

4. Grades for each course completed are reported to the Dean and to the Recorder. These grades are as follows:

H, which indicates work of outstanding quality.

P, which indicates clearly satisfactory work.

L, which indicates low passing work.

F, which indicates failure.

S, which indicates satisfactory progress on thesis.

Inc., which indicates work incomplete.

Abs., which indicates absent from examination.

The grade **Inc.** may be converted into one of the other grades (**H, P, L,** or **F**) by completing such additional assignments as may be required by the instructor in the course within one calendar year from the date of the student's next registration at the University.

An **unexcused Abs.** may not be removed and automatically becomes an **F.** An **excused Abs.** automatically becomes an **F** one calendar year from the date of the student's next registration at the University.

No work falling below the standard represented by the grade of **L** is counted for graduate work. If, in the judgment of the Administrative Board of the Graduate School of the University, the quality of the work done by any student falls below

the standard expected of a graduate student, the registration of such a student will be cancelled; moreover, any student who receives a permanent grade of **F** will become ineligible for further graduate study in the University, and one who receives three grades of **L** will become ineligible.

5. The unit of work is the semester hour, by which is meant, as a rule, one hour of lecture or at least two hours of laboratory or field work a week for a semester. In some courses open only to graduate students, such as the seminars and other research courses, the formal class exercises are modified. But all such work is credited in terms of semester hours.

Students will not be permitted to register for more than sixteen semester hours in any one semester. The minimum load for a full-time student is that of nine semester hours.

Only work announced as open for graduate credit in this bulletin or work that is approved by the Administrative Board of the Graduate School of the University may be counted toward the higher degrees.

Work done **in absentia** will not be counted for graduate credit, except that in certain cases, approved by the department and by the Administrative Board of the Graduate School of the University, part of the work on the thesis for a higher degree may be done elsewhere and except, further, that part of the work required for the degree of Doctor of Philosophy may, on recommendation of the major department and with the approval of the Administrative Board of the Graduate School of the University, be done at another university. But all such work, even when credited, is subject to examination at the finals required for the degree.

6. Work taken more than five years before that date at which the master's degree is expected may not be used to count for credit toward the degree; and work taken more than eight years before the Ph.D. degree is expected may not be counted for credit toward that degree. For students who entered the University in or after September, 1963, time limits for completion of all degrees will be counted from the date of first registration at the University.

7. Each graduate student works under the direction of a special committee. The program and plan of study proposed by each graduate student must be approved by the Chairman of

Graduate Studies and by the Dean of the Graduate School of Business Administration.

8. Teaching fellows, graduate assistants, and instructors whose time is partly devoted to service to the University, earn residence credit on the same basis as other graduate students. However, because of their service obligation, their registration will be limited to nine or twelve semester hours, according to the fraction of their time that is required for the fulfillment of their duties. Such students in the Graduate School of Business Administration are not permitted to carry a combined course and service load in excess of sixteen semester hours. Full-time instructors are not permitted to carry more than three semester hours for credit in any semester.

9. All master's degrees are terminal degrees and the student must be readmitted for a doctoral program if the department or school wishes the student to continue beyond the master's level.

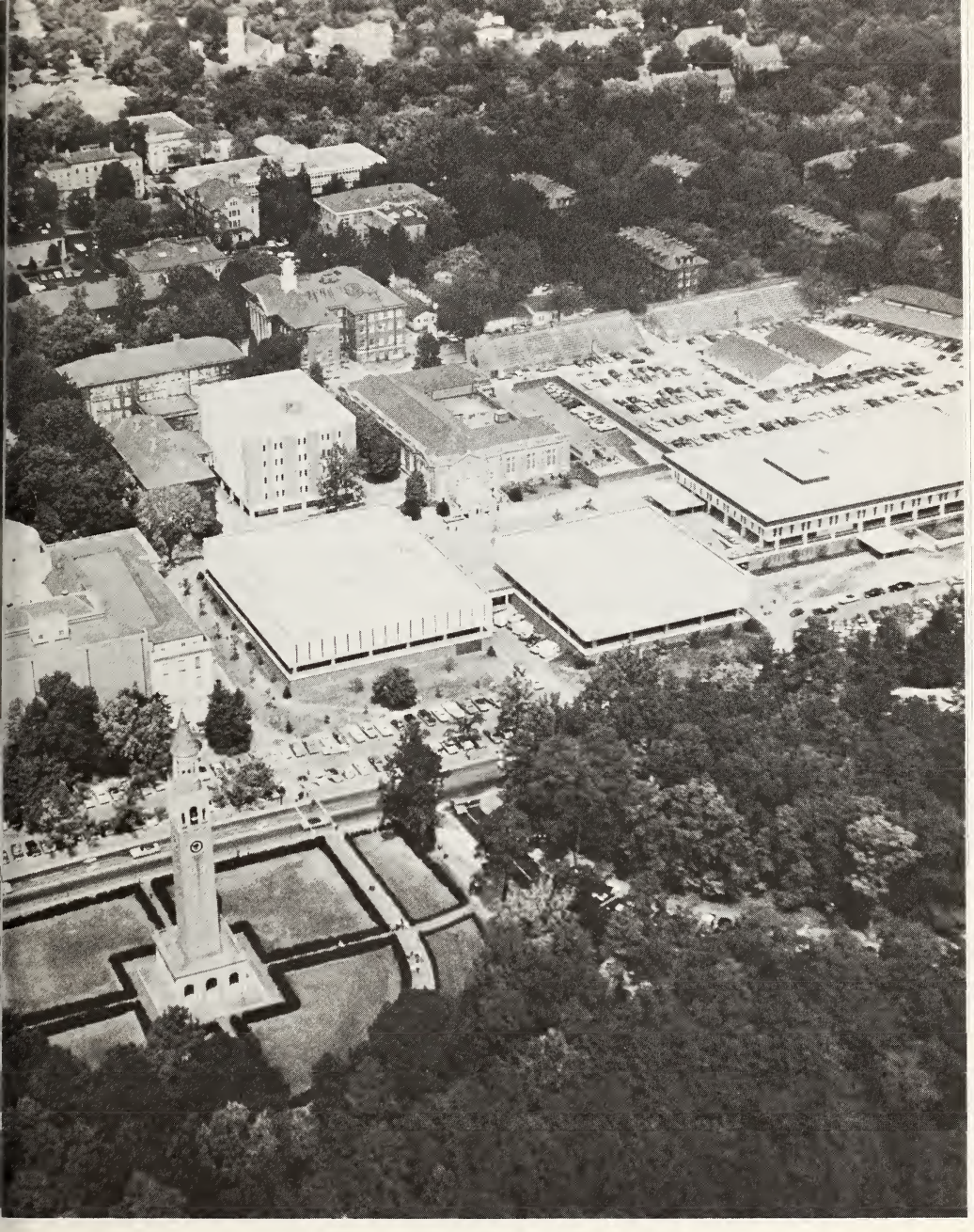
10. A student who has not been in residence for a period of eighteen months must apply for **admission** to the Graduate School at least ninety days before the date on which he plans to return.

11. A student wishing to return to graduate study at the University within eighteen months must request **re-admission** at least ninety days before the date on which he plans to return.

12. For students registered in a spring semester, preregistration for the following semester is **required** if the student plans to be enrolled at that time.

COMMENCEMENT

Master's degrees are awarded at the end of each regular semester and in August. A student must be registered in the University in the term in which he is to be awarded a degree. If his work has been completed before that time, this requirement may be met by filling out the registration forms without registering for any specific course. Attendance at commencement in June is required of all students graduating in the spring semester and not individually excused by the Dean of the Graduate School and the Chancellor of The University of North Carolina at Chapel Hill.



Overview of the South Campus

CAMPUS INFORMATION

LOCATION

The University of North Carolina at Chapel Hill is situated in the approximate center of the state, thirty miles northwest of Raleigh, the state capital, and ten miles southwest of Durham.

Air transportation is available at the Raleigh-Durham Airport, fifteen miles east of Chapel Hill, where regular limousine service is available to the campus. Railroad service to Raleigh via the Seaboard Railroad and to Greensboro via the Southern Railroad is scheduled regularly from all points on the eastern seaboard. Bus transportation is available on a continuing basis to and from the Chapel Hill bus terminal, two blocks from the campus.

HOUSING, LAUNDRY, AND LINEN SERVICES

The University reserves the right to approve the housing of all students whether they live on or off the campus. Each University student is required to maintain a correct local address with the University. By Trustee action the administration is authorized to establish minimum standards of health, safety, and general welfare in regard to housing and to require that students maintain their residence in quarters which comply with these standards. The University reserves the right to make changes in room rent and other charges stated in this section at any time. All charges are tentative and subject to annual cost studies.

University-Operated Facilities

The University provides residence hall accommodations for approximately 6700 students in its graduate center, men's and women's undergraduate residence halls, and coeducational undergraduate residential facilities. All residence halls, or residential areas, offer snack bars, TV rooms, special study and typing rooms, coin laundry, vending machines, private telephones, and social facilities. Some provide limited kitchen facilities; all are near recreational areas, parking lots and food service.

Rooms are rented for the academic year, August through May with the option to cancel at the end of the Fall Semester. Rent does not cover the occupancy during periods when the University is not officially in session. A newly accepted student wishing to live in University Residence Halls should mail the full semester's rent along with the room reservation card to the University Cashier. If for any reason a student wishes to cancel the room reservation, the Department of Residence Life must be notified on or before June 15 for the fall semester, and on or before December 15 for the spring semester. The rent payment, less $25.00, is refundable upon cancellation made by the above dates. After these dates, rent payments are

not refundable except for: illness which prevents enrollment or causes withdrawal; military draft; death in the family; dismissal for disciplinary or academic reasons.

Rates

Men's Halls — semester rent is $165 per person in a double room; $250 for a limited number of single rooms. Women's Halls — semester rent is $215 per person in a double room; $325 for a very limited number of single rooms. Coed Halls — semester rent is $175 per person in a double room; $265 for a single room. All rents include a $5.00 residence hall social fee. These rates are currently under study and are subject to change for 1973-1974.

All rooms are furnished. The University's pillow, linen, and blanket rental service is described in page 46. Students may elect to provide their own bedding.

The occupant of a room will be held directly responsible for all damage to the room and its furniture.

No pets may be kept in University residence halls or housing units. Outside aerials, cooking appliances, and air-conditioning units may not be used. Irons, self-contained coffee pots, and, under certain conditions, refrigerators are exceptions. A limited number of refrigerators are permitted in the residence halls.

After registration, rent for residence halls will not be refunded unless the student withdraws from the University during the first nine weeks of a semester because of illness (if recommended by the Director of Student Health Service), death in the family, dismissal for disciplinary or academic reasons, or military draft. A student dismissed or otherwise withdrawn from the University is expected to leave the University residence within 72 hours.

Residence Hall Tenancy

Students already living in a residence hall and desiring to retain rooms for the next academic year must make application as follows: Pay a $25.00 deposit to the University Cashier, and file a room reservation card with the Housing Assignment Office by the date announced. The deposit is forfeited on cancellation after June 15.

Room assignments will be cancelled and deposit forfeited unless rent for the fall semester is paid in full by June 15.

Room reservation for either of the two summer terms is made upon payment of the full amount of rent for one term,

refundable if cancellation is received by dates specified by the Office of Residence Life.

Conditions of Tenancy

The University reserves the right to make changes in room assignments. The University also reserves the right to require any student whom it considers, for any reason, an undesirable tenant to vacate a residence hall room. The right to occupy a room is not transferable and terminates with the expiration of the lease. Sale or transfer of a student's right to occupancy will be considered a fraudulent transaction and will result in forfeiture of the room by the lessee and the room becomes available for assignment by the Department of Residence Life. The University reserves the right to make changes at any time in room rent and other charges stated in this section.

Housing Units for Married Students

The University has a limited number of housing units for married students. It is the general policy of the University to give priority to the application of married graduate students.

Most of the apartments are unfurnished. Minimum rent for the newer brick apartments is $82.00 per month for one-bedroom units, $92.00 per month for two-bedroom apartments, including electric stoves, refrigerators, heat and water. A limited number of two-bedroom apartments are furnished and rent for $110.00

Early application is urgently recommended and should be addressed to: Manager, Married Student Housing, Branson Street, Odum Village, Chapel Hill, North Carolina 27514. Married students, especially married foreign students, should not bring their families to Chapel Hill until their housing arrangements have been settled.

The Department of Residence Life maintains listings of off-campus accommodations. Arrangements for off-campus housing must be made by applying in person.

Laundry, Linen, Pillow, and Blanket Services, Etc.

Laundry Service: Finished laundry service at reasonable cost is provided by the University Laundry Department to students who wish to use it. There is also an economical wash-dry-fold service (nothing finished). Both services are available on a cash-and-carry basis at any of the eight Laundry Call Offices. Students desiring to do so may use the deposit system in lieu of cash-and-carry for finished laundry.

Linen Rental Service: For students who do not wish to provide their own linen, the University Laundry will furnish two sheets, one pillowcase, and three bath towels each week on an exchange basis. This service is available at all Laundry Call Offices. A fee of $33.00, which includes a $5.00 refundable deposit, for the school year (September through May) is payable when service is requested.

Pillows may be rented for $1.55 for the school year. Blankets are available for a deposit of $5.00 each, with provision for a refund of $2.00 when blanket is returned in good condition.

Dry Cleaning: Complete dry cleaning service is available at all University Laundry Call Offices on a cash-and-carry basis.

Firearms and Other Weapons Prohibited: The possession of bowie knives, dirks, daggers, loaded canes, sword canes, machetes, pistols, rifles, repeating rifles, shotguns, pump guns, or other firearms or explosives upon any University campus or in any University owned or operated facility, unless explicitly permitted by the appropriate Chancellor or his designated representative in writing, is forbidden. Violation of this prohobition constitutes grounds for suspension from the University.

Coin-Op Service: Coin-Op service is available at Avery Craige, James, and Joyner laundry offices.

PRIVATELY OWNED RESIDENCE HALL ACCOMMODATIONS—UNIVERSITY SQUARE

Some graduate students are housed in privately owned Granville Towers, located just off the UNC campus about one block from the Carolina Inn. The three towers of these supervised residence halls have a cafeteria dining commons. The fee charged includes room and board. All correspondence should be directed to the Granville Towers Business Office, University Square, Chapel Hill, North Carolina 27514.

STUDENT HEALTH SERVICE

In order to provide proper medical care for the student, the University employs eleven full-time physicians, one psychiatrist, three half-time clinical psychologists, one full-time general counselor, one full-time marriage counselor, and one full-time health educator to provide general medical care and psychiatric counseling. It maintains a well-appointed infirmary with forty-two beds. Modern diagnostic facilities include a diagnostic X-ray unit under the direction of a full-

time technician, and a clinical laboratory under the direction of three full-time technicians. The Student Health Service is under the immediate supervision of a Director and is provided with a nursing staff of twenty-four persons directed by a nursing supervisor. At the discretion of the attending physician, a student may be admitted to bed, and for such services as may be rendered by the staff, no charges are made. However, certain highly specialized services (major surgery, consultations, certain types of X-ray and laboratory procedures) not available at the Health Service, are rendered by the N. C. Memorial Hospital at standard charges. In addition, a charge is made for inpatient meals and for other than routine drugs or dressings provided on either an inpatient or outpatient basis. Charges are also made for routine procedures not directly related to the health of a student—such as preemployment physical examinations, and the like—and for services rendered at times when the student is not actually enrolled in the University.

INTER-COLLEGIATE ATHLETICS

Athletic sports and all kinds of physical activity are encouraged. The program of intercollegiate athletics includes a great variety of seasonal competitive games and thus promotes maximum participation by members of the student body.

RELIGIOUS INTEREST AND ACTIVITIES

The interest of the University in the religious life of the community is expressed in the encouragement of Foundations or centers supported by Protestant, Catholic and Jewish institutions in the community and the support of the YMCA-YWCA on campus. The foundations and the YMCA-YWCA are staffed by persons trained in theology who seek to minister to the religious interests and needs of the entire University.

PLACEMENT ACTIVITIES

Through its Placement Service Offices, the University aids students and alumni in solving the problem of postgraduate employment. It also operates a Teacher Placement service for graduate students seeking jobs on the junior college or college level. Registration is voluntary, and there is no charge for the service.

The Graduate School of Business Administration assists its students in finding employment through its comprehensive contacts with other colleges and universities and its general knowledge of placement opportunities.

TUITION AND FEES*

Graduate students are charged tuition at the following rates: Residents of North Carolina, one through three hours, $37.50; four through six hours, $75.00; seven or more hours, $112.50. Nonresidents, one through three hours, $300.00; four through six hours, $600.00; seven or more hours, $900.00.

In addition to the tuition charge, the fees payable at the beginning of each semester are listed below:

Fees, M.B.A. Program	$104.00
Fees, Doctoral Programs	$96.50

Tuition Deposits

1. **Initial Tuition Deposit:** Each applicant for admission who is accepted by the institution is required to remit to the institution an advance deposit of not less than one hundred dollars ($100.00) to be applied against the student's tuition and fees for the academic term for which he has been accepted, said sum to be paid within three weeks of the mailing by the institution of the notice of acceptance; if the deposit is not paid within said period the applicant shall be assumed to have withdrawn his application. In the event of hardship, the deposit may be waived by the institution in its discretion. If the applicant, after remitting his deposit, decides not to attend the institution and gives notice of this decision by May 1, in the case of application for the fall term, or at least one month prior to the beginning of the term, in the case of application for the spring or winter term, the deposit shall be refunded. Deposits made by students who fail to give notice of withdrawal to the institution as provided above shall be forfeited to the institution and shall be used to supplement appropriations for scholarships; provided, however, that any deposit shall be refundable if in the judgment of the institution the withdrawal of an applicant is the result of illness, a call to military duty or other circumstances which are beyond the student's control and which the institution deems adequate.

2. **Subsequent Tuition Deposits:** An advance deposit of fifty dollars ($50.00) is required to be made by each student enrolled for the regular academic year who intends to return for the succeeding academic year. The fee shall be paid during the last regular term of the academic year preceding the academic

*With the approval of the proper authorities, the University reserves the right to make changes in tuition and fees at any time.

year for which the deposit is being paid. In the event of hardship, the deposit may be waived by the institution in its discretion. The deposit shall be applied against the student's tuition and fees in the event he returns. If he decides not to return to the institution and gives notice of his decision within 30 days after the last day of the term in which he made the deposit, or if the institution determines that he is not eligible to return, the deposit shall be refunded. Deposits made by students who fail to give notice of withdrawal as provided above shall be forfeited to the institution and shall be used to supplement appropriations for scholarships; provided, however, that any deposit shall be refundable if in the judgment of the institution the withdrawal of an applicant is the result of illness, a call to military duty or other circumstances which are beyond the student's control and which the institution deems adequate.

RESIDENCE STATUS FOR TUITION PAYMENT[1]

1. **General.** The tuition charge for legal residents of North Carolina is less than for nonresidents. To qualify for in-state tuition a legal resident must have maintained his domicile in North Carolina for at least the twelve months next preceding the date of first enrollment or re-enrollment in an institution of higher education in this state.[2] Student status in an institution of higher education in this state shall not constitute eligibility for residence to qualify said student for in-state tuition.

2. **Minors:** A minor is any person who has not reached the age of eighteen years.[3] The legal residence of a person under eighteen years of age at the time of his first enrollment in an institution of higher education in this state is that of his parents, surviving parent, or legal guardian. In cases where parents are divorced or legally separated, the legal residence of the father will control unless custody of the minor has been awarded by court to the mother or to a legal guardian other

1. These regulations, as amended on August 13, 1971, shall be applicable with respect to tuition payments coming due after said date.

2. The reference in this sentence to "twelve months" formerly read "six months"; Chapter 845 of the 1971 Session Laws, which was ratified on July 13, 1971, made the change from "six months" to "twelve months". The office of the Attorney General has rendered the following opinion:

'The eligibility of all students who have applied and have been accepted by state-supported institutions of higher education prior to July 13, 1971, shall be determined upon the individual having maintained his domicile in North Carolina for at least the six months next preceding the date of first enrollment or re-enrollment in an institution of higher education in this State. The twelve-month requirement as provided for in Chapter 845 of the 1971 Session Laws does not apply to any individual who applied for admission and was accepted by a state-supported institution of higher education prior to July 13, 1971. The student already enrolled as an in-state student, qualifying as such by compliance with the six-month requirement prior to July 13, 1971, shall retain in-state status.'

3. Chapter 585 of the 1971 Session Laws, which became effective on July 5, 1971, changed the age of adulthood from twenty-one years to eighteen years.

than a parent. No claim of residence in North Carolina based upon residence of a guardian in North Carolina will be considered if either parent is living unless the action of the court appointing the guardian antedates the student's first enrollment in a North Carolina institution of higher education by at least twelve months.

3. **Adults:** An adult is any person who has reached the age of eighteen years. Persons eighteen or more years of age at the time of first enrollment in an institution of higher education are responsible for establishing their own domicile. Persons reaching the age of eighteen, whose parents are and have been domiciled in North Carolina for at least the preceding twelve months, retain North Carolina residence for tuition payment purposes until domicile in North Carolina is abandoned. If North Carolina residence is abandoned by an adult, maintenance of North Carolina domicile for twelve months as a non-student is required to regain in-state status for tuition payment purposes.

4. **Married Students:** The legal residence of a wife follows that of her husband, except that a woman currently enrolled as an in-state student in an institution of higher education may continue as a resident even though she marries a nonresident. If the husband is a nonresident and separation or divorce occurs, the woman may qualify for in-state tuition after establishing her domicile in North Carolina for at least twelve months as a non-student.

5. **Military Personnel:** No person shall lose his in-state resident status by serving in the Armed Forces outside of the State of North Carolina. A member of the Armed Forces may obtain in-state residence status for himself, his spouse, or his children after maintaining his domicile in North Carolina for at least the twelve months next preceding his or their enrollment or re-enrollment in an institution of higher education in this state.

6. **Aliens:** Aliens lawfully admitted to the United States for permanent residence may establish North Carolina residence in the same manner as any other nonresident.

7. **Property and Taxes:** Ownership of property in or payment of taxes to the State of North Carolina apart from legal residence will not qualify one for the in-state tuition rate.

8. **Change of Status:** The residence status of any student is

determined as of the time of his first enrollment in an institution of higher education in North Carolina except: (a) in the case of a nonresident student at the time of first enrollment who has subsequently maintained domicile as a non-student for at least twelve consecutive months and (b) in the case of a resident who abandons his legal residence in North Carolina. In either case, the appropriate tuition rate will become effective at the beginning of the first subsequent term enrolled.

9. **Responsibility of Students:** Any student or prospective student in doubt concerning his residence status must bear the responsibility for securing a ruling by stating his case in writing to the admissions officer. The student who, due to subsequent events, becomes eligible for a change in classification, whether from out-of-state to in-state or the reverse, has the responsibility of immediately informing the Office of Admissions of this circumstance in writing. Failure to give complete and correct information regarding residence constitutes grounds for disciplinary action.

10. **Appeals of Rulings of Admission Officers:** Any student or prospective student may appeal the ruling of the admissions officer in writing to the Chancellor of the institution. The Chancellor may use any officer or committee which he deems appropriate in review of the appeal. Appeal of the Chancellor's ruling may be made to the President of the University; such appeals to be filed with the Chancellor and forwarded by him to the President.

ACADEMIC AIDS AND RESOURCES

FELLOWSHIPS AND OTHER AIDS

Numerous fellowships, assistantships, and other appointments are available to students who are making progress toward advanced degrees at The University of North Carolina at Chapel Hill. Many of these provide tax-free grants; others provide remuneration for the performance of services such as instructors, research and teaching assistants.

Applicants for appointments must be persons of good character who have demonstrated, or who have definite promise of attaining, proficiency in the subject of graduate study. Information regarding appointments and application forms may be obtained from the office of the Graduate School of Business Administration. The deadline for submission of applications and all supporting materials is February 1. Since the University is a member of the Association of American Universities, the rules of the Association in regard to fellowships are followed, and announcements of appointments to the various fel-

lowships and scholarships will not be made until March 21. Acceptance must be filed in the Graduate School of Business Administration by April 15. Occasionally consideration will be given to applications from highly qualified candidates who by special circumstances have been unable to meet the February 1st deadline date.

A regulation of the University Trustees provides that graduate students who are solicited for a special talent and who are performing specific academic duties may be entitled to a special tuition rate which will be $225.00 for the 1973-1974 academic year.

Available to graduate students in economics and business administration are two teaching fellowships, each of a value of $3,000 annually.

The Julian Price Fellowships, established in 1955, range down from $4,000 and are awarded annually to graduate students in the doctoral programs.

In 1958 the Haskins & Sells Foundation, Inc. established the Haskins & Sells Faculty Assistance Fellowship in the amount of $2,500.

The North Carolina Motor Carriers Association Graduate Research Fellowships in the field of transportation, established in 1959, are awarded in varying amounts to qualified graduate students.

There are a number of Business Foundation Scholarships of varying amounts for M.B.A. and Ph.D. candidates.

Awarded annually to M.B.A. candidates are the Central Carolina Bank Fellowship, The Charlotte Executive Program Club Fellowship and The Executive Program Scholarship, each in the amount of $500; the Collier Cobb and Associates Fellowship, the Wachovia Graduate Business School Fellowship, and the Walter E. Heller Scholarship for $1,000 each; and two Morehead M.B.A. Fellowships which pay tuition and fees and provide a living allowance of $2,500 per year.

A number of graduate teaching and research assistantships are awarded each year. Grading and laboratory assistantships are awarded annually to qualified students.

Several National Defense Fellowships have been awarded to the Graduate School of Business Administration for students pursuing the doctorate.

Detailed information regarding all of these awards may be obtained from the Dean of the Graduate School of Business Administration.

ENDOWMENTS

The Business Foundation

In July, 1946, two hundred seventy-five North Carolina business and educational leaders signed their names to the charter establishing the Business Foundation of North Carolina, Inc. The articles of incorporation provided: "The objects and purposes for which the corporation is formed are to aid and promote, by financial assistance and otherwise, all types of education, service and research for business and industry at or through the School of Commerce and other departments of The University of North Carolina at Chapel Hill . . . ." Over the years contributions to the Foundation from interested businessmen have produced an endowment currently valued at four million dollars. The income from this endowment is used by the School of Business Administration for the following purposes: supplementing salaries of distinguished teachers and researchers; supporting and publishing research; providing graduate fellowships; and expanding programs of service to the business community.

The Julian Price Professorship of Insurance was created in May, 1947, by Mr. Ralph C. Price and Mrs. Kathleen Price Bryan of Greensboro, North Carolina, as a memorial to their father, the former president of the Jefferson Standard Life Insurance Company. Funds from this endowment also provide for the Julian Price Fellowships in Business Administration and Economics. Although created as an endowment separate from the Business Foundation, the Julian Price endowment is closely allied to the Foundation in interest and purpose. The late Julian Price was a charter member of the Foundation.

In October, 1951, the Wachovia Bank and Trust Company, through a generous gift to the Business Foundation, established an endowment for the purpose of supporting instruction and research in the field of banking. Under the terms of the endowment an annual income was used to create the Wachovia Professorship in Banking.

In November, 1951, two additional professorships were created at the School through generous gifts to the Business Foundation. The R. J. Reynolds Tobacco Company established the Reynolds Professorship, currently designated for a professor in the field of Applied Behavioral Sciences; and Burlington Industries, Inc., created the Burlington Industries Chair in Business Administration. Both endowments provide annual income for instruction and research in the respective fields.

Drexel Enterprises, Inc. completed a generous gift of endowment funds to the Business Foundation in March, 1959.

Income from this endowment has been designated for use in support of the Drexel Research Professorship at the School. The Professorship is awarded annually to a faculty member involved in major research responsibilities.

In 1958, the Jefferson Standard Life Insurance Company, the Pilot Life Insurance Company, and the North Carolina National Bank established separate endowments designated as the Jefferson Standard, Pilot Life and North Carolina National Bank Business Education Funds. Annual income from each of these endowments is given to the Business Foundation for unrestricted use by the School of Business Administration.

In 1959, the Business Foundation expanded its membership policy to include, in addition to endowment contributions, gifts expendable by the School in the year in which they are given. A "living endowment," the program is known as the Sustaining Membership Program and is being supported by businesses and individuals whose annual gifts equal the income from a sizeable endowment fund.

The Willard J. Graham Chair of Business Administration was established in April, 1966, by the graduates of The Executive Program to honor Professor Graham, who was Director of the Program from its inception in 1953 until his death in November, 1966. Endowment income is used to support a distinguished professorship in Business Administration.

The Meade H. Willis, Sr. Professorship in Investment Banking was established in 1968 by Meade H. Willis, Jr., Ben S. Willis and James P. Willis, sons of the late well-known investment banker. Annual income is directed toward support of the occupant of the distinguished chair and his work.

In 1972, the Mildred Borden and Robert March Hanes Foundation Trust was established through an earlier bequest of Mrs. Mildred Borden Hanes. Mrs. Hanes wished that the income from the endowment should be used to perpetuate her husband's active interest in the continued growth and improvement of the University of North Carolina, and particularly the School of Business Administration, through the establishment of a distinguished professorship in Business Administration. Robert March Hanes led in the establishment of the Business Foundation of North Carolina, and was the Foundation's first president.

PUBLICATIONS

Central to the function of any graduate institution is the dissemination of the results of the research engaged in by its faculty. To meet this need the School of Business Administration has developed a series of publications designed for dis-

tribution among professional colleagues and other interested individuals and agencies.

The publications of the school are divided into three broad categories, each of which involves a separate format for printing and distribution purposes.

Monographs on research activity of economics or business administration relevance which are too lengthy for professional journal article requirements, but too brief for book form, are published in either **The Research In Economics/ Business Administration Series** or the **Technical Paper Series.**

Articles published in professional journals are reproduced for distribution in the **School of Business Administration Reprint Series** and are included in either the Business Administration or Department of Economics sub-series.

Publication of scholarly works in book-length form is undertaken through The University of North Carolina Press, located at Chapel Hill. Published in a special series, the books are part of the School's **Studies in Economics and Business Administration.**

A current listing of the Research Papers, Technical Papers, and book series is available upon request.

The School also publishes annually a report covering research activities in the School. In this report, **Business and Economic Research,** the general philosophy of the School with respect to the role of research is explained in some detail. Copies of this annual publication may be obtained by writing directly to the School.

Editorial supervision of School of Business Administration publications is vested in its Editorial Committee.

THE SOUTHERN ECONOMIC JOURNAL

The Southern Economic Journal, established in 1933, has been published jointly by Southern Economic Association and The University of North Carolina at Chapel Hill since 1936. It is a quarterly publication containing articles, communications, and book reviews ranging over all fields of economics. It provides a medium for publication of the creative work of southern and other economists. It is now recognized as one of the distinguished American journals in its field and has both a national and international circulation.

THE UNIVERSITY OF NORTH CAROLINA PRESS

The University of North Carolina Press is the primary publishing arm of the University in the scholarly field. In

addition to its publication of the journals of research, it carries on a book publishing program that in recent years has totaled about fifty titles a year. Although these books are the work of scholars from all parts of the world, the presence in the University of a professionally staffed book publishing organization with facilities for the international distribution of works of scholarship is a stimulus to research and writing by members of the University community. The Press's program is an important contribution to the development of that aspect of the University's service which has to do with the advancement of learning.

THE UNIVERSITY LIBRARY

The extensive resources of the two-million-volume University Library include substantial collections in business administration and economics, for both research and instructional purposes. The Business Administration and Social Sciences Division of the Wilson Library is organized to serve the library needs of students and faculty of the School. This Division contains over 550 current scholarly, trade and other journals in business and economics, as well as a selected collection of important books, plus the essential business services. The Wilson Library is a depository for the publications of the federal government and the United Nations. These collections, along with the unique collection of state publications, constitute basic research materials of specific value in business administration and economics. Individual carrels for graduate student use are available in the Library. Through a cooperative arrangement, the collections of the Duke University Library also are available to faculty and graduate students.

The Library maintains a North Carolina Union Catalogue in which the holdings of The University of North Carolina at Chapel Hill, North Carolina State University at Raleigh, The University of North Carolina at Greensboro, and Duke University at Durham are all catalogued. Graduate students may borrow from these other libraries without leaving Chapel Hill, by means of a rapid messenger service. The cooperative acquisitions program followed by these four libraries results in extraordinarily rich library facilities for each of the participating institutions.

THE COMPUTATION CENTER

The Computation Center is equipped with an IBM System/360 model 75 which is available for batch and time-

sharing operations, and which serves as a remote input/output terminal to the IBM System/370, model 165 located in the Triangle University Computation Center in Research Triangle Park. The Triangle University Computation Center was established in 1966 by the University of North Carolina at Chapel Hill, Duke University, and North Carolina State University at Raleigh. Time-sharing consoles at the School of Business Administration feed into both the local and the TUCC systems.

Special short courses are given by the staff of the Computation Center, from time to time, to assist faculty members and students in programming their problems for processing on the computer. The Department of Computer Science offers courses designed for students who are especially interested in the use of high-speed computers. Faculty members and graduate students in business administration may make use of the computer as an aid in their research.

THE CAROLINA POPULATION CENTER

The University of North Carolina at Chapel Hill has an outstanding program of studies in population and family planning. The Carolina Population Center is responsible for stimulating, coordinating, and supporting these studies. It assists in building population research and teaching within the University departments, developing interdisciplinary projects, and maintaining relationships with field activities in North Carolina and abroad for study and service purposes.

The population program involves departmental teaching and research activities in the following disciplines: Anthropology; Business Administration; Economics; Geography; Political Science; Psychology; Radio, Television, and Motion Pictures; Religion; Sociology; Social Work; Zoology; Education; Obstetrics and Gynecology; Genetics; Biostatistics; Epidemiology; Health Administration; Health Education; Maternal and Child Care; and Nursing. Postgraduate students specializing in population avail themselves of basic departmental courses plus a special interdisciplinary program of studies on population and family planning.

The Center works closely with State and County agencies concerned with population and family planning in North Carolina, and also maintains relationships with institutions and agencies with similar interests in India, Thailand, U.A.R., Iran and Chile.

INSTITUTES FOR RESEARCH

The intellectual life of the University and the research

activities of graduate students and faculty alike receive valuable encouragement and support from various institutes. These institutes do not operate as administrative or curricular agencies within the University; they rather serve to obtain financial and organizational assistance for the scholars who constitute their membership.

Institute of Applied Business and Economic Research

The Institute of Applied Business and Economic Research is a unique operation among Southeastern schools of business. It was established in 1971 to encourage and carry out research aimed specifically at solving problems of North Carolina and the Southeastern Region. In addition to providing financial support for such research, the Institute serves as a mechanism for coordinating efforts by University faculty members with those of other agencies, including the Economic Development Administration, the Appalachian and Coastal Plains Regional Commissions, the Research Triangle Institute,the Regional Federal Reserve Banks, appropriate state governmental agencies, and other universities.

The Institute for Research in Social Science

The Institute for Research in Social Science was established in 1924, by Howard W. Odum, to promote and facilitate social science research at The University of North Carolina at Chapel Hill. In performing this function, it has encouraged methodological and theoretical development in social science, extended and intensified the focus of social science investigation, published research articles and monographs, developed research personnel, and cooperated with other agencies toward increasing the utilization of research. The Institute's organizational position in relation to the central administration of the University is similar to that of a school or major division.

The senior staff of the Institute, now approximately 115 in number, generally are faculty members who receive salaries through their academic departments and are given reduced teaching loads to facilitate their research. The breadth of the staff's research interests is suggested by the departmental affiliations: anthropology, business administration, city and regional planning, economics, education, geography, history, journalism, library science, medicine, political science, psychology, public health, social work, and sociology.

The junior staff of the Institute is made up of graduate students who have been granted research assistantships, fellowships, and traineeships on the basis of their academic performance and promise and the availability of research projects on which they could receive experience relevant to their graduate training. Research assistants work under the guidance of a member of the senior staff and assist him in his research. At times the research of graduate students is developed into theses, dissertations, monographs, and articles for professional journals.

In addition to stimulating research by faculty members associated with it, the Institute also initiates and conducts research through its own facilities.

The Institute is also a service agency for research projects in social science. Its services include aid in research design, computer programming, secretarial and clerical assistance, editorial assistance, data-processing consultation, support for graduate assistants, and the publication of research monographs and working papers. Under its NSF award, the Institute established the Social Science Data Center as a readily available source of data to facilitate developmental studies.

The Institute's statistical laboratory is equipped with calculators, unit record equipment, and a 1100 lines per minute printer and a 1000 cards per minute reader/300 cards per minute punch connected directly to the central computer facility on campus; it serves both research and general instructional purposes. The Institute's publications include Research Previews, which is issued about two times a year and carries articles on the research of Institute staff members, and paperbound monographs and working papers, including a methodology series.

Through its Division of Educational Services, the Institute provides help and consultation to students in computer programming and data anlaysis and serves as a teaching adjunct to classroom instruction, ranging from introductory substantive courses to advanced methodological courses.

Information about assistantships and other graduate appointments may be obtained by writing to the chairman of the academic department in which the student wants to pursue graduate study. Information about the Institute's research program may be obtained from the Director, Institute for

Research in Social Science, Manning Hall, Chapel Hill, North Carolina.

Institute of Statistics

The Institute of Statistics is a research agency of The University of North Carolina, established in 1945, to stimulate and strengthen the University's program in statistics on all its campuses. Through sections organized on the different campuses, it plays a major role in assisting local administrations to create, maintain and strengthen departments, and administer grants and contracts which have had to do with statistical theory and practice. It brings distinguished scholars to the University from other centers throughout the world to do research, teaching, and occasional lecturing and is instrumental in organizing summer sessions and conferences. It encourages various separate statistical groups to work together for mutual benefit in teaching and research.

In Raleigh, the Institute cooperates with the Department of Statistics which is organized in the School of Physical and Mathematical Sciences and which engages in much close consulting work with the Agricultural Experiment Station, the Engineering School, and the School of Physical and Applied Mathematics. Besides training graduate students whose chief interest is an application of statistics, the Department of Statistics engages in co-operative research activities with government agencies and with industry throughout the state. In addition to conducting a graduate training program and granting M.S., M.E.S., and Ph.D. degrees in Experimental Statistics, the department conducts the undergraduate teaching of statistics and offers a degree of Bachelor of Arts in Statistics.

In Chapel Hill, the Institute works with many groups. The Department of Statistics is principally concerned with research in theoretical statistics and the training of students for M.S. and Ph.D. degrees; however a strong B.S. degree program is offered for well qualified undergraduates. The Department has active research projects in the area of probability and statistics, which provide opportunities for graduate students to conduct research leading to the Ph.D. degree and to receive stipends during their graduate study.

The Department of Biostatistics in the School of Public Health, the Social Science Statistics Laboratory, the psychometric Laboratory, and the Computation Center are other organizations in Chapel Hill which, together with the Institute of Statistics, engage in cooperative research activities. Also, collaboration with the new Research Triangle Institute nearby is an aspect of current activities. Through the Institute of Statistics, contact between members of the various groups

is maintained and encouraged. Uniting the strengths of several departments and campuses, the Institute in its membership and staff represents a resource in statistics of great distinction.

Other Institutes

In addition to those described above, other institutes of importance to graduate study at Chapel Hill are the Institute of Natural Science, the Institute for Environmental Health Studies, the Institute of Government, the Institute of Latin American Studies, the Institute of Marine Sciences, the Research Laboratories of Anthropology, the Water Resources Research Institute, the Laboratories for Reproductive Biology, the Institute of Folklore, and the Committee on Russian and East European Studies. Information about the operation of any of these institutes may be obtained from the directors.

MANAGEMENT DEVELOPMENT PROGRAMS

BUREAU OF BUSINESS SERVICES

The Bureau of Business Services designs and operates management institutes for business. These institutes are conducted at Chapel Hill and throughout the State of North Carolina.

Management Institutes at Chapel Hill include industry-sponsored institutes and open enrollment institutes. Each industry-sponsored institute usually covers a number of topics of special concern to executive personnel in a particular industry. Open enrollment institutes usually cover a single topic that is timely and relevant to executives without regard to industry group.

The faculty for industry-sponsored institutes usually comprises industry experts as well as representatives cross-section of the School's fulltime permanent faculty. The faculty for open enrollment institutes comprises selected members of the School's faculty whose special expertise is in the subject area being considered by that particular institute.

Information about both types of institutes can be obtained by writing to the Director, Bureau of Business Services, The Graduate School of Business Administration, University of North Carolina, Chapel Hill, N. C. 27514.

MANAGEMENT DEVELOPMENT, INC.

Off-campus general management institutes are conducted in approximately eight North Carolina communities each year. These institutes receive administration and logistical support, together with educational design, from the Bureau of Business Services and Management Development, Inc.

Management Development, Inc. is a non-profit corporation owned and managed by the graduates of The Executive Program. Its objective is to provide local opportunities throughout the State of North Carolina for business executives and professional persons to update and increase their managerial capacity. The faculty for these institutes comprises graduates of The Executive Program and consequently includes outstanding successful executives from all parts of North Carolina and from most of the State's leading business firms. Each such institute is jointly sponsored by Management Development, Inc. and a civic organization in the community, usually the Chamber of Commerce. Information about how to establish a Business

Management Institute in a particular community can be obtained by writing to the Educational Director, Management Development, Inc., Bureau of Business Services, The Graduate School of Business Administration, University of North Carolina, Chapel Hill, N. C. 27514.

THE EXECUTIVE PROGRAM

The Executive Program, a program of advanced study in business administration for men and women in management, was established in 1953. This program is designed for persons already carrying major executive responsibility. All areas are presented from the top management point of view to increase general effectiveness of executive performance. The over-all objective is the development of a broad-gauge senior management personnel.

The Program is not a series of self-contained units; instead attention is devoted to cases and problems which involve several areas. The emphasis is upon (a) the development of an understanding of the problems of **all** divisions of the business and (b) an approach to the solution of these problems from the top management point of view. Each participant prepares, under a faculty advisor, a written five year plan for his firm as part of his graduation requirements for The Program.

The Program consists of a combination of five weekends and three one-week periods of full-time residence. Each applicant for admission should be nominated by his employer and sponsored by him. Admission is highly selective; successful business experience weighs heavily in the selection.

Further details regarding this Program may be obtained by writing to the Director, The Executive Program, School of Business Administration, The University of North Carolina at Chapel Hill.

YOUNG EXECUTIVES INSTITUTE

The Young Executives Institute is an intensive residence management development program specifically designed to satisfy the advanced management training requirement of the younger administrator. It admitted its first class of thirty in Spring, 1971.

The program is structured to provide a formal introduc-

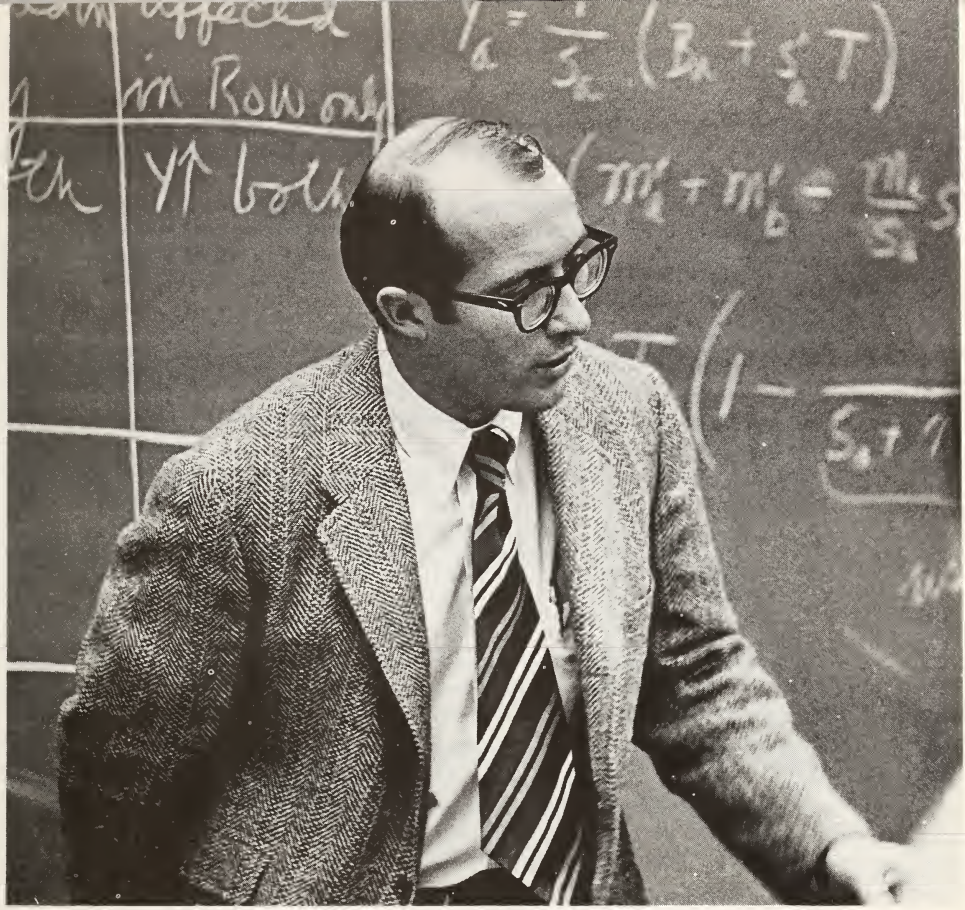
tion to policy decision considerations and advanced training in other aspects of management for young executives being considered for positions with greatly increased responsibility in their organizations. It provides training applicable not only to manufacturing firms but also to service industries, including health, and to local and state governments.

The curriculum includes comprehensive coverage both of functional area issues and the broader cross-functional and cross-disciplinary range of problems. The course is based on a solid exposure to the tool areas: decision analysis, computers and information systems, individual and group behavior, accounting and control. From these foundations the curriculum develops the concept of managerial decision-making skills in the policy areas: marketing, operations, and financial management. Finally, the environment external to the organization is explored through the broad program segments in monetary theory and the corporate role in modern society.

The five-week program is divided into three sessions spaced over the spring semester of each year. In addition to scheduled class sessions, time is provided each evening for in-depth discussion of specific current issues led by a recognized university specialist in the area.

Admission to the Young Executives Institute is open to promising young administrators between the ages of 25 and 35 who have at least five years of managerial experience. All participants are nominated by their companies and selected by the School's Administrative Board.

Futher information regarding YEI may be obtained by writing the Director, Young Executives Institute, School of Business Administration, The University of North Carolina at Chapel Hill.



COURSES OF INSTRUCTION IN BUSINESS ADMINISTRATION AND ECONOMICS*

Business Administration Courses

NOTE: **Economics 31 and 32, or equivalent, are prerequisite to all courses in Business Administration,** except as otherwise indicated. Economics 61 with a grade of C or better may, under certain circumstances, be substituted for Economics 31 and 32.

Courses for Graduates and Advanced Undergraduates

110 **QUANTITATIVE METHODS IN DECISION PROBLEMS I** (3). Prerequisites, Mathematics 22 or 31 and Economics 70, or equivalents. The use of quantitative tools in formulating and analyzing decision problems. Topics include decision analysis, linear programming, and inventory models. **Fall and spring.** Staff.

111 **QUANTITATIVE METHODS IN DECISION MAKING II** (3). Prerequisite, Business Administration 110 or equivalent. Formulations of allocation problems, such as inventory, maintenance, replacement, profit control, and their analysis as sequential decision, network and assignment problems. **Spring.** Staff.

*See the Undergraduate Catalogue for courses available to Undergraduates.

120 **RISK MANAGEMENT** (3). Analysis of the financial problems inherent in the multitude of static risks which confront the business enterprise, and evaluation of the alternative methods of dealing with such problems utilized in modern scientific risk management. **Fall and spring.** J. F. Lee, Schwentker.

121 **LIFE INSURANCE** (3). Basic life insurance principles and practices; includes functions, types of contracts, premium and reserve calculations; legal aspects, settlement options and programming; risk selection; company organization and management. **Fall and spring.** J. F. Lee, Schwentker.

122 **PROPERTY INSURANCE** (3). A study of the more important types of property coverages, including fire, marine, and inland marine insurance. Includes hazards, policy types, rate determination, company organization, financial analysis, and legal background. **Fall and spring.** J. F. Lee, Schwentker.

123 **CASUALTY INSURANCE** (3). The social, economic, and legal bases of workmen's compensation, automobile, accident and health, burglary, fidelity, surety, and other casualty insurance. Includes rate-making contract analysis, types of companies, and state regulation. **Fall and spring.** Schwentker.

124 **ADVANCED LIFE INSURANCE** (3). Prerequisite, Business Administration 121 or equivalent. An introduction to the more specialized life insurance services, such as advanced programming, Social Security benefits, wills, trusts, taxation, estate planning, and business life insurance. **Spring.** Schwentker.

125 **ADVANCED PROPERTY AND CASUALTY INSURANCE** (3). Prerequisites, Business Administration 122 or 123 or equivalents. A study of multiple line insurance, advanced rate-making, financial statements, investments and reserves, insurance statistics, reinsurance, loss adjustment, insurance surveys and government regulation. **Spring.** Schwentker.

130 **PRODUCTION MANAGEMENT** (3). Analysis of the production-operating function in both manufacturing and non-manufacturing organizations. Developing production policies which support total organizational goals under varying constraints. **Fall and spring.** Staff.

131 **PRODUCTION MANAGEMENT ANALYSIS** (3). Prerequisite, Business Administration 130 or equivalent. A case analysis course in which the principles of modern production management are applied to the solution of selected production problems considering the total objectives of the organization. **Fall and spring.** McLaughlin, Kottas.

133 **DESIGNAND OPERATION OF PRODUCTION SYSTEMS** (3). Prerequisite, Business Administration 130 or equivalent. Analysis of the problems of planning and scheduling the production-operating function of a business enterprise. Topics include forecasting, job-shop scheduling, assembly-line balancing, project management. **Fall.** Dannenbring, Elvers.

135 **QUALITY CONTROL STATISTICAL METHODS** (3). Prerequisite, Economics 70 or equivalent. Control charts: variables; defects, defectives. Operating characteristic. Tolerance limits: Single double multiple and sequential sampling. Producer's and consumer's risk. AOQL. **Spring.** Staff.

137 **PRODUCTION MANAGEMENT CONTROLS** (3). Prerequisite, Business Administration 130. Development of the skills necessary to analyze planning and control problems using an integrated set of problems, cases and programming exercises. **Fall and spring.** Kottas.

141 **TRANSPORTATION MANAGEMENT** (3). Management principles applied to transportation as a part of physical distribution. **Fall and spring.** Blaine.

150 **ORGANIZATIONAL BEHAVIOR** (3). Introductory analysis of human behavior in organizations and its applications in organizational and job design, staffing, development, compensation, and labor relations. **Fall and spring.** Staff.

152 **SOCIAL PSYCHOLOGY OF ORGANIZATIONS** (3). Prerequisite, Business Administration 150 or equivalent. Systems analysis of behavior in organizations and its application to the management of human resources. **Fall and spring.** Adams.

153 **SOCIAL-TECHNICAL SYSTEMS** (3). Prerequisite, Business Administration 152 or equivalent. Advanced readings and intensive analysis and discussion of cases and problems in socio-technical systems. **Spring.** Adams.

154 **PERSONNEL DEVELOPMENT** (3). Prerequisite, Business Administration 150 or equivalent. Analysis of problems, methods and incentives in the development of personnel. Emphasis is on the development of supervisors and executives. **Fall and spring.** Calhoon.

155 **ORGANIZATIONAL BEHAVIOR RESEARCH SEMINAR** (3). Prerequisite, Business Administration 150 or equivalent. Introduction to research methods followed by individual readings and research in organizational behavior. **Fall.** Rosen.

157 **PERSONNEL PROBLEMS** (3). Prerequisite, Business Administration 150 or equivalent. An advanced course in personnel administration concentrating on major problems and policies in managing the human resources in an organization. **Fall and spring.** Jerdee, Moffie, Rosen.

160 **PRINCIPLES OF MARKETING** (3). Marketing organization and methods with emphasis on the social and economic aspects of distribution. Consumer problems, marketing functions and institutions, marketing methods and policies. **Fall and spring.** Staff.

161 **ADVERTISING** (3). Prerequisite, Business Administration 160 or equivalent. The organization and functions of advertising. Topics include economic and social aspects; typs of advertising and purposes; media types, selection and evaluation; advertising research. **Fall or spring.** Klompmaker, Littlefield.

162 **SALESMANSHIP AND SALES PROMOTION** (3). Prerequisite, Business Administration 160 or equivalent. Principles of effective selling; professional aspects of personal selling; qualifications and obligations of salesmen; program planning and administration; interdepartmental coordination of promotion efforts. **Fall or spring.** Staff.

163 **MANAGEMENT OF PROMOTION** (3). Prerequisite, Business Administration 160 or equivalent. Consumer behavior, personal selling,

advertising, sales promotion, and the management of total promotion programs. **Fall and spring.** Tillman.

165 **RETAILING** (3). Prerequisite, Business Administration 160 or equivalent. A study of the place of retailing in the economy. Topics include development of the present retail structure, functions performed, principles governing effective operations, modern store policies and practices, and managerial problems. **Fall or spring.** Staff.

166 **DISTRIBUTION MANAGEMENT** (3). Prerequisite, Business Administration 160. The area of distribution in business, including retailing, wholesaling, marketing logistics, distribution analysis. **Fall and spring.** Klompmaker, Russ.

168 **INTRODUCTION TO MARKETING RESEARCH** (3). Prerequisites, Economics 70, Business Administration 160 or equivalents. An introduction to research methodology with emphasis upon the compilation, analysis and interpretation of data used in the planning and control of marketing operations. **Fall and spring.** Kendall, Littlefield, Russ.

169 **MARKETING POLICIES** (3). Prerequisites, Business Administration 160 or equivalent, and senior standing. A problem method course dealing with specialized marketing functions and policies; includes product and line, brands, channels of distribution, prices and pricing, promotion, and diagnosis and control. **Fall and spring.** Headen, Littlefield, Tillman.

170 **ADVANCED FINANCIAL ACCOUNTING I** (3). Prerequisite, Business Administration 72 or equivalent. Income measurement and valuation problems related to cash, marketable securities, receivables and special sales methods, inventories, long term investments, and liabilities. **Fall and spring.** Bazley, Reynolds, Windham.

171 **ADVANCED FINANCIAL ACCOUNTING II** (3). Prerequisite, Business Administration 170 or equivalent. Income measurement and valuation problems related to plant and equipment, intangible assets and stockholder equity; partnership problems; insurance problems; price-level problems; and state analysis. **Fall and spring.** Reynolds, Robey, Windham.

172 **ACCOUNTING THEORY** (3). Prerequisite, senior standing. Critical examination and analysis of accounting principles with emphasis on determination of cost and income, valuation and statement presentation. Study of current problems presented in accounting literature and business cases. **Fall and spring.** Langenderfer.

173 **COST ACCOUNTING** (3). Prerequisite, Business Administration 72 or equivalent. A study of cost systems, including job order, process, and standard costs. Managerial use of information is stressed. **Fall and spring.** Baskin, Terrill.

174 **MANAGEMENT ANALYSIS, REPORTING AND CONTROL** (3). Prerequisite, Business Administration 73 or 173. Development of reasonably precise formulations of specific objectives, concepts and analytical methods to serve the information needs of decision-making and control for various management problems. **Fall and spring.** Baskin, Bazley, Terrill.

175 **AUDITING** (3). Prerequisite, Business Administration 72 or equivalent. A course in auditing theory and practice. Auditing standards, procedures, rules of professional conduct, and related materials of professional importance are studied. **Fall and spring.** Terrell.

177 **PRINCIPLES OF FEDERAL INCOME TAXATION** (3). Prerequisite, Business Administration 72 or 73. Underlying principles of the Federal income tax law; problem recognition and tax planning emphasis. **Fall and spring.** Clarke, Windham.

178 **SPECIALIZED ACCOUNTING PROBLEMS** (3). Prerequisite, Business Administration 171 or equivalent. Advanced problems involving foreign exchange and branches, domestic branches, consolidation, estates and trusts, sick-business problems, compound interest applications, and governmental accounting. **Fall.** Reynolds, Robey.

179 **CERTIFIED PUBLIC ACCOUNTING PROBLEMS** (3). Prerequisite, major in accounting, and approval of the instructor. A review of the general and specialized accounting problems which constitute the subject matter of C.P.A. examinations. **Spring.** Langenderfer, Windham.

180 **BUSINESS FINANCE** (3). Prerequisite, Business Administration 71 or equivalent. Theoretical foundations of optimal financial policy. Problems and cases provide application of theory to financial decisions involving cash flow, capital structure, capital budgeting. **Fall and spring.** Staff.

182 **CASES IN BUSINESS FINANCE** (3). Prerequisite, Business Administration 180 or equivalent. Attention is given to cases involving financial decisions for non-financial corporations. Both long and short term capital problems are considered. **Fall and spring.** Cohan, Dearborn, Pringle, Wyman.

185 **FINANCIAL INSTITUTIONS AND MARKETS** (3). Prerequisite, Business Administration 180 or equivalent. Analysis of the operating policies of financial institutions and the effect of such policies upon the structure of the capital markets. **Fall and spring.** Kreps, Phillips.

186 **INVESTMENTS** (3). Prerequisite, Business Administration 180 or equivalent. A survey of investment principles and practice. Emphasis is given to the problems of security analysis and portfolio management with special attention to the investment problems of the individual investor. **Fall and spring.** Avera, Pringle.

190 **ADMINISTRATIVE POLICY** (3). Prerequisite, senior standing. Comprehensive analysis of administrative policy-making from a total organization point of view; use of case analysis and simulation to develop integrative decision skills. **Spring.** Levin, Tillman.

191 **INTRODUCTION TO INTERNATIONAL BUSINESS** (3). Prerequisite, senior standing. Problems in operating overseas, including analysis of differences in country settings, legal and financial systems, and governmental policies affecting foreign operations. **Fall and spring.** Behrman.

192 **INTRODUCTION TO MANAGEMENT INFORMATION SYSTEMS** (3). Prerequisite, senior standing. A survey of the elements and function

of management information systems and an introduction to the principles underlying the design of effective systems. **Fall.** DesJardins.

194 **CREDIT TRANSACTIONS AND SALES** (3). Prerequisite, Business Administration 91 or equivalent. The laws of negotiable instruments and the legal principles governing sales, including conditional sales and security transactions, are covered. **Fall and spring.** Carter, Stewart.

195 **LAW OF TRADE** (3). Prerequisite, Business Administration 91 or equivalent. This course considers the law affecting the conduct of trade and industry: nature and scope of competition at common law, and legislative attempts to fix the boundaries of permissible competition. **Spring.** Stewart.

197 **FUNDAMENTALS OF MANAGERIAL ORGANIZATION** (3). Prerequisite, senior standing. A detailed analysis of the basic problem of organizing manpower. **Fall and spring.** George.

199 **MANAGEMENT SIMULATION** (3). Open to seniors only. A seminar simulating the operation of a complex business enterprise. Three student teams operate competing firms in an industrial environment simulated by a computer. **Fall and spring.** Dannenbring, Elvers, McLaughlin.

Courses for Graduates

200 **QUANTITATIVE METHODS I** (3). Prerequisite, graduate standing in business administration or economics. An introduction to basic mathematical concepts and their application to decision models in management situations. **Fall.** Evans, Rubin.

201 **QUANTATIVE METHODS II** (3). A continuation of Business Administration 200. **Spring.** Evans, Rubin.

202 **DETERMINISTIC DECISION PROCEDURES** (3). Prerequisite, Business Administration 201 or two semesters of calculus. Model building, optimization, matrix algebra, linear programming, multivariate calculus and constrained optimization, dynamic programming. **Fall.** Staff.

203 **NON-DETERMINISTIC DECISION PROCEDURES** (3). Prerequisite, Business Administration 201 or two semesters of calculus. Set theory, probability, discrete and continuous distributions, sampling distributions, point estimation, linear statistical models, tests of hypotheses, sequential decision models. **Fall.** Staff.

205 **DYNAMIC PROGRAMMING** (3). Prerequisite, Business Administration 201, 209 or equivalent. Development of theoretical and computational aspects of dynamic programming, multi-stage decision processes, the Principle of Optimality, recursive equations, and Marcovian decision problems. **Spring.** Blau.

206 **QUANTITATIVE DECISION METHODS** (3). Prerequisite, Business Administration 205 or equivalent. Introduction to models of decision making under risk. Fundamental aspects of statistical decision theory, Bayesian decision rules, utility theory and game theory. **Spring.** Staff.

207 **HISTORY OF MANAGEMENT THOUGHT** (3). A comparative study and evaluation of the development of management thought. **Fall.** George.

208 **SIMULATION THEORY** (3). Prerequisite, permission of the instructor. Theory and techniques of simulation and gaming, and their use for investigating multivariable interrelationships in complex systems. **Spring.** DesJardins.

209 **BASIC QUANTITATIVE TECHNIQUES I (Economics 209)** (3). Prerequisite, graduate standing in business administration or economics. Elementary calculus, with applications in economic theory, statistics and management science. **Fall.** Staff.

210 **BASIC QUANTITATIVE TECHNIQUES II (Economics 210)** (3). Prerequisite, Business Administration 209 (Economics 209). Matrix algebra and multidimensional calculus, with applications in economic theory, statistics, and management science. **Fall and spring.** Crabill, DesJardins.

220 **COMPARATIVE MANAGEMENT** (3). Comparison of different managerial styles, methods, and settings among the major countries and regions in the world, for the purpose of understanding the problems of doing business in a foreign environment and the different roles of enterprise. **Fall.** Behrman.

225 **STUDIES IN INTERNATIONAL BUSINESS** (3). Prerequisite, Business Administration 220 or permission of instructor. Individual analysis of problems in a functional or on an industry basis. Analysis will also be required of a geographic region, including its attractiveness to U.S. business, its commercial, financial and economic conditions as well as its competitive situations and government policies. **Spring.** Behrman.

226 **LINEAR PROGRAMMING (Economics 226)** (3). Prerequisite, permission of the instructor. A rigorous development of the mathematics of linear programming and its application to practical problems. Extensions to separable, quadratic, and integer programming. **Fall.** Staff.

227 **ADVANCED MATHEMATICAL PROGRAMMING (Economics 227)** (3). Prerequisite, permission of the instructor. An advanced course in classic optimization with constraints. The Kuhn Tucker theory, Lagrange regularity, convex programming, special algorithms, and nonlinear duality theory. **Spring.** Evans.

230 **PRODUCTION MANAGEMENT** (3). Prerequisite, graduate standing in business administration or economics. Analysis and solution of production problems in the total firm environment. The development of production policies and controls under varying objectives and constraints. **Spring.** Dannenbring, Khumawala, McLaughlin.

231 **OPERATIONS MANAGEMENT POLICY** (3). Prerequisite, Business Administration 230 or equivalent. Operations management policy formation and administration by case analysis in selected industries emphasizing integration of operations management with the major goals of the organization. **Spring.** Elvers, McLaughlin.

232 **MANAGEMENT INFORMATION SYSTEMS** (2). A study of the theory, design and use of man-machine information systems for decision making in a management context. Analysis of the computer and communications equipment supporting such systems. **Fall.** Dannenbring, DesJardins.

233 **FUNDAMENTALS OF ORGANIZATION** (2). An intensive examination of the process of organization and its application to managerial endeavors. **Spring.** Bell, George.

234 **APPLICATIONS IN OPERATIONS MANAGEMENT** (3). Prerequisite, Business Administration 230 or equivalent. Use of quantitative procedures to generate operational solutions to operations management problems drawn from area enterprises. **Fall.** Khumawala, Kottas.

235 **OPERATIONS SYSTEMS** (3). Prerequisite, Business Administration 230 or equivalent. Intensive study of approaches to designing efficient operating systems including forecasting; output planning, scheduling and control; inventory control; physical distribution planning, and facilities location. **Fall.** Elvers, Khumawala.

250 **HUMAN BEHAVIOR IN MANAGEMENT** (3). Prerequisite, graduate standing in business administration or economics. The analysis of individual and group behavior in organizations and applications to organizational relations. **Fall.** Bell, Rosen.

252 **CONFLICT IN ORGANIZATIONS** (3). An understanding of the factors in conflict and conflict resolution within management and between management and employees. **Spring.** Calhoon.

254 **ORGANIZATIONAL DEVELOPMENT** (3). Methods for changing and developing individuals, groups, and organizations. Analysis of different individual therapy techniques; group growth techniques such as T-groups; and encounter groups; organization design strategy. **Fall.** Bell.

257 **PERSONNEL ADMINISTRATION** (3). Prerequisite, Business Administration 150 or equivalent. A study of the factors contributing to the building and maintaining of an effective work force. Analysis of problems by case study. **Fall.** Calhoon.

260 **MARKETING MANAGEMENT** (3). Prerequisite, graduate standing in business administration or economics. A course to develop an understanding of marketing problems and to survey policies and procedures for the formulation, execution, and appraisal of marketing programs. **Spring.** Hughes, Kendall.

261 **ADVANCED MARKETING ANALYSIS** (3). Prerequisite, Business Administration 260 or equivalent. Intensive study of market structure and demand analysis for consumer and industrial goods, buyer and consumer behavior, and analysis of distribution systems with analytical techniques. **Fall and spring.** Hughes.

262 **ADVANCED MARKETING PLANNING AND STRATEGY** (3). Prerequisite, Business Administration 261 or equivalent. Development, planning, and evaluation of marketing strategies for products and services at various life cycle stages. Emphasis is on development and evaluation of programs. **Spring.** Klompmaker.

269 **APPLIED MARKETING STRATEGY** (3). Prerequisite, Business Administration 260 or equivalent. Small teams of students develop solutions to actual marketing strategy problems, making final presentations to corporate officers. **Fall or spring.** Hughes.

270 **FINANCIAL AND MANAGEMENT ACCOUNTING** (4). Prerequisite, graduate standing in business administration or economics. Concepts underlying financial reporting. Analysis of cost and quantitative data for managerial purposes. Provides understanding of accounting measurements and appreciation of use of accounting data. **Fall.** Brummet, Langenderfer, Wyman.

271 **ADVANCED FINANCIAL ACCOUNTING PROBLEMS** (3). Prerequisite, Business Administration 270 or equivalent. An advanced problems survey course covering sources and uses of capital; valuation and income determination; reporting issues; analysis of data; consolidated statements; and other topics. **Fall.** Reynolds.

272 **ADVANCED FINANCIAL ACCOUNTING THEORY** (3). Critical examination of accounting concepts and standards. Emphasis on income determination, particularly controversial issues. Study of current problems and contemporary development reflected in research bulletins, monographs, journals, textbooks, and reports. **Spring.** Langenderfer.

273 **MANAGEMENT ACCOUNTING THEORY AND PRACTICE** (3). Prerequisite, Business Administration 270 or equivalent. The role of accounting and the information function within organizations. Management decision models, analyses, and financial controls are considered. **Fall.** Brummet, Terrill.

274 **ACCOUNTING SYSTEMS** (3). Prerequisites, Business Administration 171 and 173, or equivalents. The design and installation of accounting systems for textile and furniture manufacturing firms, banks and public utilities. **Spring.** Baskin.

277 **TAX FACTORS IN BUSINESS DECISIONS** (3). Prerequisite, Business Administration 270 or equivalent. Significance of taxes relevant to business decisions; sets in perspective tax factors and other considerations influencing the decision process. **Spring.** Clarke, Langenderfer.

280 **FINANCIAL MANAGEMENT** (3).Prerequisite, graduate standing in business administration or economics. Analysis of financial problems and policies of non-financial firms including working capital management, capital rationing and cost of capital, and capital structures. **Spring.** Cohan, Dearborn, Pringle, Wyman.

282 **ADVANCED TOPICS IN FINANCIAL MANAGEMENT** (3). Prerequisite, Business Administration 280 or equivalent. Analysis of specific financial problems of interest to financial managers. **Fall or spring.** Cohan, Dearborn, Wyman.

285 **FINANCIAL INSTITUTIONS AND MARKETS** (3). Financial institutions as suppliers of funds to the money and capital markets. Comparative financial policies of institutions considered in the context of their market environments. **Fall or spring.** Kreps, Phillips.

286 **INVESTMENT POLICIES** (3). Prerequisite, Business Administration 180 or equivalent. A basic treatment of investment policies with emphasis upon long-run values. Portfolio policies of financial institutions are examined. **Fall or spring.** Avera, Pringle.

287 **THEORY OF FINANCIAL MANAGEMENT** (3). Prerequisite, Business Administration 280 or equivalent. Conceptual foundations for a theory of financial management; the structure of major areas of financial management, and the theoretical content and validity of formalized techniques for improving decision-making in these areas. **Spring.** Cohan, Dearborn.

292 **LABOR-MANAGEMENT RELATIONS (Economics 292)** (3). An advanced study of the procedure, subject matter and legal framework of collective bargaining. **Spring.** Guthrie.

294 **BUSINESS AND SOCIETY** (3). An analysis of the external environment of which management must be cognizant and of those external factors which may influence management decisions. **Spring.** Barrett.

295 **BUSINESS POLICY** (3). Integrating and building upon the business administration core, this course approches policy-making and administration in a firm from the point of view of top management. **Fall.** Barrett.

297 **INTEGRATIVE MANAGEMENT AND BUSINESS COMMUNICATION** (3). Prerequisite, graduate standing. Two-semester course beginning Fall Semester only. Integration of the functional and tool courses and their application to a variety of business problems; emphasis on problem identification and on oral and written communication of analysis and recommendations. **Fall and spring.** Holsten, Levin. Staff.

298 **MANAGEMENT SIMULATION** (3). Prerequisite, permission of the instructor. A seminar in the application of analytical techniques and managerial principles to policy formulation and implementation in a complex computer-simulated environment. **Spring.** Elvers, Levin.

299 **SEMINAR IN BUSINESS POLICY** (3). Prerequisite, Business Administration 295 or equivalent. Case analysis in depth of top management problems. **Spring.** Barrett.

300 **QUANTITATIVE METHODS IN MANAGEMENT I** (3). Prerequisite, Business Administration 209 and Economics 70 or equivalents. Multivariable deterministic models. Stochastic models, linear equations, and matrices, linear systems. **Fall.** Evans, Rubin.

301 **QUANTITATIVE METHODS IN MANAGEMENT II** (3). Prerequisite, Business Administration 300 or equivalent. Statistical inference, analysis of variance, regression and correlation, time series analysis, multiple regression, design of experiments, statistical decision theory. **Spring.** Blau, Crabill.

302 **CURRENT RESEARCH IN MANAGEMENT SCIENCE** (0). Prerequisite, permission of the instructor. Survey of the current literature in management science and operations research. **Fall and spring.** Staff.

303 **ADVANCED TOPICS IN MANAGEMENT SCIENCE** (3). Prerequisite, permission of the instructor. In-depth study of a specific area of contemporary research in management science. **Spring.** Staff.

304 **PROBLEMS OF OPTIMAL CONTROL IN OPERATIONS RESEARCH** (3). Prerequisite, permission of the instructor. A seminar in opti-

mization of continuous and discrete dynamic systems. The application of Maximal Principle to control problems. **Spring.** Staff.

307 **SEMINAR IN THE HISTORY OF MANAGEMENT THOUGHT** (3). An advanced course dealing with the evolution of management thought. **Spring.** George.

309 **INTRODUCTION TO INVENTORY THEORY** (3). Prerequisite, permission of the instructor. Introduction to the techniques of constructing and analyzing mathematical models of inventory systems. **Fall.** Crabill.

310 **NETWORK FLOWS AND SCHEDULING THEORY** (3). Prerequisite, permission of the instructor. Network flow models such as the maximum flow assignment, and shortest route problem; flow shop and job shop scheduling models; deterministic and stochastic results. **Fall.** Crabill, Rubin.

330 **THEORY OF OPERATIONS MANAGEMENT I** (3). Prerequisites, Business Administration 209 and 230, or equivalents. Rigorous study of traditional and modern issues, problems and approaches in operations management. **Fall.** Elvers, Khumawala, Kottas.

331 **THEORY OF OPERATIONS MANAGEMENT II** (3). Prerequisite, Business Administration 330 or equivalent. A continuation of Business Administration 330. **Spring.** Dannenbring, Elvers, Khumawala, Kottas.

334 **APPLICATIONS IN OPERATIONS MANAGEMENT** (3). Prerequisite, permission of the instructor. Intensive study of the problems of applying the theory of operations management in actual situations; problems of formulation, model building, data collection and experimentation. **Spring.** Elvers, Khumawala, Kottas.

337 **ADVANCED TOPICS IN OPERATIONS MANAGEMENT** (3). Prerequisite, permission of the instructor. Intensive study of a specific area in operations management. **Fall.** Staff.

338 **SEMINAR IN OPERATIONS MANAGEMENT** (3). Prerequisite, permission of the instructor. Intensive study of a specific area in operations management. **Spring.** Staff.

350 **ORGANIZATION THEORY** (3). Intensive examination of the literature and fundamental concepts of organization and their applications to managerial action; applications of the research findings from the behavioral sciences to management problems. **Spring.** Bell, Rosen.

351 **INDIVIDUAL BEHAVIOR IN ORGANIZATIONS** (3). Analysis of individual behavior, adjustment, and effectiveness. Examination of perception, learning, problem-solving, decision-making, motivation, and personality. Applications to management of human resources. **Fall.** Jerdee.

352 **INTERPERSONAL AND INTERGROUP BEHAVIOR IN BUSINESS ORGANIZATIONS** (3). Intensive critical examination of interpersonal and intergroup behavior, including decision processes, communication, conflict, and conflict resolution in large organizations. Case studies are used to illustrate application in business. **Spring.** Adams, Bell, Rosen.

353 **SOCIAL-TECHNICAL SYSTEMS** (3). Integration and relation of the tools and concepts from the management and behavioral sciences to the organization as a Social-Technical System. **Spring.** Staff.

354 **ORGANIZATIONAL DESIGN AND DEVELOPMENT** (3). The development of understanding and skills in changing and evolving organizational design, interpersonal relationships, and people, in order to achieve desired organizational goals. **Spring.** Bell.

355 **METHODS IN ORGANIZATIONAL BEHAVIOR RESEARCH** (3). Research in organizational behavior with consideration of establishing experimental designs, data collection, and application of appropriate methods in the analysis of data. **Fall.** Moffie.

356 **SEMINAR IN ORGANIZATIONAL BEHAVIOR** (3). Prerequisite, permission of instructor. Intensive study of important current theory and research in organizational behavior. **Fall.** Staff.

357 **SEMINAR IN PERSONNEL MANAGEMENT** (3). Prerequisite, Business Administration 250 or equivalent. Individual research in depth in particular phases of industrial relations: manpower planning, acquisition, control, training, and development; labor relations. **Spring.** Calhoon.

360 **SEMINAR IN MARKETING I** (3). Prerequisite, permission of the instructor. Intensive study of problems in establishing marketing goals, consumer demand, product selection and identification, pricing policies and decisions. **Fall.** Headen.

361 **SEMINAR IN MARKETING II** (3). Prerequisite, Business Administration 360. Intensive study of problems in design of distribution channels, marketing logistics, promotional decisions and evaluations, sales forecasting and analysis. **Spring.** Hughes.

363 **SEMINAR IN MARKET COMMUNICATION AND STIMULATION** (3). Prerequisite, permission of the instructor. Individual research on marketing problems involving communication and stimulation. Typical problems: communication processes of marketers; communication media; objectives and techniques; evaluation of communication effectiveness; promotional programs. **Fall.** Staff.

366 **SEMINAR IN DISTRIBUTION MANAGEMENT** (3). Prerequisite, permission of the instructor. Advanced study in the area of marketing logistics, Institutions, distribution cost fundamentals, and related problems. **Fall.** Staff.

368 **SEMINAR IN MARKETING RESEARCH METHODOLOGY** (3). Prerequisite, permission of the instructor. Study of research design, methods of data collection and analysis, sample design, and problems of measurement in research in marketing. **Spring.** Headen, Russ.

372 **SEMINAR IN CURRENT ACCOUNTING ISSUES** (3). Prerequisite, permission of the instructor. Analysis of current accounting issues through readings, discussion, and individual research assignments. Typical problems include pensions, leases, price-level and other controversial issues. **Fall.** Brummet, Reynolds.

374 **SEMINAR IN CONCEPTS OF BUSINESS INCOME** (3). Prerequisite, permission of the instructor. Concepts of income which have evolved

in various disciplines. Degree of interdependence of such concepts. Extent concepts have influenced or been influenced by other concepts. **Fall.** Langenderfer.

376 **SEMINAR IN RESEARCH IN ACCOUNTING** (0). Prerequisite, permission of the instructor. An informal seminar to discuss current research in accounting. **Fall and spring.** Brummet, Langenderfer.

377 **SEMINAR IN TAXATION** (3). Prerequisite, permission of the instructor. Analysis of selected topics for taxable entities. Nature and significance of taxation affecting business decisions. Development of tax law and critical appraisal of current law. **Spring.** Clarke, Langenderfer.

380 **THEORY OF FINANCIAL MANAGEMENT I** (3). Prerequisite, permission of the instructor. Review of the theory of financial management. **Fall.** Cohan, Latane.

381 **THEORY OF FINANCIAL MANAGEMENT II** (3). Prerequisite, Business Administration 380 or equivalent and permission of the instructor. Review of tests of various aspects of the theory of financial management, and critical evaluation of the theory's usefulness to financial managers. **Spring.** Cohan, Dearborn.

385 **SEMINAR IN RESEARCH IN FINANCE** (0). Prerequisite, permission of the instructor. Advanced research in business finance and investment. An informal seminar to discuss current research of doctoral candidates, faculty, and others. **Fall and spring.** Staff.

386 **SEMINAR IN PORTFOLIO MANAGEMENT (Economics 386)** (3). Prerequisite, permission of the instructor. Development, testing, and economic effects of models for determining the selection of assets. **Fall or spring.** Latane.

387 **QUANTITATIVE METHODS IN FINANCE** (3). Prerequisite, permission of the instructor. Review of information generating and optimizing models, and their applicability to decision making in finance. **Spring.** Cohan.

388 **SEMINAR IN FINANCIAL MARKETS** (3). Intensive study of market characteristics and inter-relationships, market price and yield determination, impact of monetary and regulatory policies, and effect of market structure on performance. **Fall or spring.** Kreps, Phillips.

390 **SEMINAR IN BUSINESS ECONOMICS** (3). Prerequisite, Economics 200 or permission of the instructor. Review of theory of demand and supply, statistical measurement of demand and costs, uncertainty, change, theory of investment. **Spring.** Cohan, Latane.

393 **MASTER'S THESIS** (3-6). **Fall and spring.** Staff.

394 **DOCTORAL DISSERTATION** (3 or more). **Fall and spring.** Staff.

397 **SEMINAR IN THE MODERN CORPORATION** (3). Prerequisite, permission of the instructor. An analysis of the areas of conflict between the internal objectives of management and their external impact. **Fall.** Barrett.

398 **RESEARCH METHODOLOGY** (3). Prerequisite, permission of the instuctor. A course in research concepts, objectives and methods. **Spring.** Staff.

399 **SEMINAR** (3). Prerequisite, permission of the Instructor. Individual research in a special field under the direction of a member of the department. **Fall and spring.** Staff.

400 **GENERAL REGISTRATION** (0).

Economics Courses

NOTE: **Economics 31 and 32, or equivalents, with grades of C or better, are prerequisite to all the courses in Economics listed below.** Economics 61, with a grade of **C** or better, may, under certain circumstances, be substituted for Economics 31 and 32.

Courses for Graduates and Advanced Undergraduates

111 **INTERNATIONAL RESOURCES AND NATIONAL POLICY** (3). International resource problems which necessitate United States policy decisions. National policy and objectives; production potentials; and international security. **Fall.** Mouzon.

120 **LOCATION AND SPACE ECONOMY** (City and Regional Planning 176) (3). The evaluation of models generalizing the effects of space on economic and social activity. **Fall.** Richter.

121 **REGIONAL SCIENCE TECHNIQUES** (City and Regional Planning 178) (3). The description, understanding and projection of income and employment variables within urban areas and regions. **Spring.** Richter.

122 **URBAN ECONOMICS** (3). Prerequisite, Economics 131 or equivalent. Economic analysis of urban growth, urban structure, and current urban problems: location theory, transportation and housing policy, racial issues, and the provision of urban services. **Fall or spring.** Richter.

131 **INTERMEDIATE THEORY: PRICE AND DISTRIBUTION** (3). The determination of prices and the distribution of income in a free-enterprise system. **Fall and spring.** Staff.

132 **INTERMEDIATE THEORY: MONEY, INCOME AND EMPLOYMENT** (3). An introduction to contemporary macroeconomic concepts and analysis. Topics include the level, fluctuations, and growth of national income, and monetary and fiscal policies designed to achieve economic goals. **Fall and spring.** Staff.

133 **TOPICS IN APPLIED MICROECONOMIC ANALYSIS** (3). Prerequisite, Economics 70 and 131 or equivalent. Economic versus accounting profit; the meaning and significance of uncertainty; capital budgeting and the firm's cost of capital; portfolio theory; cost-benefit analysis and the social cost of capital. **Fall or spring.** Cohan.

135 **ECONOMIC DEVELOPMENT IN THE UNITED STATES** (3). Principal factors governing American economic expansion since 1800. **Fall and spring.** Gallman, Orsagh.

136 **ECONOMIC DEVELOPMENT IN WESTERN EUROPE** (3). Main features of economic expansion under capitalism since 1700. **Fall and spring.** Gallman, Orsagh.

140 **ECONOMICS OF SOCIAL EXPENDITURES** (3). Theory and practice of public spending on health, education, welfare and related areas. Minority group problems considered. **Fall.** Ribich.

141 **PUBLIC FINANCE** (Political Science 191) (3). The facts and theories of American public finance – federal, state, and local. **Fall and spring.** Wilde.

143 **PROBLEMS IN STATE AND LOCAL FINANCE** (Political Science 193) (3). Prerequisite, Economics 141 or equivalent. Selected problems relating to the financing of state and local functions. **Fall.** Liner.

145 **INDUSTRIAL ORGANIZATION** (3). The structure of industry and its relation to performance; causes and historical development of industrial concentration; investigation and analysis of specific industries in the current economy. **Fall.** Kwoka, D. McFarland.

146 **INDUSTRIAL CONCENTRATION AND PUBLIC POLICY** (3). Historical development of Federal policy toward business concentration and behavior; the economic interpretation of present Federal anti-trust policy toward business. **Spring.** Kwoka, D. McFarland.

150 **HEALTH ECONOMICS** (3). An economic analysis of the production and distribution of health care. **Spring.** Scheffler.

151 **THE AMERICAN TRANSPORTATION SYSTEM** (3). A survey of the economic characteristics and basic problems of the several modes of transportation. **Fall.** Blaine.

152 **TRANSPORTATION AS A REGULATED INDUSTRY** (3). Economic problems and policies under state and federal regulation. **Spring.** Blaine.

153 **ECONOMICS OF REGULATED INDUSTRIES** (3). Prerequisite, Economics 131 or equivalent. Market failure and government intervention in theory and practice. Issues in regulating prices and profits in communications, power, transport, and other industries. **Fall or spring.** Douglas.

159 **HISTORY OF ECONOMIC DOCTRINES** (3). A survey of the fundamental forms of economic thought from the scholastics through Keynes. **Fall.** Tarascio.

161 **INTERNATIONAL ECONOMICS** (3). An introduction to international trade, the balance of payments, and related issues of foreign economic policy. **Fall and spring.** Appleyard, Howle, Ingram.

163 **ECONOMIC DEVELOPMENT** (3). An introduction to the economic characteristics and problems of the less developed countries and to theories and policies applicable to the developing economy. **Fall and spring.** Appleyard, Field, Ingram, Keesing.

165 **ECONOMICS OF POPULATION** (3). Analysis of economic demographic interrelations including demographic analysis, population in history, population and economic growth and development, economic models of fertility and migration, and population policy. **Fall.** Turchi.

166 **CRIME AND THE ECONOMY** (3). Economic theory and empirical research are utilized to evaluate the volume of crime, its cost to society, and the importance of economic variables associated with crime. **Spring.** Orsagh.

170 **INTRODUCTION TO ECONOMETRICS** (3). Prerequisite, Economics 70 or equivalent. Intermediate topics of probability and regression theory; interval estimation; construction, application and testing of linear economic models. **Spring.** Murphy, Schmidt.

185 **ECONOMIC FLUCTUATIONS** (3). Prerequisite, Economics 132 or equivalent. Analysis of economic fluctuations. Macroeconomic theory. Stabilization policy. Macroeconomic forecasting. **Fall.** M. W. Lee.

188 **MICRO-ECONOMIC THEORY** (3). Prerequisite, graduate standing in Business Administration or permission of the instructor. Utility and demand theory of the firm; perfect and imperfect competition; applications and welfare economics. **Spring.** Schmidt.

189 **MACRO-ECONOMIC THEORY** (3). Prerequisite, graduate standing in Business Administration or permission of the instructor. Determination of national income, interest rates, and the price level. **Fall.** Schmidt.

191 **AN INTRODUCTION TO THE LABOR PROBLEM.** (3). A survey of the field of labor with emphasis on the labor force, the structure of the labor market, collective bargaining, wages, hours, and hazards of modern industrial life. **Fall and spring.** Guthrie, Johannesen, Scheffler.

192 **COLLECTIVE BARGAINING** (3). Prerequisite, Economics 191 or equivalent. This course deals with collective bargaining agencies, procedures, and the subject matter of collective bargaining. **Fall and spring.** Guthrie, Johannesen.

193 **HISTORY OF THE LABOR MOVEMENT** (3). Prerequisite, Economics 191 or equivalent. A history of the labor movement in the United States, with special reference to its economic significance. **Fall.** Guthrie.

194 **SOCIAL INSURANCE** (3). Prerequisite, Economics 191 or equivalent. The origin and development of social insurance as a means of dealing with the hazards of modern industrial life. Special consideration of

the development of social insurance systems in the United States. (1972-1973 and alternate years). **Spring.** Guthrie.

195 **HUMAN CAPITAL AND THE LABOR MARKET** (3). Prerequisite, Economics 140 or 191 or equivalent. Advanced treatment of topics in wage determination, human capital theory, and methodological problems. **Spring.** Ribich.

196 **COMPARATIVE ECONOMIC SYSTEMS** (3). A review of the basic institutions of our American economic system and a comparison with other existent or proposed economic systems. **Fall.** Rosefielde.

197 **GOVERNMENT AND BUSINESS** (Political Science 197) (3). The regulation and control of business by government. Constitutional provisions, the antitrust laws, public utilities, taxation, labor laws, and transportation are the fields explored. **Spring.** Carter.

198 **LABOR LAW AND PUBLIC POLICY** (3). Prerequisite, Economics 191. Evolution of public policy in the labor relations area, emphasizing the behavior aspects via cases, the institutional forces, and current developments. **Fall.** Johannesen.

199 **SEMINAR IN ECONOMICS** (3). Detailed examination of selected problems in economics and a critical analysis of pertinent theories. **Fall and spring.** Staff.

Courses for Graduates

200 **ADVANCED MICROECONOMIC THEORY I** (3). Prerequisite, Economics 131 or equivalent. Theory of utility and demand; brief review of perfect competition; theories of imperfect competition. **Fall.** Lovell, Pfouts.

201 **ADVANCED MICROECONOMIC THEORY II** (3). Prerequisite, Economics 200 or equivalent. Advanced theory of utility and demand; continuation of imperfect competition; brief treatment of methodology, of input-output methods and of welfare economics. **Spring.** Lovell, Pfouts.

202 **ADVANCED MACROECONOMIC THEORY I** (3). Prerequisite, Economics 132 or equivalent. Keynesian and classical equilibrium models; theories of the consumption function; capital and investment theory; portfolio and interest theory. **Fall.** Benavie, Froyen, Waud.

203 **ADVANCED MACROECONOMIC THEORY II** (3). Prerequisite, Economics 202 or equivalent. Growth models, general equilibrium approach to monetary theory; input-output; disequilibrium theory; extensions of Keynesian and classical models. **Fall.** Benavie, Froyen, Waud.

209 **BASIC QUANTITATIVE TECHNIQUES I (Business Administration 209)** (3). Prerequisite, graduate standing in business administration or economics. Elementary calculus with applications in economic theory, statistics, and management science. **Fall.** Staff.

210 **BASIC QUANTITATIVE TECHNIQUES II (Business Administration 210)** (3). Prerequisite, Economics 209 (Business Administration 209). Matrix algebra and multi-dimensional calculus, with applications in economic theory, statistics, and management science. **Fall and spring.** Staff.

211 **ADVANCED COMMODITY ECONOMICS** (3). The supply and demand conditions of selected commodities representing certain types. The institutional factors affecting these conditions, with special reference to commodity control schemes. **Spring.** Mouzon.

223 **MATHEMATICAL ECONOMICS I (Statistics 182)** (3). Prerequisite, Economics 210 or equivalent. Basic concepts of mathematical economics. Linear equations and inequalities; quadratic forms; differential calculus; convex sets and functions; constrained maxima. Activity analysis, consimption and production. **Fall. Staff.**

224 **MATHEMATICAL ECONOMICS II (Statistics 183)** (3). Prerequisite, Economics 203. Mathematical investigations of economic concepts and models. **Spring.** Staff.

226 **LINEAR PROGRAMMING (Business Administration 226)** (3). Prerequisite, permission of the instructor. A rigorous development of the mathematics of linear programming and its application to practical problems. Extensions to separable, quadratic, and integer programming. **Fall.** Crabill, Murphy.

227 **ADVANCED MATHEMATICAL PROGRAMMING (Business Administration 227)** (3). Prerequisite, permission of the instructor. An advanced course in classic optimization with constraints. The Kuhn Tucker theory, Lagrange regularity, convex programming, special algorithms, and non-linear duality theory. **Spring.** Evans, Murphy.

235 **GENERAL ECONOMIC HISTORY** (3). Pre-industrial societies, early stages of industrial growth and growth of the world economy in the nineteenth century. **Fall.** Gallman, Orsagh.

236 **MODERN ECONOMIC HISTORY** (3). Prerequisite, Economics 235 or permission of the instructor. Economic change in modern Western societies. Comparative study of growth in Europe and North America. **Spring.** Gallman, Orsagh.

241 **ADVANCED PUBLIC FINANCE** (3). Prerequisite, Economics 141 or equivalent. Theory of public finance; criteria, procedures, instruments, proposals and operation. The relationship between fiscal and other public policy. **Spring.** Wilde.

245 **ADVANCED BUSINESS ORGANIZATION AND SOCIAL CONTROL** (3). Prerequisite, permission of the instructor. Extensive readings in the literature are required. Emphasis is placed upon the role of economic analysis in dealing with problems in this field. (1972-1973 and alternate years.) **Spring.** Kwoka, D. McFarland.

246 **TRANSPORTATION PROBLEMS AND POLICIES** (3). A course designed to develop an understanding of the major problems affecting the American transportation system and of the need for formulating effective transportation policies. **Fall.** Blaine.

247 **DYNAMICS OF TRANSPORTATION** (3) Prerequisite, permission of the instructor. The role of transportation in providing mobility in developing economics. **Spring.** Blaine.

248 **ECONOMIC REGULATION OF INDUSTRY** (3). Economic regulation in theory and in practice. Principles of optimal regulation are developed, and regulatory performance in various industries is appraised. **Fall.** Douglas.

251 **HISTORY OF ECONOMIC THOUGHT I** (3). A survey of the development of economic thought from the seventeenth century to the present, with particular emphasis on doctrines reflected in modern economic theory. **Spring.** Tarascio.

252 **HISTORY OF ECONOMIC THOUGHT II** (3). A study of economic doctrines from the nineteenth century to the present in a methodological perspective. **Fall.** Tarascio.

261 **INTERNATIONAL ECONOMICS** (3). Prerequisite, permission of the instructor. The theory of international values; comparative advantage and the gains from trade; alternative routes to adjustment in the balance of payments; capital movements. **Fall.** Appleyard, Howle, Ingram.

262 **SELECTED TOPICS IN INTERNATIONAL ECONOMICS** (3). Prerequisite, Economics 261 or equivalent. Various subjects in international economic theory and policy are pursued in detail. **Spring.** Appleyard, Howle, Ingram.

263 **ECONOMIC DEVELOPMENT: THEORY AND POLICY** (3). Prerequisite, permission of the instructor. Intensive study of the development processes and problems of the less developed countries, with emphasis upon theories of growth and development, internal and external policies, and planning strategies. **Fall or spring.** Field, Keesing, Ingram.

264 **SELECTED TOPICS IN ECONOMIC DEVELOPMENT AND DEVELOPMENT PLANNING** (3). Prerequisite, Economics 263 or equivalent. Examination of various topics in economic development of the less developed countries, with special emphasis on the role of development planning. **Fall or spring.** Appleyard, Field, Ingram.

271 **FUNDAMENTALS OF STATISTICAL THEORY** (3). Prerequisite, Economics 70 or equivalent. Polynomial and exponential trends; moving seasonal; index numbers; estimation; power of a test; differences among variances and means; binomial distribution; chi-square, multiple and partial correlation ratio; rank correlation. **Fall.** Lovell, Murphy, Schmidt.

272 **INTERMEDIATE STATISTICS** (3). Prerequisite, Economics 271 or equivalent. Orthogonal polynomials; growth curves; weighted moving averages. Theory of index numbers. Analysis of variance and covariance. Poisson distribution; hypergeometric distribution. Compact methods in correlation. (1974-1975 and alternate years.) **Spring.** Murphy, Schmidt.

273 **ECONOMETRICS** (3). Prerequisite, Economics 210 and 271, or equivalent. The application of statistical methods to economic problems.

Topics include measurement of demand and costs and macroeconomic models. **Fall.** Murphy, Schmidt.

274 **ADVANCED ECONOMETRICS** (3). Prerequisite, Economics 273 or equivalent. A study of advanced econometric methods, current econometric problems, and the methodology of testing econometric models. **Spring.** Murphy, Schmidt.

281 **MONETARY THEORY** (3). Monetary systems in the light of theory and historical development. Evaluation of contemporary policies and reform proposals. Analysis of interrelationships between monetary factors and economic processes and phenomena. **Fall and spring.** Philbrook.

282 **CENTRAL BANKING AND MONETARY POLICY** (3). Prerequisite, Economics 132 or equivalent. The objective, structure, and function of central banks, especially the Federal Reserve System. Central bank operations, formation and execution of monetary policy, and the impact and effectiveness of monetary action. **Spring.** Kreps.

285 **ANALYSIS OF ECONOMIC FLUCTUATIONS** (3). Nature of economic fluctuations. Business cycle theory. Economic stabilization and growth. **Spring.** Froyen.

288 **MANAGERIAL ECONOMICS** (3). Prerequisite, graduate standing in business administration or economics. The price system, competitive equilibrium and imperfect competition. **Fall.** Kwoka, D. McFarland.

289 **STABILIZATION AND ECONOMIC GROWTH** (3). Prerequisite, graduate standing in business administration or economics. The macrostructure, and operation of the aggregate system; emphasis on growth and economic fluctuations. Consideration of stabilization problems, domestic and international; macroeconomic forecasting. **Spring.** Douglas, Wilde.

291 **LABOR ECONOMICS** (3). Prerequisite, Economics 191 or equivalent. The economic implications of basic phenomena in a field of labor, including the demand for and supply of labor, wage theory, unemployment, the economics of reduced working hours, collective bargaining, and social insurance. **Spring. Ribich.**

292 **LABOR-MANAGEMENT RELATIONS (Business Administration 292)** (3). An advanced study of the procedure, subject matter and legal framework of collective bargaining. **Spring.** Guthrie.

294 **POLICIES AND PRACTICES IN LABOR DISPUTE SETTLEMENT** (3). Prerequisite, Economics 191 or equivalent. A study of the theory and practice in the settlement of labor disputes. Attention will be given to grievance procedure, mediation, fact finding, and arbitration. Special consideration will be given to the economic implications of such procedures and the resultant effects upon the public interest. (1973-1974 and alternate years.) **Spring.** Guthrie.

295 **COMPARATIVE ECONOMIC SYSTEMS** (3). Selected case studies in current proposals for reform in the economic system. Individual assignments are made for critical study and reports. **Spring.** Rosefielde.

296 **SOVIET ECONOMIC PLANNING** (3). A study of the theory and practice of economic planning in the Soviet Union. Special attention is given to current methods of allocating resources and controlling economic activities to the prospects for increasing the rationality of economic decision-making. **Fall.** Rosefielde.

297 **MODERN SOCIALISM IN ITS HISTORICAL DEVELOPMENT** (3). A systematic study of the development of socialist economic theory from Robert Owen to Cohn-Bendit, emphasizing Marx, Russian Marxism and contemporary Marxist economic theory. **Fall.** Rosefielde.

300 **SEMINAR IN ECONOMIC THEORY I** (3). Prerequisite, Economics 201 and 202. Seminar study of advanced topics in economic theory. **Fall.** Staff.

301 **SEMINAR IN ECONOMIC THEORY II** (3). Prerequisite, Economics 300 or permission of the instructor. Seminar study of advanced topics in economic theory. **Spring.** Staff.

303 **SEMINAR IN MATHEMATICAL ECONOMICS I** (3). Prerequisite, permission of the instructor. Advanced topics in mathematical and quantitative economics. **Fall.** Staff.

304 **SEMINAR IN MATHEMATICAL ECONOMICS II** (3). Prerequisite, permission of the instructor. Advanced topics in mathematical and quantitative economics. **Spring.** Staff.

335 **SEMINAR IN ECONOMIC HISTORY** (3). Relation of economic history to economics; history of work in the field. Current problems and techniques of study and research. **Fall and spring.** Gallman.

341 **RESEARCH IN PUBLIC FINANCE** (3). Prerequisite, permission of the instructor. Open to qualified graduate students who wish to make intensive studies in particular fields of public finance. Conference hours subject to arrangement. Written reports are normally required. **Fall and spring.** Staff.

351 **SEMINAR IN THE HISTORY OF ECONOMIC THOUGHT** (3). Prerequisite, permission of the instructor. Advanced study of economic analysis beyond the scope of Economics 251 and 252. **Fall and spring.** Philbrook.

361 **SEMINAR IN INTERNATIONAL ECONOMICS** (3). Prerequisite, Economics 262 or equivalent. A directed reading and research course. **Spring.** Appleyard, Howle, Ingram.

363 **SEMINAR IN ECONOMIC DEVELOPMENT** (3). Prerequisite, Economics 264 or equivalent. Directed reading and research on selected problems in economic development. **Fall and spring.** Field, Keesing.

371 **RESEARCH IN ECONOMIC STATISTICS** (3). Prerequisite, permission of the instructor. **Spring.** Staff.

381 **SEMINAR IN MONEY AND EMPLOYMENT** (3). Prerequisite, permission of the instructor. The advanced study of business cycles. The modern controversy over employment and wages, interest, and money; anti-depression policy. **Spring.** Douglas, Philbrook.

385 **SEMINAR IN ECONOMIC FLUCTUATIONS** (3). Prerequisite, permission of the instuctor. A course for mature students interested in advanced study of economic fluctuation and growth. **Spring.** M. W. Lee.

386 **SEMINAR IN PORTFOLIO MANAGEMENT** (Business Administration 386) (3). Prerequisite, permission of the instructor. Development, testing, and economic effects of models for determining the selection of assets. **Spring.** Latane.

391 **SEMINAR IN LABOR** (3). Prerequisite, permission of the instructor. This course offers mature students an opportunity to carry their investigations of significant subject matter beyond the limits of the formal course offerings. **Fall and spring.** Guthrie.

393 **MASTER'S THESIS** (3-6). **Fall and spring.** Staff.

394 **DOCTORAL DISSERTATION** (3 or more). **Fall and spring.** Staff.

396 **SEMINAR IN SOVIET ECONOMICS** (3). Prerequisite, permission of the instructor. Studies of selected problems of the Soviet economy and related aspects of Soviet economic thought. Seminar members are expected to present reports on assigned research topics. **Fall.** Staff.

399 **SEMINAR.** Prerequisite, permission of the instructor. Individual research in a special field under direction of a member of the department. **Fall and spring.** Staff.

400 **GENERAL REGISTRATION** (0).

Students may select electives from the department of mathematics, statistics, information science, psychology, sociology, and other relevant areas.

GENERAL INFORMATION

Policies, Procedures, and Disciplinary Actions In Cases of Disruption of Educational Process

The following statement has been incorporated in the By-Laws of the Board of Trustees of the University, and is quoted for the information of all members of the University Community.

Section 5-1. Policies Relating to Disruptive Conduct

The University of North Carolina has long honored the right of free discussion and expression, peaceful picketing and demonstrations, the right to petition and peaceably to assemble. That these rights are a part of the fabric of this institution is not questioned. They must remain secure. It is equally clear, however, that in a community of learning willful disruption of the educational process, destruction of property, and interference with the rights of other members of the community cannot be tolerated. Accordingly, it shall be the policy of the University to deal with any such disruption, destruction or interference promptly and effectively, but also fairly and impartially without regard to race, religion, sex or political beliefs.

Section 5-2. Definition of Disruptive Conduct

(a) Any faculty member (the term "faculty member," wherever used in this Chapter V, shall include regular faculty members, full-time instructors, lecturers, and all other persons exempt from the North Carolina State Personnel System [Chapter 126 of the General Statutes as amended]who receive compensation for teaching, or other instructional functions, or research at the University), any graduate student engaged in the instructional program, or any student who, with the intent to obstruct or disrupt any normal operation of function of the University or any of its component institutions, engages, or incites others to engage, in individual or collective conduct which destroys or significantly damages any University property, or which impairs or threatens impairment of the physical well-being of any member of the University community, or which, because of its violent, forceful, threatening or intimidating nature or because it restrains freedom of lawful movement, otherwise prevents any member of the University community from conducting his normal activities within the University, shall be subject to prompt and appropriate disciplinary action, which may include suspension, expulsion, discharge or dismissal from the University.

The following, while not intended to be exclusive, illustrate the offenses encompassed herein, when done for the purpose of obstructing or disrupting any normal operation or function of the University or any of its component institutions: (1) occupation of any University building or part thereof with intent to deprive others of its normal use; (2) blocking the entrance or exit of any University building or corridor or room therein with intent to deprive others of lawful access to or from, or use of, said building or corridor or room; (3) setting fire to or by any other means destroying or substantially damaging any University building or property, or the property of others on University premises; (4) any possession or display of, or attempt or threat to use, for any unlawful purpose, any weapon, dangerous instrument, explosive, or inflammable material in any University building or on any University

campus; (5) prevention of, or attempt to prevent by physical act, the attending, convening, continuation or orderly conduct of any University class or activity or of any lawful meeting or assembly in any University building or on any University campus; and (6) blocking normal pedestrian or vehicular traffic on or into any University campus.

(b) Any person engaged in the instructional program who fails or refuses to carry out validly assigned duties, with the intent to obstruct or disrupt any normal operation or function of the University or any of its component institutions, shall be subject to prompt and appropriate disciplinary action under this Chapter V if (but only if) his status is such that he is not subject to the provisions of Section 4-3 of Chapter IV.

Section 5-3. Responsibilities of Chancellors

(a) When any Chancellor has cause to believe that any of the provisions of this Chapter V has been violated, he shall forthwith investigate or cause to be investigated the occurrence, and upon identification of the parties involved shall promptly determine whether any charge is to be made with respect thereto.

(b) If he decides that a charge is to be made, he shall, within thirty (30) days after he has information as to the identity of the alleged perpetrator of the offense but in no event more than twelve (12) months after the occurrence of the alleged offense, (i) refer the case to the appropriate existing University judicial body, or (ii) refer the matter to a Hearing Committee drawn from a previously selected Hearings Panel which, under this option, is required to implement action for violation of Section 5-2 (a) or (b) of this Chapter. If the case is referred to an existing University judicial body under (i) above, the procedural rules of that body shall be followed, and subsections (c) through (f) below shall not be applicable. If the matter is referred to a Hearing Committee under (ii) above, the procedural rules prescribed in subsections (c) through (f) below shall be followed.

(c) The accused shall be given written notice by personal service or registered mail, return receipt requested, stating:

(1) The specific violations of this Chapter V with which the accused is charged.

(2) The designated time and place of the hearing on the charge by the Hearing Committee, which time shall be not earlier than seven (7) nor later than ten (10) days following receipt of the notice.

(3) That the accused shall be entitled to the presumption of innocence until found guilty, the right to retain counsel, the right to present the testimony of witnesses and other evidence, the right to cross-examine all witnesses against him, the right to examine all documents and demonstrative evidence adverse to him, and the right to a transcript of the proceedings of the hearing.

(d) The Hearing Committee shall determine the guilt or innocence until accused. If the person charged is found guilty, the Hearing Committee shall recommend to the Chancellor such discipline as said body determines to be appropriate. After considering such recommendation the Chancellor shall prescribe such discipline as he deems proper. In any event, whether the person

is found guilty or not guilty, a written report shall be made by the Chancellor to the President within ten (10) days.

(e) Any person found guilty shall have ten (10) days after notice of such findings in which to appeal to the President of the University. Such an appeal if taken shall be upon the grounds set forth in Section 5-5.

(f) Any accused person who, without good cause, shall fail to appear at the time and place fixed for the hearing of his case by the Hearing Committee shall be suspended indefinitely or discharged from University employment.

(g) A Chancellor, unless so ordered or otherwise prevented by court, shall not be precluded from carrying out his duties under this Chapter V by reason of any pending action in any State or Federal court. Should a delay occur in prosecuting the charge against the accused because the accused or witnesses that may be necessary to a determination of the charge are involved in State or Federal court actions, the time limitations set forth above in this Section 5-3 shall not apply.

(h) Conviction in any State or Federal court shall not preclude the University or any of its officers from exercising disciplinary action in any offense referred to in this Chapter V.

(i) Nothing contained in this Chapter V shall preclude the President or any Chancellor from taking any other steps, including injunctive relief or other legal action, which he may deem advisable to protect the best interests of the University.

Section 5-4. Aggravated Acts or Threatened Repetition of Acts

(a) The Chancellor of each of the component institutions of the University shall appoint an Emergency Consultative Panel which shall be composed of not less than three (3) nor more than five (5) faculty members and not less than three (3) nor more than five (5) students who shall be available to advise with the Chancellor in any emergency. No member of such Panel shall serve for more than one (1) year unless he be reappointed by the Chancellor. The Chancellor may make appointments, either temporary or for a full year, to fill any vacancies which may exist on the Panel.

(b) If, in the judgment of the Chancellor, there is clear and convincing evidence that a person has committed any of the acts prohibited under this Chapter V which, because of the aggravated character or probable repetition of such act or acts, necessitates immediate action to protect the University from substantial interference with any of its orderly operations or functions, or to prevent threats to or acts which endanger life or property, the Chancellor, with the concurrence as hereinafter provided of the Emergency Consultative Panel established pursuant to (a) above, may forthwith suspend such person from the University and bar him from the University campus; provided, however, that in the event of such suspension the person suspended shall be given written notice of the reason for his suspension, either personally or by registered mail addressed to his last known addresses and shall be afforded a prompt hearing, which, if requested, shall be commenced within ten (10) days of the suspension. Except for purposes of attending personally any hearings conducted under this Chapter V, the bar against the appearance of the accused on the University campus shall remain in effect until final judgment has been rendered in his case and all appellant proceedings have been concluded, unless such restriction is earlier lifted by written notice from the Chancellor.

(c) A quorum of the Emergency Consultative Panel provided for in (a) above shall consist of not less than four (4) of its members, and the required concurrence shall have been obtained if a majority of such quorum shall indicate their concurrence. The Chancellor shall meet personally with members of such Panel at the time he seeks concurrence, if it is feasible to do so. However, if the circumstances are such that the Chancellor deems it not to be feasible to personally assemble such members, then he may communicate with them or the required number of them individually by telephone or by such other means as he may choose to employ, in which event he may proceed as provided in (b) above after the required majority of such members have communicated their concurrence to him.

(d) In the Chancellor's absence or inability to act, the President may exercise the powers of the Chancellor specified in this Section 5-4 in the same manner and to the same extent as could the Chancellor but for such absence or inability to act.

Section 5-5. Right of Appeal

Any person found guilty of violating the provisions of this Chapter V by the Hearing Committee referred to in Section 5-3 shall have the right to appeal the finding and the discipline imposed upon him to the President of the University. Any such appeal shall be in writing, shall be based solely upon the record, and shall be limited to one or more of the following grounds:

(1) That the finding is not supported by substantial evidence;

(2) That a fair hearing was not accorded the accused; or

(3) That the discipline imposed was excessive or inappropriate.

It shall be the responsibility of the President to make prompt disposition of all such appeals, and his decision shall be rendered within thirty (30) days after receipt of the complete record on appeal.

Section 5-6. No Amnesty

No administrative official, faculty member, or student of the University shall have authority to grant amnesty or to make any promise as to prosecution or non-prosecution in any court, State or Federal, or before any student, faculty, administrative, or Trustee committee to any person charged with or suspected of violating Section 5-2 (a) or (b) of these Bylaws.

Section 5-7. Publication

The provisions of this Chapter V shall be given wide dissemination in such manner as the President or Chancellors may deem advisable, and shall be printed in the official catalogues which may be issued by each component institution of the University.

Procedures For Use In Case of Refusal By Graduate Student Service Appointees Who Are Not Subject To Code Section 4-3 To Perform Validly Assigned Duties

The following statement has been promulgated by the University Administration and is quoted for the information of all members of the University Community.

In the event that any graduate student fails or refuses to carry out validly assigned duties with the intent to obstruct or disrupt any normal operation or function of the University, the procedures given below will be followed. In these procedures the term "dean" identifies the deans of professional schools.

I. Administrative Procedures

1. The dean or department chairman in whose school or department the graduate student is appointed will immediately inquire into the alleged conduct. He shall, in writing, notify the graduate student involved that he is beginning an inquiry into the alleged conduct, which shall be briefly described. On the basis of his inquiry, he shall make a concise written finding of fact with respect to whether it appears that there did occur a failure or refusal to carry out validly assigned duties with the intent to obstruct or disrupt any normal operation or function of the University. He shall transmit one copy of the finding to the Chancellor and one to the graduate student involved.

2. If the inquiry indicates that the graduate student has failed or refused to carry out validly assigned duties with the intent to obstruct or disrupt any normal operation or function of the University, then the dean or chairman shall suspend the graduate student with pay from all duties until (a) the Chancellor has determined that no charge is to be made with respect thereto or (b) a final decision with respect thereto has been reached following a hearing before the body to which the matter is referred by the Chancellor.

3. If the Chancellor decides that a charge is to be made with respect to the matter and that it is to be referred to the appropriate existing University judicial body (rather than to the Hearing Committee referred to in Code Section 5-3), it shall be handled in the manner set forth below.

II. Hearing Procedures

1. The dean or chairman shall convene by written directive the Grievance Committee set up by faculty action on January 10, 1969 (see Appendix B of Faculty Legislation).

2. The dean or chairman shall, in writing, notify the graduate student of the convening of the hearing committee and shall provide the chairman of the hearing committee with a concise written summary of the charges of violation based upon the findings of the inquiry.

3. Upon convening of the hearing committee and receipt of the written charges, the chairman of the hearing committee shall forthwith set a time and place for the hearing by written notification to the graduate student and shall make the necessary arrangements for conducting the hearing. Unless manifestly impossible for reasons of specific unfairness to the graduate student or gross inconvenience to members of the hearing committee or to necessary witnesses, the hearing shall be set to commence not later than five (5) days after receipt by the graduate student of the written notice of the convening of the hearing committee. Failure on the part of the graduate student to attend the

hearing without adequate cause shall result in automatic permanent suspension without pay.

4. The hearing shall be conducted on the written charges to determine their truth or falsity. The department chairman or dean who initiated the proceedings has the responsibility for presenting witnesses or documentary evidence to establish the charges. The graduate student shall be accorded the right to counsel of his own choosing, to confront and cross-examine the witnesses against him, and to examine all documents and demonstrative evidence against him. He shall have the right to present testimony of witnesses and other evidence in his own behalf.

5. A complete transcript of the proceedings shall be furnished at the expense of the University.

6. Promptly upon the close of the hearing, the hearing committee shall render its decision, and that decision shall be presented in writing to the graduate student and his department chairman or dean.

III. Disciplinary Action and Appeal Procedure

1. If the decision is adverse to the graduate student, the department chairman or dean who initiated the proceedings shall determine what disciplinary action is to be taken.

2. An appeal may be taken in the manner described in paragraph C of Appendix B to the Faculty Legislation on University Government.

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