RECORD OF
HE UNIVERSITY OF NORTH
AROLINA AT CHAPEL HILL

BRUARY 27, 1970 NUMBER 746 EXTRA

THE GRADUATE SCHOOL OF BUSINESS ADMINISTRATION

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THE UNIVERSITY OF NORTH CAROLINA

(Six Component Institutions)

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By the act of the General Assembly of 1931 the University of North Carolina at Chapel Hill, the North Carolina College for Women at Greensboro, and the North Carolina State College of Agriculture and Engineering at Raleigh were merged into The University of North Carolina.

By the act of the General Assembly of 1963 effective July 1, 1963, The University of North Carolina comprised: The University of North Carolina at Chapel Hill, The University of North Carolina at Greensboro and North Carolina State of The University of North Carolina at Raleigh.

By the act of the General Assembly of 1965 effective July 1, 1965, The University of North Carolina comprised: The University of North Carolina at Chapel Hill, The University of North Carolina at Greensboro, The University of North Carolina at Charlotte, and North Carolina State University at Raleigh.

By the act of the General Assembly of 1969 effective July 1, 1969, The University of North Carolina comprises: The University of North Carolina at Chapel Hill, The University of North Carolina at Asheville, The University of North Carolina at Charlotte, The University of North Carolina at Greensboro, The University of North Carolina at Wilmington, and North Carolina State University at Raleigh.

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 effective by a single Board of Trustees and by the President with other administrative officers of The University. The general administration offices are located in Chapel Hill.

Members of the Board of Trustees are elected by the Legislature, and the Governor of North Carolina is chairman ex officio.

The chancellors of the component institutions are responsible to the President as the principal executive officer of The University of North Carolina.

February 27, 1970 Number 746 Extra

RECORD OF
THE UNIVERSITY OF NORTH CAROLINA
AT CHAPEL HILL

THE ONE HUNDRED AND
SEVENTY-SIXTH SESSION

THE GRADUATE
SCHOOL OF BUSINESS ADMINISTRATION

ANNOUNCEMENTS FOR THE SESSION
1970-1971

CALENDAR OF EVENTS

FALL SEMESTER, 1970

September 14	*Monday*. Examination for proficiency and reading knowledge in English will be given at 2:00 P.M. in Bingham Hall, Department of English.
September 15-16	*Tuesday-Wednesday*. Registration for the fall semester.
September 17	*Thursday*. Class work begins.
November 20	*Friday*. Last day for submitting an application for a degree or an application for admission to candidacy for the master's degree for the January Commencement. Last day for submitting an application for degree for the doctoral degree.
November 25	*Wednesday*. Thanksgiving recess begins at 1:00 P.M.
November 30	*Monday*. Classes resume in all departments at 8:00 A.M.
December 18	*Friday*. Christmas vacation begins at 5:00 P.M.
January 4, 1971	*Monday*. Classes resume in all departments at 8:00 P.M.
January 5	*Tuesday*. Doctoral dissertations and master's theses for candidates for the January Commencement must be filed in the Graduate School by this date. (No typing extension will be allowed for this Commencement.)
January 9	*Saturday*. Written examinations for master's candidates for the January Commencement may not be taken after this date.
January 14	*Thursday*. Classes for fall semester end at 6:00 P.M.
January 16	*Saturday*. Last day for the final oral examination for the master's degree for graduation in January.
January 18-23 25-27	*Monday-Saturday, Monday-Wednesday*. Examinations in courses.

SPRING SEMESTER, 1971

January 29	*Friday*. Registration for the spring semester.
February 1	*Monday*. Class work begins.
February 17	*Wednesday*. Students wishing to take the reading knowledge examination in English must register with the Graduate School by this date.
February 18	*Thursday*. Examination for reading knowledge in English will be given at 2:00 P.M. in Bingham Hall, Department of English.
February 26	*Friday*. Last day for submitting an application for a degree, or an application for admission to candidacy, for the master's degree, for the June Commencement. Last day for submitting an application for degree for the doctoral degree.

March 26	*Friday*. Spring recess begins at 6:00 P.M.
April 5	*Monday*. Classes resume in all departments at 8:00 A.M.
April 9	*Friday*. Doctoral dissertations and master's theses for candidates for the June Commencement must be filed in the Graduate School by this date.
May 1	*Saturday*. Written examinations for the master's candidates for the June Commencement may not be taken after this date.
May 13	*Thursday*. Classes for spring semester end at 6:00 P.M.
May 15	*Saturday*. Last day for final oral examinations for the master's or doctoral degrees for graduation in June.
May 17-22 24-26	*Monday-Saturday, Monday-Wednesday*. Examinations in courses.
May 31	*Monday*. Commencement.

SUMMER SESSION, 1971

First Term

June 7	*Monday*. Registration for the first term.
June 8	*Tuesday*. First day of classes.
June 14	*Monday*. Students wishing to take the reading knowledge examination in English must register with the Graduate School by this date.
June 15	*Tuesday*. Last day for submitting an application for admission to candidacy or an application for degree for the master's degree for the August Commencement.
June 18	*Friday*. Examination for reading knowledge in English will be given at 2:00 P.M. in Bingham Hall, Department of English.
June 26	*Saturday* classes.
July 2	*Friday*. Last day for submitting an application for degree for the doctoral degree for the August Commencement.
July 9	*Friday*. Last day of classes for first term.
July 12-13	*Monday-Tuesday*. Final examinations in courses for the first term.

Second Term

July 15	*Thursday*. Registration for the second term.
July 16	*Friday*. First day of classes.
July 17	*Saturday* classes.

July 19	*Monday*. Doctoral dissertations and master's theses for candidates for the August Commencement must be filed in the Graduate School by this date.
July 31	*Saturday*. Written examinations for the master's candidates for the August Commencement may not be taken after this date.
August 18	*Wednesday*. Last day for final oral examinations for the master's or doctoral degrees for graduation in August.
August 20	*Friday*. Last day of classes for second term.
August 23-24	*Monday-Tuesday*. Final examinations in courses for the second term.

Special Deadlines for Applications for Admission

July 1, 1970	Last day for submitting application for admission to the Fall Semester.
December 1, 1970	Last day for the submitting application for admission to the Spring Semester.
February 1, 1971	Last day for submitting application for most graduate appointments.
May 25, 1971	Last day for submitting application for admission to the First Term of the Summer Session.
July 1, 1971	Last day for submitting application for admission to the Second Term of the Summer Session.

Meetings of the Graduate Executive Council of the Consolidated University for 1970-1971

November 2, 1970	*Monday*, 2:00 P.M.
January 11, 1971	*Monday*, 2:00 P.M.
April 5, 1971	*Monday*, 2:00 P.M.
November 1, 1971	*Monday*, 2:00 P.M.

TESTING AND REGISTRATION DATES FOR ETS FOREIGN LANGUAGE EXAMINATIONS

Examination Date	Oct. 10	Feb. 6	Apr. 17	July 24
Penalty Date (Last date for receipt of Registration form without $3.00 penalty fee)	Sept. 16	Jan. 13	March 24	June 31
Closing Date (Last date for guaranteed registration or for changes in registration)	Sept. 23	Jan. 20	March 31	July 7

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THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

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CHARLES MILTON SHAFFER, B.S. Comm., Director of Developmental Affairs

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JOSEPH M. FLORA, Ph.D., Assistant Dean

EDWARD S. HOWLE, Ph.D., Assistant Dean

WILLIAM J. BRINSON, B.A., Director of the Graduate Office

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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.

SAMUEL M. HOLTON, Ph.D., Professor of Education (1973)

WILLIAM S. NEWMAN, Ph.D., Alumni Distinguished Professor of Music (1973)

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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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RALPH WILLIAM PFOUTS, Ph.D., Professor of Economics

JOSEPH CURTIS SLOANE, Ph.D., Alumni Distinguished Professor of Art and Director of the Ackland Memorial Art Center

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ROBERT BIGELOW DesJARDINS, Ph.D., Associate Professor of Business Administration; Director of Doctoral Program in Business Administration

4. Resigned August 31, 1969.
5. Appointment effective January 1, 1970.
6. Retired May 31, 1969.

GEORGE WARREN DOUGLAS, Ph.D., Assistant Professor of Economics

DOUGLAS ALLEN ELVERS, Ph.D., Assistant Professor of Business Administration

JOHN LESLIE EVANS, Ph.D., Assistant Professor of Business Administration

[7]JOHN PARKHILL EVANS, Ph.D., Associate Professor of Business Administration

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JOHN FREDERICK KOTTAS, Ph.D., Assistant Professor of Business Administration

CLIFTON HOLLAND KREPS, JR., Ph.D., Wachovia Professor of Banking

HAROLD QUENTIN LANGENDERFER, D.B.A., C.P.A., Professor of Accounting

7. Appointment effective January 1, 1970.
8. Spring semester, 1970.
9. Absent on leave, September 1, 1969 through August 31, 1970.

DAVID THEODORE LAPKIN, Ph.D., Professor of Economics

HENRY ALLEN LATANE, Ph.D., Meade H. Willis Professor of Investment Banking

MAURICE WENTWORTH LEE, Ph.D., Professor of Economics and Business Administration; Dean of the School of Business Administration

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CORYDON PERRY SPRUILL, B.Litt. (Oxon.) Alumni Distinguished Professor of Economics, Emeritus

WILLIAM S. STEWART, LL.B., Associate Professor of Business Law

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10. Resigned August 31, 1969.

ROBERT PHILIP STRAUSS, Ph.D., Assistant Professor of Economics

VINCENT JOSEPH TARASCIO, Ph.D., Associate Professor of Economics; Managing Editor, The Southern Economic Journal

JUNIUS HEWITT TERRELL, Ph.D., C.P.A., Associate Professor of Accounting

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DOUGLAS WILLIAM WEBBINK, Ph.D., Assistant Professor of Economics

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HAROLD EDGAR WYMAN, Ph.D., Associate Professor of Business Administration

[12]THOMAS NEVILLE YOUNG, B. Comm. (Melbourne), Visiting Associate Professor of Accounting

[11]WILLIAM EARL YOUNG, Ph.D., Assistant Professor of Business Administration

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WILLIAM SIMUEL HARGETTE, B.S.
JOSEPH WAYNE HARRIS, B.S.
JOHN ARTHUR HENDRIX, A.B.

11. Resigned August 31, 1969.
12. Fall semester, 1969-1970.

LINDA CAROL HOFFNER, A.B.
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GILBERT REID MARSH, S.B.
DAVID ERNST MENSEL, A.B.
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KAY RHODES ORGAN, B.A.
PETER THEODORE TREADWAY, M.B.A.

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JAMES THEODORE MARSH, B.A.
JOHN REAGAN STEWART, A.B.

Price Waterhouse Foundation Fellow
RICHARD EDGAR ZIEGLER, M.B.A.

Robert B. Patteson, Jr. Fellow
JOHN EDWARD MILLER, B.S.

University Limited Service Fellow
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University Teaching Fellows
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GEORGE ARTHUR SCHIEREN, B.A.

Wachovia Bank and Trust Company Fellows
OLIVER ROANE CROSS, JR., B.A.
HOWARD JOSEPH HULL III, B.S.

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, 1965, 170 years later, The University of North Carolina at Chapel Hill had a student enrollment in excess of 12,400 and a full-time and part-time faculty of more than 1,200.

The heavily wooded campus, situated at the edge of Chapel Hill, the small, but internationally recognized university community, covers an area of more that 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 colleges and schools are provided.

The Louis Round Wilson Library, one of the largest in the Southeast, contains a collection of a million and a half volumes. Its distinguished Southern Historical Collection and Rare Book Room serve as important adjuncts to the purposeful Business Administration-Social Science Division and its counterparts in the Library.

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 1853-54 the catalogue of the University carried an announcement of graduate work in course. 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, University of North Carolina, Chapel Hill, N. C. 27514.

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.

DEGREE PROGRAMS

THE MASTER OF BUSINESS ADMINISTRATION

The professional graduate program leading to the degree of Master of Business Administration is designed to meet the needs of graduate students who aspire to executive positions in business. Primary emphasis is placed on the analysis of business problems, the determination of business policy, and the cultivation of the skills and judgment involved in competent and responsible business management. The duration of the M.B.A. Program is two academic years, September through May.

Admission to the M.B.A. Program is open to qualified graduates of recognized colleges or universities accredited by a regional or general accrediting agency. There are three major requirements for admission: (1) a generally superior undergraduate record as evidenced by an official transcript; (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.

The M.B.A. is designed to be appropriate for graduates who have completed undergraduate majors in the humanities and liberal arts, engineering and natural sciences, and the social sciences. There are no prerequisite courses, nor is there any waiver of the Program requirements on the basis of undergraduate work. The applicant must be proficient in written and spoken English, and his command of the language must be such that he can participate freely in active classroom discussion with individuals of widely divergent backgrounds. The nature of the first-year curriculum requires that students enter the M.B.A. Program only in September.

The first-year program consists of a carefully coordinated group of graduate courses required of all students, followed by a comprehensive written examination at the end of that year. A summary of the first-year courses follows:

Fall Term	Spring Term
Quantitative Methods I	Quantitative Methods II
Management and Financial Accounting	Stabilization and Economic Growth
Managerial Economics	Financial Management
Human Behavior in Management	Marketing Management
Research and Report Writing	Production Management
	Research and Report Writing

The second year allows the student to build, if he chooses to do so, a concentration in some area of management through his choice of elective courses. Six courses are required, four are elective. A summary of the second-year program follows:

Fall Term	Spring Term
International Business	Management Simulation
Business Policy	Business and Society
Management Information Systems	Fundamentals of Organization
Elective	Elective
Elective	Elective

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 M.B.A. Program in the Doctoral Program, selection of second-year electives may be tailored to the requirements of the Ph.D. curriculum.

Candidates for the M.B.A. 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. Neither a thesis nor a reading knowledge of a foreign language is required. In addition to the comprehensive written examination at the end of the first year, the examining committee may require an oral examination at its discretion.

THE DOCTOR OF PHILOSOPHY

The degree of Doctor of Philosophy is conferred upon those who have completed the prescribed course of study with high distinction and have evidenced through a dissertation their capacity for independent research, advanced study, and analytical thinking.

Course Requirements

The following work must be offered prior to admission to the Program or satisfactorily completed as deficiencies:

1. Basic work, at the level of the M.B.A. Program in Accounting, Finance, Human Behavior, Marketing, and Production
2. Intermediate Economic Theory, both microeconomics and macroeconomics
3. Elementary Statistics
4. Elementary Calculus

Course requirements for the doctorate in Business Administration are:

The Fundamentals of Business Administration

The following courses or their equivalents must be offered from this area:

Business Administration 300—Quantitative Methods in Management I

Business Administration 301—Quantitative Methods in Management II

Business Administration 307—Seminar in the History of Management Thought

Business Administration 333—Organization Theory

Areas of Concentration

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

Accounting
Finance
Operations Management
Marketing
Organizational Behavior
Quantitative Methods in Business

Supporting Courses

Eighteen semester hours of supporting coursework are required, of which six semester hours must be Economics 200, Advanced Microeconomic Theory I, and Economics 202, Advanced Macroeconomic Theory.

Foreign Languages

Prior to admission to candidacy, each student must demonstrate by examination a reading knowledge of two modern for-

eign languages. Research skill in mathematics or statistics may be substituted for one of the two languages. The research skill requirement is fulfilled by successful completion of two courses approved by the Director of the Doctoral Program.

If a student wishes to offer French, German, Spanish or Russian, the foreign language requirement may be met by passing the examination administered by the Educational Testing Service, Princeton, New Jersey or Berkeley, California. For these languages, the requirement may also be fulfilled by the successful completion of the second semester of a special two-semester course series numbered 101X and 102X. For other modern languages, the requirement will be met by passing examinations administered by the departments offering instruction in the languages.

On the recommendation of the major department, foreign students who are seeking the degree of Doctor of Philosophy may take an examination in English composition and reading comprehension as one of the two required examinations. They may not offer their native language.

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 will be expected to obtain some experience as a classroom teacher and as a research assistant.

More detailed 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.

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. Applicants 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 is required to make an enrollment deposit of $25.00, which is not refundable but will be credited to his tuition in the term for which he is admitted. If the applicant decides later that he cannot enter the University, $20.00 will be refunded provided that a request is made by July 1 in the case of September admission, or by January 1 for spring admission.

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.**

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.

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 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. It should also be pointed out that the regulations of the United States Immigration Service prohibit students from abroad who enter the United States on student visas from engaging in part-time employment during the first year in this country. Therefore, 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. The rules for admission and the requirements for advanced degrees in the Summer Session are the same as in the regular academic year.

GENERAL 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

2. See Calendar of Events.

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 28.)

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 subject to the approval of the Administrative 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 received 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 uni-

versity. 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 the 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, pre-registration 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.

GENERAL INFORMATION

LOCATION

The site of 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.

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.

HOUSING, FOOD, 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

RESIDENCE HALL ACCOMMODATIONS: The University provides campus residence hall accommodations for approximately 400 graduate men and 200 graduate women in Craige Graduate Center. Craige Graduate Center is exclusively for graduate men and women and involves a new program on campus geared to the needs and maturity of the graduate community. Craige offers a snack bar, TV rooms, special study and typing rooms, coin laundry, vending

machines, limited kitchen facilities, tennis courts, parking lots, bus service, private telephones, social facilities, and nearby Chase Cafeteria. Rooms are rented for the academic year, September through May. Rent does not cover the occupancy during periods when the University is not officially in session. A newly accepted student wishing to live in Craige Graduate Center 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 Housing Office must be notified on or before July 1 for the fall semester, January 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—semester rent is $169.50 per person in a double room ($244.50 for limited number of single rooms). This amount includes a $5.00 residence hall social fee and $1.00 key deposit. Women—semester rent is $208.50 per person in a double room ($303.50 for a very limited number of single rooms). This includes a $5.00 residence hall social fee.

All rooms are furnished. The University's pillow, linen, and blanket rental service is described on page 33. 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.

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 Director

of Housing by a date announced by the Director of Housing. The deposit is forfeited on cancellation after June 10th.

Room assignments will be cancelled and deposit forfeited unless rent for the fall semester is paid in full by July 1.

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 June 1 for the first summer term, and by July 13 for the second summer term.

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 to the Director of Housing is urgently recommended. Married students, especially married foreign students, should not bring their families to Chapel Hill until their housing arrangements have been settled.

The Housing Office maintains listings of off-campus accommodations. Satisfactory arrangements for these places are best made by applying in person.

Student Dining Facilities

Dining facilities are operated in locations convenient to residence halls and meals are offered at reasonable rates.

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

LAUNDRY SERVICES: Finished laundry service at reasonable cost is provided by the University Laundry Department to students who wish to use it. This service is 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.)

ADDITIONAL LAUNDRY SERVICES: Wash-Dry-Fold service (nothing finished) is available at any of the University Laundry Call Offices. This is an economical, Cash-and-Carry service and is separate from the finished laundry service.

LINEN RENTAL SERVICE: For students who do not wish to provide their own linen, the University Laundry will furnish two sheets, one pillow case, 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 prohibition 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 attention for the student, the University employs nine full-time physicians, two part-time physicians, two half-time psychiatrists, one part-time consulting psychologist, and one half-time marriage counselor, who provide general medical care and psychiatric counseling. It maintains a well-appointed infirmary with sixty-five beds. Modern diagnostic facilities include an x-ray unit, under the direction of a full-time tech-

nician, and a clinical laboratory, under the direction of two full-time technicians. The infirmary is under the immediate supervision of the Director of the Student Health Service and is provided with seventeen full-time experienced nurses who are directed by a nursing supervisor. At the discretion of the attending physician, a student may be admitted to the wards, and for such service 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 infirmary are rendered by N. C. Memorial Hospital at standard charges. In addition, a charge is made for inpatient meals and for other than routine drugs and 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 between regular sessions when the student is not actually enrolled in the University.

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. The University fosters an unusually extensive program of intramural athletics, involving participation of about two-thirds of the male student body. Every effort is made to provide each interested student with the opportunity to participate in a healthful form of competition and to learn teamwork and good sportsmanship.

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 theologically trained persons 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

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

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, $158.50; four through six hours, $317.00; seven or more hours, $475.00.

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

Fees[3] $84.50

Use of the University Laundry is optional. Any student desiring to use this service is required to make the initial deposit at the beginning of each semester and an additional deposit if the first is exhausted. Any amount not used will be refunded at the close of the spring semester.

Residence Status for Tuition Payment

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[4] 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.

2. **Minors:** The legal residence of a person under twenty-one years of age at the time of his 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 order to the mother or to a legal guardian other than a parent. No

3. M.B.A. Program, fees $89.50.

4. Domicile is synonymous with legal residence. A person's domicile is his permanent dwelling place. It is the place where he is generally understood to reside with the intention of remaining there indefinitely or of returning there when absent. It is presumed that a person whose domicile is in North Carolina is registered to vote, files a North Carolina State Income Tax and other reports, and complies with other obligations of persons resident in North Carolina.

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.

A minor student whose parents move their legal residence from North Carolina to a location outside the State shall be considered to be a nonresident after six months from the date of removal from the State.

For the purpose of determining residence requirements under these rules, a person will be considered a minor until he has reached his twenty-first birthday. Married minors, however, are entitled to establish and maintain their residence in the same manner as adults. Attendance at an institution of higher education as a student cannot be counted as fulfilling the six-month domicile requirement.

3. **Adults:** A person twenty-one years of age or older is eligible for in-state tuition if he has maintained continuous domicile in North Carolina for the six months next preceding the date of enrollment or re-enrollment, exclusive of any time spent in attendance at any institution of higher education. An in-state student reaching the age of twenty-one is not required to re-establish residence provided that he maintains his domicile in North Carolina.

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 non-resident. 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 six months under the same conditions as she could if she were single.

5. **Military Personnel:** No person shall be presumed to have gained or lost in-state residence status in North Carolina while serving in the Armed Forces. However, 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 six 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 in-state tuition rate.

8. **Change of Status**[5]: 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 and may not thereafter be changed except: (a) in the case of a nonresident student at the time of his enrollment who, or if a minor his parents, has subsequently maintained a legal residence in North Carolina for at least six months, and (b) in case of a resident who has abandoned his legal residence in North Carolina for a minimum period of six months. In either case, the appropriate tuition rate will become effective at the beginning of the term following the six-month period.

9. **Responsibility of Student:** 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.

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5. To qualify for in-state tuition, a legal resident must have maintained his domicile in North Carolina for at least six months next preceding the date of first enrollment or re-enrollment in an institution of higher education in the State. Attendance at an institution of higher education as a student cannot be counted as fulfilling the six-month domicile requirement. A person twenty-one years of age or older is eligible for in-state tuition if he has maintained continuous domicile in North Carolina for the six months next preceding the date of enrollment or re-enrollment, exclusive of any time spent in attendance at any institution of higher education.

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 fellowships 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.

Graduate students who hold appointments such as teaching fellowships, graduate assistantships, research assistantships, and instructorships pay tuition at the staff rate, which is the same as the rate charged residents of North Carolina.

Available to graduate students in economics and business administration are two teaching fellowships, each of a value of $2,600 annually.

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

The Ernest H. Abernethy Fellowship was established in 1944.

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

The Price Waterhouse Foundation Fund for Business Administration was established in 1958 in the amount of $1,000 annually. This is to be used to support a research program by a member of the

accounting faculty or a graduate fellowship for students majoring in accounting.

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 Cargill, Wilson and Acree Scholarship, the Central Carolina Bank Fellowship, and The Executive Program Scholarship, each in the amount of $500; the Collier Cobb and Associates Fellowship and the Wachovia Graduate Business School Fellowship 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 $3,200,000. 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 gradu-

ate fellowhips; 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, 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 R. J. Reynolds Tobacco Company Professorship, currently designated for a professor in the field of Applied Behavioral Science; and Burlington Industries, Inc., created the Burlington Industries Chair in Marketing. 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, 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.

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 distribution 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 Paper Series** or **Technical Paper Series.** These publications vary in length from eighty to one hundred twenty manuscript pages.

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 books 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 one and a half million volume University Library include substantial collections in business administration and economics, for both research and instructional purposes. The Library's Business Administration and Social Sciences Division is organized to serve the library needs of students and faculty of the School. This Division contains over 500 current schol-

arly, trade and other journals in business and economics, as well as a selected collection of important books, plus the essential business services. The 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 360 Data Processing System. The facilities and personnel of the Center are available to assist in instruction and research throughout the University. Special short courses are given by the staff of the Center, from time to time, to assist faculty members and students in programming their problems for processing on the computer. The Department of Information 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.

SUMMER PROGRAM IN ECONOMICS FOR SECONDARY TEACHERS OF SOCIAL STUDIES

The R. J. Reynolds Tobacco Company has made a grant to the University for a program in economics for teachers of social studies which is conducted by the Department of Economics in the School of Business Administration during the first term of the Summer Session. Three closely coordinated courses designed especially for social studies teachers are offered for a total of six semester hours of graduate credit. Admission to the Graduate School will be

required of students who take the program for credit. Others who are eligible to participate in the Program will be admitted to the Summer Session as visiting students.

The purposes of the program are twofold: first, to develop further understanding of the structure and functioning of the American economy and the economic systems with which it must cooperate and compete; and second, to increase effectiveness of social studies instruction by providing resource materials which may be useful in the classroom.

Sixty all-expense fellowships are offered to qualified high school and junior high school teachers. Each of the R. J. Reynolds Tobacco Company Fellowship holders will be entitled to: (1) transportation from his home town to Chapel Hill and return, (2) board and room in University facilities during the six-weeks program, (3) full payment of all tuition and fees, and (4) a miscellaneous expense allowance.

Social studies teachers in accredited high schools or junior high schools in the Southeastern states are eligible to apply for these fellowship grants. Applications must be in the hands of the Selection Committee by March 10. Applicants will be notified of the decision of the Committee by April 1. Address all inquiries and applications to: The R. J. Reynolds Tobacco Company Economics Fellowship Office, School of Business Administration, The University of North Carolina at Chapel Hill.

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.

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 fifty 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, history, journalism, political science, social and clinical psychology, social work, and sociology.

The junior staff of the Institute, numbering about fifty at this time, 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. Research fellows are mature graduate students equipped by training and experience to carry on research, usually with some faculty consultation and direction. Mental health trainees are advanced graduate students who receive academic training and research experience in the analysis of the social aspects of mental health and the health professions. At times the research of graduate students is developed into theses, dissertations, monographs, and articles for professional journals.

Just as representation from different academic disciplines is broad, so the content and methods of research are varied. There are research programs in urban studies, organization research, adolescent socialization, social change, political behavior, and health; these provide a flexible framework for the coordination and cumulation of much research. Projects need not fit under these rubrics, however, since many individual projects are also supported. To keep Institute staff members and other interested persons informed about research plans and developments, a report, **Research Previews,** is issued. Research documents are published as books, monographs, or articles.

The Institute for Research in Social Science has a small group laboratory for the observations of groups in action and a statistical laboratory for the processing and statistical analysis of data. The central office of the Institute provides secretarial, bookkeeping, and editorial services to members of the staff.

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, 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 Experimental Statistics which is organized in the School of Agriculture and which engages in much close consulting work with the Agricultural Experiment Station and Engineering School. Besides training graduate students, whose chief interest is in application of statistics to such areas, it engages in cooperative research activities with government agencies and with industry throughout the state. In addition to conducting a graduate training program and granting degrees of Master of Science and Doctor of Philosophy 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 organized within the Graduate School and is principally concerned with research in theoretical statistics and the training of students for master's and doctor's degrees. The Department has research projects sponsored by the Office of Naval Research and the United States Air Force in probability and statistics, which provide opportunities for graduate students to conduct research leading to the Ph.D. degree and receive stipends for 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 of Field Physics, the Institute of Government, the Institute of Latin American Studies, the Institute of Fisheries Research, and the Research Laboratories of Anthropology. Information about the operation of any of these institutes may be obtained from the directors.

COURSES OF INSTRUCTION IN BUSINESS ADMINISTRATION AND ECONOMICS*

BUSINESS ADMINISTRATION COURSES

Note: **Economics 31 and 32, or equivalents, are prerequisite to all courses in Business Administration,** except as otherwise indicated. Economics 61 may, under certain circumstances, be substituted for Economics 31 and 32.

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.** Schwentker.

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

123 **CASUALTY INSURANCE** (3). The social, economic, and legal bases for workmen's compensation, automobile, accident and health, burglary, fidelity, surety, and other casualty insurances. 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 governmental 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.** Levin, McLaughlin, Kottas, Elvers.

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*See School of Business Administration Undergraduate Catalogue for courses available to undergraduates.

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.** Levin, McLaughlin, Kottas.

133 **DESIGN AND 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.** Elvers.

134 **ANALYSIS OF BUSINESS DECISIONS** (3). Prerequisite, Economics 70. Introduction to the techniques of decision theory with applications to problems in business. **Fall and spring.** Staff.

135 **QUALITY CONTROL BY STATISTICAL METHODS** (3). Prerequisite, Economics 70 or equivalent. Control charts. Historical analysis. Process control; variables; defects; defectives. Operating characteristic. Tolerance limits. Lot acceptance: single; double; multiple; sequential. Producer's and consumer's risk. AOQL. Cost functions. (1971-1972 and alternate years.) **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.

156 **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.** Staff.

158 **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, Jerdee.

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 from the point of view of the business executive. Topics include economic and social aspects; types of advertising and purposes; media types, selection and evaluation; advertising research. **Fall or spring.** Kirkpatrick, Kendall.

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.** Kirkpatrick.

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.** Kirkpatrick, 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 posed by social and economic trends. **Fall and spring.** McGregor.

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

167 **SALES MANAGEMENT** (3). Prerequisite, Business Administration 160 or equivalent. Planning, organization, and control of sales operations. Emphasis upon the sales manager's functions and problems in manufacturing, wholesaling, and service establishments. **Fall and spring.** Logsdon, Tillman.

168 **INTRODUCTION TO MARKETING RESEARCH** (3). Prerequisites, Economics 70 and 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.** McGregor, Littlefield, Kendall.

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, sales promotion, and operating diagnosis and control. **Fall and spring.** Staff.

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.** Reynolds, Windham, Brummet.

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 statement analysis. **Fall and spring.** Reynolds, Windham, Cook.

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, Lunn.

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.** 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 controls for various management problems. **Fall and spring.** Langenderfer, Terrill, Cook.

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.** Terrill.

177 **FEDERAL AND STATE TAXATION** (3). Prerequisite, Business Administration 72 or 73. Federal and State tax laws and their application to tax situations for various taxable entities. Basic tax research and tax planning. **Fall and spring.** Windham, Robey.

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.

179 **CERTIFIED PUBLIC ACCOUNTING PROBLEMS** (3). Prerequisites, 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.

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.

181 **CAPITAL MARKETS** (3). Prerequisite, Business Administration 180 and Economics 132. Analysis of the basic factors determining the supply and demand for funds. The role of the private sectors is emphasized. **Fall or spring.** Kreps.

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.** Staff.

185 **FINANCIAL INSTITUTIONS** (3). Prerequisites, Business Administration 180 and Economics 132 or equivalents. Lectures, cases, and readings covering the financial management of commercial banks and selected nonbank financial institutions. **Fall or 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.** Latané, Tuttle, Evans.

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

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 operations. **Fall and spring.** Behrman.

192 **INTRODUCTION TO MANAGEMENT INFORMATION SYSTEMS** (3). Prerequisite, senior standing. A survey of the elements and functions of management information systems and an introduction to the principles underlying the design of effective systems. **Spring.** DesJardins.

194 **CREDIT TRANSACTIONS AND SALES** (3). Prerequisite, Business Administration 91 or equivalent. The law 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.

196 **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.** Calhoon, Moffie, Adams.

197 **FUNDAMENTALS OF MANAGERIAL ORGANIZATION** (3). Prerequisite, senior standing. A detailed analysis of the basic problem of organization, including its basis in management, as well as the development, attributes, structure, staffing, directing, and controlling of an organization. **Fall and spring.** George.

198 **OPERATIONS RESEARCH** (3). Prerequisite, Economics 70 or equivalent. The use of quantitative methods in managerial decision making. Topics include linear programming, inventory control, Bayes Theorem, game theory, queuing, and Markov chains. **Fall and spring.** Levin, Kottas, Elvers.

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 the computer. **Fall and spring.** Levin, DesJardins.

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.** Staff.

201 **QUANTITATIVE METHODS II** (3). A continuation of Business Administration 200. **Spring.** Staff.

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, statistical decision theory. **Spring.** Staff.

205 **DECISION THEORY** (3). Prerequisite, Business Administration 201 or equivalent. Application of the techniques of decision theory to problems which require the use of multi-stage or sequential decision models. **Fall.** Gearing, Gould.

206 **QUANTITATIVE DECISION METHODS** (3). Prerequisite, Business Administration 205 or equivalent. Generalized models for making choices are developed and analyzed through the use of payout matrices. **Spring.** Gearing.

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 application in economics theory, statistics, and management science. **Fall and spring.** Staff.

220 **INTERNATIONAL BUSINESS** (3). Procedures and problems of doing business abroad; analysis of institutional settings overseas and of policies of the United States and other governments toward foreign business. **Fall.** Behrman.

225 **STUDIES IN INTERNATIONAL BUSINESS** (3). Prerequisite, Business Administration 220 or permission of instructor. Individual analysis of problems on 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.** Murphy, Gould.

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 non-linear duality theory. **Spring.** Murphy, Boisseau, Gould.

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.** Levin, McLaughlin, Kottas.

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.** 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.** DesJardins.

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

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.** Levin.

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.

250 **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, Jerdee, Moffie.

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.** Tillman, Headen.

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.** Headen.

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.** Littlefield.

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.** Langenderfer, Wyman.

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** (3). Prerequisite, Business Administration 173 or equivalent. Study of the basic concepts, methods and controversial problems involved in the use of accounting and other quantitative tools in aiding management to plan, coordinate, control operations and appraise results. **Spring.** 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.** Staff.

276 **ACCOUNTING IN THE MANAGEMENT CONTROL PROCESS** (3). Prerequisite, Business Administration 270 or equivalent. Topics of current relevance to those interested in accounting in the management control process. **Fall or spring.** Staff.

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.** Staff.

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.** 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.** Tuttle, Evans.

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, Tuttle.

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 approaches policy-making and administration in a firm from the point of view of top management. **Fall.** Barrett.

296 **HUMAN BEHAVIOR IN MANAGEMENT** (4). Prerequisite, graduate standing in business administration or economics. The analysis of individual and group behavior in organizations and applications to organizational relations. **Fall.** Jerdee, Bell.

297 **BUSINESS RESEARCH AND REPORT WRITING** (3). Prerequisite, graduate standing in business administration or economics. Two semester course beginning Fall Semester only. Analytical skills and methods of communicating decisions are developed through preparation of a variety of written reports. Sources and use of information are also stressed. **Fall and spring.** Holsten.

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.** Levin, DesJardins.

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.** Gearing, Boisseau.

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.** Gearing, Boisseau.

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.** Gearing, Gould, Evans.

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. **Fall.** Evans.

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

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.

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.** Levin, McLaughlin, Kottas, Elvers.

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

333 **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.** Rosen.

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.** Levin, McLaughlin, Kottas, Elvers.

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

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

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 applications in business. **Spring.** Adams, 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 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.

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

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.** Logsdon, Littlefield.

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.** McGregor, Tillman.

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. (1970-1971 and alternate years.) **Fall.** Kirkpatrick.

364 **SEMINAR IN CONSUMER BEHAVIOR** (3). Prerequisite, permission of the instructor. Concepts and research from the behavioral sciences germane to marketing are explored through readings, discussions, and individual research assignments. (1970-1971 and alternate years.) **Spring.** Tillman, Kirkpatrick.

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. (1971-1972 and alternate years.) **Fall.** McGregor, Logsdon.

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.** Littlefield.

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. (1971-1972 and alternate years.) **Fall.** 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. (1970-1971 and alternate years.) **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.** Staff.

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. (1971-1972 and alternate years.) **Spring.** Langenderfer.

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

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.** Kreps, Latané.

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, Latané.

393 **MASTER'S THESIS. Fall and spring.** Staff.

394 **DOCTORAL DISSERTATION. 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 instructor. A course in research concepts, objectives and methods. **Spring.** Staff.

399 **SEMINAR.** 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.**

ECONOMICS COURSES

Note: **Economics 31 and 32, or equivalents, are prerequisite to the following courses.** For Economics majors, the grade of **C** or better must have been attained in Economics 31 and 31 or equivalents. Economics 61 may, under certain circumstances, be substituted for Economics 31 and 32.

111 **INTERNATIONAL RESOURCES AND NATIONAL POLICY** (3). International resource problems which necessitate United States policy decisions. National policy and objectives and nature of resources; production potentials; major agricultural and industrial resources, and international interdependence; 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.** Knox.

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.** Knox.

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.** Knox.

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.

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.** Staff.

141 **PUBLIC FINANCE (Political Science 191)** (3). The facts and theories of American public finance—federal, state, and local. Public expenditures, taxes and other forms of revenue, public borrowing, and the economic effects of fiscal administration. **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. **Spring.** Staff.

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.** 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.** McFarland.

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 PUBLIC UTILITIES** (3). Theory and policies as applied to the power and communication industries. **Fall.** Webbink.

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.** Ingram, Appleyard, Howle.

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.** Ingram, Appleyard, Field.

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.

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

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 the hazards of modern industrial life. **Fall and spring.** Staff.

192 **COLLECTIVE BARGAINING** (3). Prerequisite, Economics 191 or equivalent. This course deals with collective bargaining agencies, procedures, and the subject matter of collective bargaining. Cognizance is taken of the existing legal limitations on collective bargaining. **Fall and spring.** Johannesen.

193 **HISTORY OF THE LABOR MOVEMENT** (3). Prerequisite, Economics 191 or equivalent. A history of the labor movement in the United States, with some references to its development in other industrial countries. The main objectives of the labor movement and its economic consequences are stressed. **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. (1970-1971 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.** Staff.

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.** Staff.

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.

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 and spring.** Pfouts, Benavie, Lovell.

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. **Fall and spring.** Pfouts, Benavie.

202 **ADVANCED MACROECONOMIC THEORY** (3). Concepts and measurements of national income. Determination of national income. **Fall and spring.** Pfouts, Douglas, Benavie, Waud.

203 **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, consumption and production. **Fall.** Afriat.

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

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.** DesJardins, Richter.

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.** DesJardins, Boisseau, Afriat, Lovell.

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.

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.** Murphy, Gould.

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 nonlinear duality theory. **Spring.** 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. (1970-1971 and alternate years.) **Spring.** 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 mature economies. **Spring.** Blaine.

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.** Ingram, Appleyard.

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.** Ingram, Appleyard.

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.

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.

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; correlation ratio; rank correlation. **Fall.** Lovell.

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. (1970-1971 and alternate years.) **Spring.** Staff.

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, Richter.

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

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 functions 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, Lapkin.

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

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

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

291 **LABOR ECONOMICS** (3). Prerequisite, Economics 191 or equivalent. The economic implications of basic phenomena in the 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.** Iden.

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. (1971-1972 and alternate years.) **Spring.** Guthrie.

295 **COMPARATIVE ECONOMIC SYSTEMS** (3). Prerequisite, Economics 195. Selected case studies in current proposals for reform in the economic

system. Individual assignments are made for critical study and reports. **Spring.** Staff.

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 and to the prospects for increasing the rationality of economic decision-making. **Fall.** Staff.

297 **SOVIET ECONOMIC GROWTH** (3). An evaluation of Soviet statistical data and methodology with reference to the measurement and analysis of the national product during the period of the Five-Year Plans. Emerging trends in factor efficiency and supply are examined as a basis for projecting future patterns and rates of growth. **Spring.** Staff.

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

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

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

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

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.

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

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.** Philbrook, Douglas.

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

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. Fall and spring.** Staff.

394 **DOCTORAL DISSERTATION. 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.**

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

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