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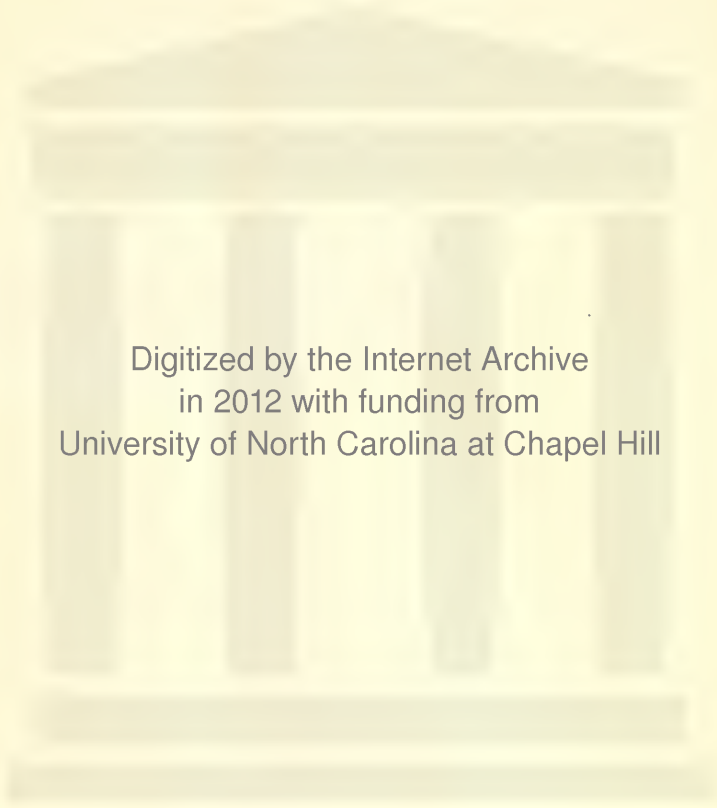
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THE UNIVERSITY OF NORTH CAROLINA RECORD

May 20, 1951

Number 490

THE
GENERAL CATALOGUE ISSUE

FOR

THE 157TH SESSION

1950-1951

ANNOUNCEMENTS
FOR THE SESSION

1951-1952



THE UNIVERSITY OF NORTH CAROLINA RECORD
Published by THE UNIVERSITY OF NORTH CAROLINA PRESS
ISSUED 14 TIMES A YEAR AS FOLLOWS: 2 NUMBERS IN JANUARY, 3 NUMBERS IN
FEBRUARY, 3 NUMBERS IN MARCH, 3 NUMBERS IN APRIL, 2 NUMBERS IN
MAY, AND 1 NUMBER IN OCTOBER. ENTERED AS SECOND-CLASS
MATTER AT THE POST OFFICE AT
CHAPEL HILL, N. C.

UNDER THE ACT OF AUGUST 24, 1912

SCHEDULE OF ISSUES OF
THE RECORD
FOR YEAR 1950-1951

Research in Progress

School of Social Work Catalogue

Institute of Statistics Catalogue

School of Library Science Catalogue

Summer Session Catalogue

School of Pharmacy Catalogue

School of Dentistry Catalogue

School of Public Health Catalogue

School of Law Catalogue

School of Medicine Catalogue

Graduate School Catalogue

School of Business Administration Catalogue

The General Catalogue Issue

General Information

MAY 20, 1951

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THE UNIVERSITY OF NORTH CAROLINA RECORD

THE ONE HUNDRED AND
FIFTY-SEVENTH SESSION



THE GENERAL CATALOGUE ISSUE

1950-1951

*Announcements for the Session
1951-1952*

THE UNIVERSITY OF NORTH CAROLINA PRESS
CHAPEL HILL, N. C.

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Part One

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(Office at Chapel Hill)

A consolidation of the University of North Carolina at Chapel Hill, The State College of Agriculture and Engineering at Raleigh, and the Woman's College of the University of North Carolina at Greensboro.

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THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

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*ROY K. MARSHALL, Ph.D., *Director, The Morehead Planetarium*

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Dean, Graduate School: W. W. PIERSON, Ph.D.

Dean, General College: C. P. SPRUILL, A.B., B.Litt. (Oxon.)

Dean, School of Business Administration: THOMAS H. CARROLL, D.C.S.

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*Resigned, March 1, 1951.

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Elected Members

Terms expire December 31, 1951

DIVISION OF HEALTH AFFAIRS: J. C. Andrews, K. M. Brinkhous, Emil Chanlett, C. M. Sturdevant.

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Terms expire December 31, 1952

DIVISION OF HEALTH AFFAIRS: J. H. Ferguson, J. B. Graham, E. P. Hiatt, J. J. Wright.

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DIVISION OF SOCIAL SCIENCES: G. W. Blackwell, R. L. Bunting, F. M. Green, M. S. Heath, Dorothy McCuskey.

Terms expire December 31, 1953

DIVISION OF HEALTH AFFAIRS: H. J. Magnuson, Cecil Sheps.

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DIVISION OF NATURAL SCIENCES: R. E. Coker, W. R. Mann, Paul Shearin, S. Y. Tyree.

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*Resigned from the Council, March 1, 1951.

STANDING COMMITTEES OF THE FACULTY*

ADVISORY (*elected*). 1951: Messrs. Baity, Fesler, Wells; 1952: Couch, Phillips, Woosley; 1953: Blackwell, Bost, T. H. Carroll.

ATHLETICS. 1951: Messrs. Cornwell, Hedgpeth; 1952: Hanft, Linker; 1953: A. W. Hobbs (*Chairman*), Sitterson, H. D. Wolf.

BUILDINGS AND GROUNDS. Messrs. Baity, Cornwell, Emory, R. J. M. Hobbs (*Chairman*), Parker, Teague, Totten, Wager.

CATALOGUE. Messrs. Armstrong (*Chairman*), Howell, Miss Norman.

ENDOWED SCHOLARSHIPS, LOAN FUNDS, AND SELF-HELP WORK. 1951: Messrs. Armstrong, D. D. Carroll, Cecil Johnson, S. B. Knight, Wells; 1952: Friday, Mackie, Plemmons (*Chairman*), Spruill, J. A. Williams; 1953: Cornwell, M. A. Hill, Lanier, J. M. Saunders, Teague.

ENGLISH COMPOSITION. 1951: Messrs. Emery, Gwynn, Cecil Johnson, Lehman, Newman, Roe, White; 1952: Miss Atchison, Epps, Hardré, Guy B. Johnson, McKnight, Pegg, Sechrist; 1953: Aycock, Friederich, Hartung, Heard, Horner (*Chairman*), Layman, Mouzon, Selden.

ESTABLISHED LECTURES. 1951: Messrs. Epps, George; 1952: Blackwell (*Chairman*), MacNider; 1953: Hanft, Heath, Nash.

EXAMINATIONS AND INSTRUCTION. 1951: Messrs. S. B. Knight (*Chairman*), Pegg; 1952: Cameron, Jordan; 1953: Armstrong (*ex officio*), Engstrom, Horner.

EXECUTIVE (*elected*). 1951: Messrs. Engstrom, Sitterson; 1952: Bailey, Spearman; 1953: S. B. Knight, Miss McCuskey.

FACULTY WELFARE. 1951: Messrs. Morgan, Sitterson; 1952: Eliason, Kottke (*Chairman*); 1953: Brooks, Crockford, Wadsworth.

FRATERNITIES AND SORORITIES. 1951: Messrs. E. E. Peacock (*Chairman*), Saunders, Woodhouse; 1952: Godfrey, McKinney; 1953: O'Neil, Shotts.

HONORARY DEGREES (*elected*). 1951: Messrs. Couch, Lefler; 1952: Leavitt, Odum; 1953: Baity, F. M. Green.

INSTRUCTIONAL PERSONNEL. Messrs. Brandis, T. H. Carroll, Coffin, Fink, Haydon, Lasley, Phillips, Pierson, Spruill, Wells (*Chairman*), H. D. Wolf, Miss Akers.

COMMUNICATION. 1951: Messrs. J. C. Lyons, Olsen; 1952: Haydon, Morrison; 1953: Cornwell, Grumman (*Chairman*), Schenkan.

REGISTRATION. 1951: Messrs. Armstrong, Coffin, M. A. Hill, Lanier (*Chairman*), Lasley, Phillips; 1952: Brecht, Engstrom, Evans, Horner,

*Terms expire the year indicated.

Jamerson, A. K. King, Spruill; 1953: T. H. Carroll, Hedgpeth, Markham, McGavran, Pegg, Wells.

REGULATION OF STUDENT DANCES. 1951: Miss Carmichael, Messrs. Stanback; 1952: Cotten, Markham; 1953: Allen (*Chairman*), Cornwell, Jefferies.

RETIREMENT ARRANGEMENTS. 1951: Messrs. Dey, Jente (*Chairman*), L. R. Wilson; 1952: Dalzell, MacNider; 1953: McGill, H. K. Russell.

SULLIVAN AWARD. 1951: Miss Carmichael, Messrs. Cornwell; 1952: Mackie (*Chairman*), Suskin; 1953: Weaver.

UNIVERSITY GOVERNMENT. 1951: Messrs. E. W. Knight, Van Hecke (*Chairman*), L. R. Wilson; 1952: A. K. King, O'Neil; 1953: Godfrey, Whyburn.

WAR CREDIT FOR VETERANS. 1951: Messrs. Wells (*Chairman*); 1952: Spruill; 1953: O'Neil, Plemmons.

OFFICERS OF INSTRUCTION

GORDON GRAY, A.B., LL.B., LL.D., *President of the University of North Carolina*

A.B., 1930, LL.D. (North Carolina); LL.B., 1933 (Yale)

ROBERT BURTON HOUSE, A.M., LL.D., *Chancellor of the University at Chapel Hill and Vice-President of the University of North Carolina*

A.B., 1916 (North Carolina); A.M., 1917 (Harvard); LL.D. (Catawba, Bowdoin)

By action of the Trustees of the University, the General Faculty includes all members of the University's teaching force above the rank of instructor and all general administrative officers of the institution. In the President and the General Faculty is vested final authority (under the Trustees) over all matters of University policy and activity. Under the General Faculty the colleges and the schools have separate faculties and administrative boards, which have final authority over matters pertaining solely to such colleges or schools. In the following list are included the names of all members of the General Faculty who have not been listed under Officers of Administration, the names of all administrative officers who also do actual teaching, and the names of all instructors and part-time instructors. The names are arranged in alphabetical order.

ELIE MAYNARD ADAMS, Ph.D., *Assistant Professor of Philosophy*

A.B., 1941, M.A., 1944 (Richmond); B.D., 1944 (Colgate-Rochester Divinity School); A.M., 1947, Ph.D., 1948 (Harvard)

JOSEPH EDISON ADAMS, Ph.D., *Professor of Botany*

Ph.G., 1925, Ph.Ch., 1927 (College of Pharmacy, Columbia); B.S., 1929 (Michigan); M.A., 1932 (Columbia); Ph.D., 1935 (California)

NICHOLSON BARNEY ADAMS, Ph.D., *Professor of Spanish*

A.B., 1915 (Washington and Lee); M.A., 1920, Ph.D., 1922 (Columbia)

RAYMOND WILLIAM ADAMS, Ph.D., *Professor of English*

A.B., 1920 (Beloit); A.M., 1921, Ph.D., 1928 (North Carolina)

DOROTHY C. ADKINS, Ph.D., *Professor of Psychology*

B.S., 1931, Ph.D., 1937 (Ohio State)

THOMAS WORTHEN AIKEN, B.A., *Part-time Instructor in Political Science*

B.A., 1946 (American University)

*SUSAN GREY AKERS, Ph.D., *Professor of Library Science and Dean of the School of Library Science*

A.B., 1909 (Kentucky); Certificate, 1913 (Library School, Wisconsin); Ph.D., 1932 (Chicago)

* Absent on leave, August 25, 1950—April 15, 1951.

- FRANCIS LEE ALBERT, JR., A.B., *Part-time Instructor in English*
A.B., 1947 (Harvard)
- MARY SWINGLE ALBERT, A.B., *Part-time Instructor in Political Science*
A.B., 1948 (Radcliffe)
- EDGAR ALDEN, M.M., A.M., *Instructor in Music*
B.M., 1936, M.M., 1940 (Oberlin); A.M., 1950 (North Carolina)
- SYDENHAM BENONI ALEXANDER, A.B., M.D., *Instructor in Medicine and Associate University Physician*
A.B., 1941 (North Carolina); M.D., 1944 (Medical College of Virginia)
- JOHN VOLNEY ALLCOTT, M.A., *Professor of Art*
Ph.B., 1928 (Wisconsin); M.A., 1936 (Chicago)
- ERNEST MARVIN ALLEN, JR., A.M., *Assistant Professor of Physical Education*
A.B., 1938, A.M., 1940 (North Carolina)
- JOHN ALEXANDER ALLEN, A.B., B.A., *Part-time Instructor in English*
A.B., 1943 (Swarthmore); B.A., 1948 (Oxford)
- WALTER ALLEN, JR., Ph.D., *Professor of Latin*
A.B., 1932 (Wesleyan); Ph.D., 1936 (Yale)
- WILLIAM D. AMIS, A.B., *Instructor in Social Science*
A.B., 1949 (Swarthmore)
- MARY EDNA ANDERS, S.B. in L.S., A.M., *Visiting Instructor in Library Science*
A.B., 1943 (Alabama); S.B. in L.S., 1947, A.M., 1950 (North Carolina)
- CARL E. ANDERSON, Ph.D., *Associate Professor of Biological Chemistry and Nutrition*
B.S., 1935 (Connecticut); Ph.D., 1943 (North Carolina)
- FRANK WALTER ANDERSON, A.M., *Part-time Instructor in English*
A.B., 1947 (Birmingham-Southern); A.M., 1948 (North Carolina)
- JOHN ANDRAKO, M.S., *Instructor in Pharmacy*
B.S. in Phar., 1947, M.S., 1949 (Rutgers)
- JAMES CLARENCE ANDREWS, Ph.D., *Professor of Biological Chemistry and Nutrition*
B.S. in Chem., (Iowa); Ph.D., 1918 (Columbia)
- HARRY ARMOGIDA, Ph.D., *Assistant Professor of Education*
B.A., 1938, B.S., 1940, M.A., 1941, Ph.D., 1950 (Ohio State)
- LOWELL DEWITT ASHBY, Ph.D., *Associate Professor of Economics*
A.B., 1936 (Hastings College); M.A., 1938 (Nebraska); Ph.D., 1948 (Wisconsin)
- EARLENE ATCHISON, Ph.D., *Associate Professor of Botany*
A.B., 1941 (Huntingdon College); M.A., 1943 (Alabama); Ph.D., 1946 (Virginia)
- JAMES W. AUSTIN, JR., A.B., *Lieutenant Commander, United States Navy, Assistant Professor of Naval Science*
A.B., 1938 (North Carolina)
- EDITH EUGENIA AVERITT, A.B., A.B. in L.S., *Geology Librarian*
A.B., 1925, A.B. in L.S., 1934 (North Carolina)
- ROY EDWIN AYCOCK, A.B., *Part-time Instructor in English*
A.B., 1949 (Furman)

- WILLIAM BRANTLEY AYCOCK, A.M., J.D., *Associate Professor of Law*
B.S., 1936 (North Carolina State); A.M., 1937, J.D., 1948 (North Carolina)
- HERBERT RALPH BAER, A.B., LL.B., *Professor of Law*
A.B., 1923 (Cornell); LL.B., 1926 (Harvard)
- ENGLISH BAGBY, Ph.D., *Professor of Psychology*
A.B., 1913, A.M., 1914 (Princeton); Ph.D., 1918 (Johns Hopkins)
- JAMES OSLER BAILEY, Ph.D., *Associate Professor of English*
A.B., 1924, A.M., 1927, Ph.D., 1934 (North Carolina)
- HERMAN GLENN BAITY, Sc.D., *Professor of Sanitary Engineering*
A.B., 1917, S.B. in C.E., 1922 (North Carolina); S.M., 1925, Sc.D., 1928 (Harvard)
- CLAUDE ROWE BAKER, A.B., D.D.S., M.S., *Professor of Fixed Partial Dentures*
D.D.S., 1935, A.B., 1937, M.S., 1939 (Minnesota)
- *HAL LACKEY BALLEW, A.M., *Part-time Instructor in Spanish*
A.B., 1947, A.M., 1949 (North Carolina)
- LEE ARMSTEAD BARCLAY, B.S., *Instructor in Accounting*
B.S., 1943 (Alabama)
- WILLIAM JOSEPH BARNHART, A.M., *Part-time Instructor in English*
A.B., 1947, A.M., 1949 (Tennessee)
- GERALD ALAN BARRETT, A.B., LL.B., *Associate Professor of Business Law and Adviser in the General College*
A.B., 1933 (Lehigh); LL.B., 1936 (Columbia)
- DAVID GIOVANNI BASILE, M.A., *Assistant Professor of Geography*
A.B., 1936 (Washington and Lee); M.A., 1939 (Columbia)
- WILLIAM HARRELL BASKIN, III, A.B., *Part-time Instructor in French*
A.B., 1949 (North Carolina)
- JAN H. R. BEAUJON, S.M., *Part-time Instructor in Pharmacy*
S.B. in Phar., 1949 (Rutgers); S.M., 1950 (North Carolina)
- JAMES RUSH BEELER, A.M., *Part-time Instructor in French*
A.B., 1942, A.M., 1949 (North Carolina)
- CHARLES DALE BEERS, Ph.D., *Professor of Zoology*
A.B., 1921, A.M., 1922 (North Carolina); Ph.D., 1925 (Johns Hopkins)
- OTIS CARRINGTON BEESON, JR., A.B., *Part-time Instructor in French*
A.B., 1949 (North Carolina)
- ELLEN BOYKIN BELL, A.B., *Part-time Instructor in English*
A.B., 1942 (Winthrop)
- GEORGE FERDINAND BENTLEY, A.B., B.S. in L.S., *Assistant to the Librarian*
A.B., 1937 (Vanderbilt); B.S. in L.S., 1941 (Peabody)
- MICHAEL KALEN BERKUT, B.S., *Instructor in Biological Chemistry and Nutrition*
B.S., 1941 (North Carolina State)
- EDWARD CLARK BERRY, S.B., *Part-time Instructor in Geology*
S.B., 1948 (North Carolina)

*Resigned, January 1, 1951.

- WALTER REECE BERRYHILL, A.B., M.D., *Professor of Clinical Medicine and Dean of the School of Medicine*
A.B., 1921 (North Carolina); M.D., 1927 (Harvard)
- LANGDON BERRYMAN, Ph.D., *Instructor in Physics*
A.B., 1946, Ph.D., 1950 (Oklahoma)
- *HAROLD A. BIERCK, JR., Ph.D., *Assistant Professor of History*
B.A., 1938, M.A., 1940, Ph.D., 1944 (U.C.L.A.)
- GORDON WILLIAMS BLACKWELL, Ph.D., *Professor of Sociology and Director of the Institute for Research in Social Science*
A.B., 1932 (Furman); A.M., 1933 (North Carolina); A.M., 1937, Ph.D., 1940 (Harvard)
- ROBERT J. BLACKWELL, A.B., *Part-time Instructor in Physics*
A.B., 1947 (Texas Christian)
- JAMES CYRIL DICKSON BLAINE, Ph.D., *Associate Professor of Business Administration*
B.Comm., 1934 (Queen's University, Canada); S.M., 1939, Ph.D., 1941 (North Carolina)
- CHARLES BARKLEY BLAIR, JR., A.B., *Instructor in Zoology*
A.B., 1938 (Maryville College)
- JOHN FRIES BLAIR, M.A., LL.B., *Research Professor in Public Law and Government*
A.B., 1924 (Haverford); LL.B., 1928 (Harvard); M.A., 1941 (Columbia)
- MARGARET BLEE, M.Ed., *Associate Professor of Public Health Nursing*
B.S., 1933 (Missouri); M.Ed., 1941 (Mills College)
- CARL S. BLYTH, A.M., *Instructor in Physical Education*
B.S., 1947 (Lenoir Rhyne); A.M., 1948 (North Carolina)
- *RICHMOND PUGH BOND, Ph.D., *Professor of English*
A.B., 1920 (Vanderbilt); A.M., 1923, Ph.D., 1929 (Harvard)
- RAJ CHANDRA BOSE, D.Litt., *Professor of Mathematical Statistics*
M.A., 1927, D.Litt., 1947 (University of Calcutta)
- RALPH WALTON BOST, Ph.D., *Kenan Professor of Chemistry*
A.B., 1923 (Newberry); A.M., 1924, Ph.D., 1928 (North Carolina)
- VERNON LEE BOUNDS, LL.B., *Associate Research Professor in Public Law and Government*
LL.B., 1949 (Virginia)
- WAYNE A. BOWERS, Ph.D., *Associate Professor of Physics*
A.B., 1938 (Oberlin); Ph.D., 1943 (Cornell)
- BERNARD H. BOYD, M.A., Th.D., *James A. Gray Professor of Biblical Literature*
A.B., 1932 (Presbyterian College); Th.B., 1935 (Princeton Theological Seminary); M.A., 1935 (Princeton); Th.D., 1946 (Union Theological Seminary)
- PAUL WELDON BOYLES, A.B., S.M., *Part-time Instructor in Physiology*
A.B., 1947 (Duke); S.M., 1949 (North Carolina)

*Absent on leave, 1950-1951.

- JOHN SAEGER BRADWAY, A.M., LL.B., *Visiting Professor of Social Laws; Professor of Law, Duke University*
A.B., 1911, A.M., 1915 (Haverford); LL.B., 1914 (Pennsylvania)
- HENRY PARKER BRANDIS, JR., A.B., LL.B., *Professor of Law and Dean of the School of Law*
A.B., 1928 (North Carolina); LL.B., 1931 (Columbia)
- WALLACE REID BRANDON, A.M., *Part-time Instructor in French*
A.B., 1948 (Florida Southern College); A.M., 1950 (North Carolina)
- ALFRED THEODOR BRAUER, Ph.D., *Professor of Mathematics*
Ph.D., 1928 (Berlin)
- JOHN CHARLES BRAUER, A.B., M.Sc., D.D.S., *Professor of Pedodontics and Dean of the School of Dentistry*
D.D.S., 1928, A.B., 1934, M.Sc., 1936 (Nebraska)
- WILHELM BRAUN, A.M., *Instructor in German*
A.B., 1949, A.M., 1950 (Toronto)
- EDWARD ARMOND BRECHT, Ph.D., *Professor of Pharmacy and Dean of the School of Pharmacy*
B.S. in Pharmacy, 1933, M.S., 1934, Ph.D., 1939 (Minnesota)
- MILLARD SHERIDAN BRECKENRIDGE, Ph.B., LL.B., *Professor of Law*
Ph.B., 1917 (Chicago); LL.B., 1918 (Yale)
- KENNETH MERLE BRINKHOUS, B.A., M.D., *Professor of Pathology*
B.A., 1929, M.D., 1932 (Iowa)
- ARTHUR V. BRISKIN, M.A., *Assistant Professor of Radio; Director of Radio and Television, Communication Center*
A.A., 1942 (Wright College); E.E., 1944 (Calif. Tech.); B.S., 1946 (Columbia); B.A., 1947, M.A., 1948 (Michigan State)
- ALFRED CARTER BROAD, A.B., *Instructor in the Institute of Fisheries Research*
A.B., 1943 (North Carolina)
- *EDITH PERRYMAN BROCKER, R.N., B.S.P.H.N., *Visiting Instructor in Public Health Nursing*
R.N., 1930 (Pennsylvania); B.S.P.H.N., 1944 (North Carolina)
- EARLE W. BROCKMAN, JR., A.M., *Part-time Instructor in French*
A.B., 1940, A.M., 1949 (North Carolina)
- CHARLES BUTLER BROCKMANN, A.B., *Part-time Instructor in French*
A.B., 1949 (North Carolina)
- JOHN CARUTHERS BRODERICK, A.M., *Part-time Instructor in English*
A.B., 1948 (Southwestern); A.M., 1949 (North Carolina)
- LEE MARSHALL BROOKS, Ph.D., *Professor of Sociology*
A.B., 1925 (Boston); A.M., 1926, Ph.D., 1929 (North Carolina)
- CARL FRASER BROWN, Ph.D., *Associate Professor of Education*
A.B., 1930, A.M., 1931 (South Carolina); Ph.D., 1946 (Peabody)

*Absent on leave, 1950-1951.

- ERNEST ALLAN BROWN, A.M., *Part-time Instructor in English*
A.B., 1941, A.M., 1947 (North Carolina)
- JACK HAROLD UPTON BROWN, Ph.D., *Assistant Professor of Physiology*
B.S., 1939 (South West Texas State College); Ph.D., 1948 (Rutgers)
- ROY MELTON BROWN, Ph.D., *Professor of Public Welfare Administration, Emeritus*
A.B., 1906, A.M., 1921, Ph.D., 1929 (North Carolina)
- EDWARD TANKARD BROWNE, Ph.D., *Professor of Mathematics*
B.A., 1915, M.A., 1917 (Virginia); Ph.D., 1926 (Chicago)
- HARRY DAVIS BRUNER, Ph.D., M.D., *Visiting Professor of Radiobiology*
B.S., 1932, M.D., 1934, M.S., 1936 (Louisville); Ph.D., 1939 (Chicago)
- HOYLE SANDERS BRUTON, A.B., *Part-time Instructor in English*
A.B., 1947 (North Carolina)
- ALBERT HUGHES BRYAN, B.S., M.D., *Professor of Public Health Nutrition*
B.S., 1927, M.D., 1931 (Harvard)
- J. SHEPARD BRYAN, JR., B.S., LL.B., *Assistant Research Professor in Public Law and Government*
B.S., 1944 (United States Naval Academy); LL.B., 1950 (Harvard)
- SHASTA MONROE BRYANT, A.B., *Part-time Instructor in Spanish*
A.B., 1950 (North Carolina)
- DANIEL HOUSTON BUCHANAN, Ph.D., *Professor of Economics*
Litt.B., 1909 (Sterling College); A.B., 1911 (Colorado College); A.M., 1912 (Harvard); D.Sc.Econ., 1928 (Keiogijuku Univ., Tokyo); Ph.D., 1931 (Harvard)
- EVERETT IRVING BUGG, M.D., *Lecturer in Orthopedic Surgery*
M.D., 1937 (Johns Hopkins)
- JAMES BELL BULLITT, M.A., M.D., *Professor of Pathology, Emeritus*
B.A., 1894, M.A., 1895 (Washington and Lee); M.D., 1897 (Virginia)
- WILLIAM D. BULLOCH, S.M., *Instructor in Astronomy*
B.A., 1946 (Dartmouth); S.M., 1950 (North Carolina)
- ROBERT LOGAN BUNTING, A.M., *Assistant Professor of Economics*
A.M., 1948 (Chicago)
- MARIA HOGAN BUTLER, A.M., *Part-time Instructor in English*
A.B., 1938 (Mississippi State College for Women); A.M., 1943 (North Carolina)
- THOMAS C. BUTLER, A.B., M.D., *Professor of Pharmacology*
A.B., 1930, M.D., 1934 (Vanderbilt)
- ROBERT RANDALL CADMUS, A.B., M.D., *Administrator of the University Hospital*
A.B., 1936 (College of Wooster); M.D., 1940 (Columbia)
- FRANK COLEMAN CADY, D.D.S., M.P.H., *Professor of Public Health and Dental Science*
D.D.S., 1910 (Michigan); M.P.H., 1937 (Harvard)

- GEORGE CHARLES CALDWELL, A.B., *Part-time Instructor in Mathematics*
A.B., 1942 (North Carolina)
- JAMES ROY CALDWELL, Ph.D., *Instructor in Social Science*
A.B., 1931 (Davidson); A.M., 1937, Ph.D., 1950 (North Carolina)
- WALLACE EVERETT CALDWELL, Ph.D., *Professor of Ancient History*
A.B., 1910 (Cornell); Ph.D., 1919 (Columbia)
- RICHARD PERCIVAL CALHOON, M.A., *Professor of Business Administration*
A.B., 1930, A.M., 1932 (Pittsburgh)
- EDWARD ALEXANDER CAMERON, Ph.D., *Professor of Mathematics*
A.B. in Educ., 1928, A.M., 1929, Ph.D., 1936 (North Carolina)
- FRANK KENNETH CAMERON, Ph.D., *Professor of Chemistry, Emeritus*
A.B., 1891, Ph.D., 1894 (Johns Hopkins)
- JAMES VERNON CAMP, A.M., *Assistant Football Coach*
A.B., 1947, A.M., 1948 (North Carolina)
- CHARLES H. CAMPBELL, A.B., *Part-time Instructor in Parasitology*
A.B., 1949 (North Carolina)
- KATHERINE KENNEDY CARMICHAEL, Ph.D., *Dean of Women*
A.B., 1932 (Birmingham-Southern); M.A., 1939, Ph.D., 1943 (Vanderbilt)
- GEORGE WILLIAM CAROW, A.B., *Part-time Instructor in Mathematics*
A.B., 1949 (Swarthmore)
- NOEL CARPENTER, B.S., *Major, United States Air Force, Assistant Professor of Air Science and Tactics*
B.S., 1941 (Alabama)
- *DUDLEY DEWITT CARROLL, M.A., *Professor of Economics and Dean Emeritus of the School of Commerce*
A.B., 1907 (Guilford); A.B., 1908 (Haverford); M.A., 1915 (Columbia)
- JOHN ERWIN CARROLL, JR., A.M., *Instructor in French*
B.S., 1923 (The Citadel); A.M., 1928 (North Carolina)
- THOMAS H. CARROLL, B.S., M.B.A., D.C.S., *Professor of Business Administration and Dean of the School of Business Administration*
B.S., 1934 (California); M.B.A., 1936, D.C.S., 1939 (Harvard Graduate School of Business Administration)
- †CLYDE CASS CARTER, Ph.D., *Associate Professor of Business Law and Adviser in the General College*
A.B., 1925 (Emory and Henry); M.A., 1928 (Vanderbilt); LL.B., 1935 (Wilmington Law School); Ph.D., 1942 (North Carolina)
- ISABELLE KIRKLAND CARTER, B.S., M.S.S., *Associate Professor of Social Work*
B.S., 1924 (Boston); M.S.S., 1925 (Smith College School of Social Work)
- JOEL J. CARTER, M.A., *Assistant Professor of Music*
A.B., 1935 (San Jose State College); M.A., 1947 (Stanford)

*Absent on leave, 1950-1951.

†Absent on leave for military duty, beginning spring quarter, 1951.

- *LESLIE RALPH CASEY, A.M., *Instructor in Physical Education*
A.B., 1946, A.M., 1949 (North Carolina)
- IRA COLUMBUS CASTLES, M.A., *Part-time Instructor in Economics*
B.S., 1934 (Louisiana State); M.A., 1948 (Columbia)
- *CORNELIUS OLIVER CATHEY, Ph.D., *Assistant Professor of History and
Adviser in the General College*
A.B., 1928, A.M., 1929 (Davidson College); Ph.D., 1948 (North Carolina)
- †CONSTANTINE P. CAVARNOS, Ph.D., *Assistant Professor of Philosophy*
A.B., 1942, A.M., 1947, Ph.D., 1948 (Harvard)
- EMIL THEODORE CHANLETT, M.S.S.E., *Associate Professor of Sanitary
Engineering*
B.S., 1937 (College of the City of New York); M.S.P.H., 1939 (Columbia);
M.S.S.E., 1941 (North Carolina)
- FRANCIS STUART CHAPIN, JR., A.B., B.Arch.C.P., M.C.P., *Associate Pro-
fessor of Planning and Research Associate in the Institute for
Research in Social Science*
A.B., 1937 (Minnesota); B.Arch.C.P., 1939, M.C.P., 1940 (Massachusetts Insti-
tute of Technology)
- JEAN DANIEL CHARRON, M.S., *Part-time Instructor in French*
B.S., 1942 (Paris); M.S., 1944 (College Stanislas)
- PHILIP MACON CHEEK, Ph.D., *Assistant Professor of English*
A.B., 1927, A.M., 1928, Ph.D., 1931 (North Carolina)
- ALPHONSE F. CHESTNUT, Ph.D., *Associate Professor in the Institute of
Fisheries Research*
B.S., 1941 (William and Mary); M.S., 1943, Ph.D., 1949 (Rutgers)
- SIDNEY SHAW CHIPMAN, B.A., M.D., M.P.H., *Professor of Maternal and
Child Health*
B.A., 1924 (Acadia); M.D., 1928 (McGill); M.P.H., 1947 (Yale)
- HENRY TOOLE CLARK, JR., A.B., M.D., *Administrator of the Division
of Health Affairs*
A.B., 1937 (North Carolina); M.D., 1944 (Rochester)
- CHARLES MORGAN CLARKE, Ph.D., *Assistant Professor of Education*
A.B., 1936 (Henderson State Teachers College); M.A., 1938 (Louisiana State);
Ph.D., 1948 (North Carolina)
- GORDON BAYLOR CLEVELAND, M.S., *Part-time Instructor in Political
Science*
B.S., 1938 (Davidson); M.S., 1947 (Alabama Polytechnic Institute)
- ALBERT COATES, A.B., LL.B., *Professor of Law and Director of the
Institute of Government*
A.B., 1918 (North Carolina); LL.B., 1923 (Harvard)
- *WILLIAM MCWHORTER COCHRANE, A.B., LL.B., *Associate Research
Professor in Public Law and Government*
A.B., 1939, LL.B., 1941 (North Carolina)

*Absent on leave, 1950-1951.

†Absent on leave, fall quarter, 1950.

- JOFFRE LANNING COE, M.A., *Instructor in Anthropology and Director of the Laboratory of Anthropology*
A.B., 1944 (North Carolina); M.A., 1948 (Michigan)
- FREDERIC EDWARD COENEN, Ph.D., *Associate Professor of German*
A.B., 1928, A.M., 1930 (Arizona); Ph.D., 1936 (North Carolina)
- OSCAR JACKSON COFFIN, A.B., *Professor of Journalism and Dean of the School of Journalism*
A.B., 1909 (North Carolina)
- GEORGE RALEIGH COFFMAN, Ph.D., *Kenan Professor of English*
A.B., 1903 (Drake); A.M., 1909 (Harvard); Ph.D., 1913 (Chicago)
- *FRANCIS WILLIAM COKER, Ph.D., *Burton Craige Visiting Professor of Jurisprudence*
A.B., 1899 (North Carolina); A.B., 1902 (Harvard); Ph.D., 1910 (Columbia)
- ROBERT ERVIN COKER, Ph.D., Sc.D., *Kenan Professor of Zoology*
S.B., 1896, S.M., 1897 (North Carolina); Ph.D., 1906 (Johns Hopkins); Sc.D. (South Carolina)
- WILLIAM CHAMBERS COKER, Ph.D., LL.D., D.Sc., *Kenan Research Professor of Botany, Emeritus*
B.S., 1894 (South Carolina); Ph.D., 1901 (Johns Hopkins); LL.D. (South Carolina); D.Sc., (North Carolina)
- DAN STEAD COLLINS, S.B., *Part-time Instructor in English*
S.B., 1941 (Pennsylvania)
- ROSS F. CONDIT, *Technical Sergeant, United States Air Force, Instructor in Air Science and Tactics*
- WILLIAM STOKES CONNOR, A.M., *Research Associate with the Department of Mathematical Statistics*
A.B., 1943 (Davidson); A.M., 1944 (North Carolina)
- GERARD LESTRANG COOK, A.B., *Part-time Instructor in Spanish*
A.B., 1949 (North Carolina)
- OLAN VICTOR COOK, A.B., A.B. in L.S., *Associate Professor, Assistant Librarian, and Curator of Rare Books*
A.B., 1929, A.B. in L.S., 1932 (North Carolina)
- ALBERT DERWIN COOPER, A.B., M.D., *Visiting Assistant Professor of Public Health*
A.B., 1932, M.D., 1931 (George Washington)
- J. ELLIOTT COOPER, B.S., *Captain, United States Navy, Professor of Naval Science*
B.S., 1926 (United States Naval Academy)
- JAMES ISAAC COPELAND, A.B., B.S. in L.S., M.A., *Documents Librarian*
A.B., 1931 (Presbyterian College); B.S. in L.S., 1932, M.A., 1934 (Peabody)
- WILLIAM MAURICE COPPRIDGE, M.D., *Instructor in Medicine*
M.D., 1918 (Jefferson Medical College)

*Winter quarter, 1950-1951.

- OLIVER KELLY CORNWELL, M.A., Ed.D., *Professor of Physical Education and Director of Physical Education for Men*
A.B., 1920 (Wittenberg); M.A., 1929 (Ohio State); Ed.D., 1948 (Catawba)
- DONALD PAUL COSTELLO, Ph.D., *Kenan Professor of Zoology*
A.B., 1930 (College of the City of Detroit); Ph.D., 1934 (Pennsylvania)
- LYMAN ATKINSON COTTEN, Ph.D., *Associate Professor of English*
A.B., 1936 (North Carolina); Ph.D., 1941 (Yale)
- CLARE COTTON, B.A., *Part-time Instructor in Philosophy*
B.A., 1948 (Randolph-Macon)
- JOHN NATHANIEL COUCH, Ph.D., Sc.D., *Kenan Professor of Botany*
A.B., 1919, A.M., 1922, Ph.D., 1924 (North Carolina); Sc.D., (Catawba College)
- DUDLEY JOHNSTONE COWDEN, Ph.D., *Professor of Economic Statistics*
A.B., 1919 (Grinnell); A.M., 1922 (Chicago); Ph.D., 1931 (Columbia)
- PORTER COWLES, A.B., *Assistant Director of the University of North Carolina Press*
A.B., 1933 (North Carolina)
- HARDIN CRAIG, Ph.D., Litt.D., *Professor of English, Emeritus*
A.B., 1897 (Centre College); A.M., 1899, Ph.D., 1901 (Princeton); Litt.D., (Centre College); F.R.S.L.
- HARRY WOLVEN CRANE, Ph.D., *Professor of Psychology and Psychological Consultant*
A.B., 1909, A.M., 1910, Ph.D., 1913 (Michigan)
- WALTER DÉVEREUX CREECH, A.M., *Instructor in French*
A.B., 1928, A.M., 1930 (North Carolina); Certificate, University of Lyons (1932), University of Bordeaux (1933)
- *LEO PAUL CRESPI, Ph.D., *Professor of Social Psychology and Research Professor in the Institute for Research in Social Science*
A.B., 1938 (U.C.L.A.); M.A., 1941, Ph.D., 1942 (Princeton)
- HORACE DOWNS CROCKFORD, Ph.D., *Professor of Chemistry*
B.S., 1920 (North Carolina State); S.M., 1923, Ph.D., 1926 (North Carolina)
- JOAN McELLIGOTT CRONIN, M.A., *Part-time Instructor in English*
A.B., 1943 (Good Counsel); M.A., 1946 (Fordham)
- ROBERT WILLINGHAM CRUTCHFIELD, S.M., C.P.A., *Associate Professor of Accounting*
A.B., 1930 (Wake Forest); S.M., 1939 (North Carolina); C.P.A. (State of North Carolina)
- HORACE HERNDON CUNNINGHAM, A.M., *Instructor in Social Science*
A.B., 1936 (Atlantic Christian College); A.M., 1940 (North Carolina)
- JOHN PERCY DALZELL, A.B., LL.B., *Professor of Law*
A.B., 1922, LL.B., 1924 (Minnesota)
- WILLIAM JOHN DANIEL, Ph.D., *Associate Professor of Psychology*
A.B., 1938 (Antioch College); Ph.D., 1942 (North Carolina)

*Absent on leave, 1950-1951.

- JOHN FREDERICK DASHIELL, Ph.D., D.Sc., *Kenan Professor of Psychology*
B.S., 1908, B.Litt., 1909, D.Sc. (Evansville College); M.S., 1910, Ph.D., 1913
(Columbia)
- HARRY ELLERBE DAVIS, M.A., *Professor of Dramatic Art and Associate
Director of The Carolina Playmakers*
A.B., 1927 (South Carolina); M.A., 1940 (Columbia)
- *KENNETH REXTON DAVIS, Ph.B., M.B.A., *Assistant Professor of Mar-
keting*
Ph.B., 1946, M.B.A., 1947 (Wisconsin)
- LAMBERT DAVIS, M.A., *Director of the University of North Carolina
Press*
B.A., 1925, M.A., 1926 (Virginia)
- JOSEPH G. DAWSON, Ph.D., *Associate Professor of Psychology*
A.B., 1940 (North Carolina); A.M., 1947, Ph.D., 1949 (Chicago)
- FRANCIS BERNIEL DEDMOND, Th.M., M.A., *Part-time Instructor in Eng-
lish*
A.B., 1940 (Catawba); Th.M., 1945 (Southern Baptist Theological Seminary);
M.A., 1950 (Duke)
- NICHOLAS JAY DEMERATH, Ph.D., *Professor of Sociology and Research
Professor in the Institute for Research in Social Science*
A.B., 1934 (DePauw); A.M., 1938, Ph.D., 1942 (Harvard)
- WILLIAM MORTON DEY, Ph.D., *Kenan Professor of the Romance Lan-
guages and Literatures, Emeritus*
B.A., M.A., 1902 (Virginia); A.M., 1904, Ph.D., 1906 (Harvard)
- GEORGE O. DOAK, Ph.D., *Associate Professor of Experimental Medicine*
B.S. in Chemistry, 1929, B.S. in Pharmacy, 1930 (Saskatchewan); M.S., 1932,
Ph.D., 1934 (Wisconsin)
- JAMES TALMAGE DOBBINS, Ph.D., *Professor of Chemistry*
A.B., 1911, A.M., 1912, Ph.D., 1914 (North Carolina)
- MARGARET BAGGETT DOLAN, B.S.P.H.N., *Assistant Professor of Public
Health Nursing*
Diploma, 1935 (School of Nursing, Georgetown); B.S.P.H.N., 1944 (North
Carolina)
- ARCH RICHARD DOOLEY, A.B., M.B.A., *Lecturer in Business Admini-
stration*
A.B., 1944 (Yale); M.B.A., 1950 (Harvard)
- WALTER J. DOUGLASS, JR., B.S., *Part-time Instructor in Mathematics*
B.S., 1943 (Wake Forest)
- EDWARD THAYER DRAPER-SAVAGE, *Instructor in French*
- FRANK MARION DUFFEY, Ph.D., *Assistant Professor of Spanish*
A.B., 1938 (Miami University); A.M., 1940, Ph.D., 1950 (North Carolina)

*Absent on leave, spring quarter, 1951.

- DOUGLAS DUKE, Ph.D., *Assistant Professor of Astronomy*
B.A., 1947 (California); Ph.D., 1950 (Chicago)
- RICHARD LEE DUNCAN, B.A., *Part-time Instructor in Political Science*
B.A., 1948 (Antioch College)
- ROBERT YALE DURAND, A.B., M.B.A., *Assistant Professor of Economics*
A.B., 1934 (Oberlin); M.B.A., 1941 (Harvard)
- JOHN EDWARD DYKSTRA, C.E., M.B.A., D.C.S., *Professor of Business Administration*
C.E., 1930 (Rensselaer); M.B.A., 1932, D.C.S., 1936 (Harvard)
- CHARLES EDWARD EATON, A.M., *Assistant Professor of English*
A.B., 1936 (North Carolina); A.M., 1940 (Harvard)
- CHARLES H. V. EBERT, *Instructor in German*
- FLOYD HARRIS EDMISTER, Ph.D., *Professor of Chemistry and Adviser in the General College*
B.S., 1912, Ph.D., 1918 (Syracuse); M.S., 1913 (Louisiana State)
- NORMAN ELLSWORTH ELIASON, Ph.D., *Professor of English*
A.B., 1927 (Luther College); M.A., 1931 (Iowa); Ph.D., 1936 (Johns Hopkins)
- LUCILE MARSHALL ELLIOTT, B.Pd., *Law Librarian*
B.Pd., 1912 (Woman's College, U.N.C.)
- FRED WILSON ELLIS, Ph.D., *Associate Professor of Pharmacology*
B.S., 1936 (South Carolina); Ph.D., 1941 (Maryland)
- G. GORDON ELLIS, Ph.D., *Associate Professor of Education*
A.B., 1937 (Iowa State Teachers College); M.A., 1940, Ph.D., 1948 (Wisconsin)
- WILLIAM ANDREW ELLISON, JR., A.M., *Associate Professor and Director of the Institute of Fisheries Research*
A.B., 1923, A.M., 1924 (Trinity College)
- MAURICE ELSTUN, A.M., *Part-time Instructor in Spanish*
A.B., 1940 (Miami University); A.M., 1948 (North Carolina)
- STEPHEN ALBERT EMERY, Ph.D., *Professor of Philosophy*
A.B., 1923, Ph.D., 1928 (Cornell)
- SAMUEL THOMAS EMORY, Ph.D., *Professor of Geography*
A.B., 1917, A.M., 1918 (Randolph-Macon); M.A., 1921 (Columbia); Ph.D., 1939 (Chicago)
- WILLIAM LOUIS ENGELS, Ph.D., *Associate Professor of Zoology*
B.S., 1930 (Notre Dame); Ph.D., 1937 (California)
- ALFRED GARVIN ENGSTROM, Ph.D., *Associate Professor of French*
A.B., 1933, A.M., 1935, Ph.D., 1941 (North Carolina)
- PRESTON HERSCHEL EPPS, Ph.D., *Professor of Greek*
A.B., 1915, A.M., 1917 (North Carolina); Ph.D., 1928 (Chicago)
- CHARLES PERRY ERICKSON, B.S. in Civ. Eng'g., *Assistant Director of Athletics and Instructor in Physical Education*
B.S. in Civ. Eng'g., 1931 (North Carolina)

- GEORGE HYNDMAN ESSER, JR., B.S., LL.B., *Associate Research Professor in Public Law and Government*
B.S., 1942 (Virginia Military Institute); LL.B., 1948 (Harvard)
- LEROY T. EURE, *Master Sergeant, United States Air Force, Instructor in Air Science and Tactics*
- GEORGIA HICKS FAISON, A.B., B.L.S., *Reference Librarian*
A.B., 1911 (Woman's College, U.N.C.); B.L.S., 1924 (New York State Library School)
- PRESTON COOKE FARRAR, M.A., *Professor of Education, Emeritus*
A.B., 1891 (Washington and Jefferson); M.A., 1904 (Columbia)
- MAURICE LOUIS FELDMAN, A.B., *Part-time Instructor in English*
A.B., 1949 (Miami University)
- JOHN HOWARD FERGUSON, M.A., M.D., L.M.S.S.A., F.A.C.P., *Professor of Physiology*
B.A., 1921 (Capetown); B.A., 1925, M.A., 1931 (Oxford); M.D., 1928 (Harvard); L.M.S.S.A., 1931 (London); F.A.C.P., 1945
- JAMES WILLIAM FESLER, Ph.D., *Professor of Political Science and Research Professor in the Institute for Research in Social Science*
A.B., 1932 (Minnesota); A.M., 1933, Ph.D., 1935 (Harvard)
- ROBERT ALLISON FETZER, B.S., M.A., B.S. in Elec. and Mech. Eng'g., *Director of Physical Education and Athletics*
B.S., 1907, M.A., 1908 (Davidson College); B.S. in Elec. and Mech. Eng'g., 1909 (Clemson)
- ARTHUR EMIL FINK, Ph.D., M.S.W., *Professor of Social Work and Dean of the School of Social Work*
A.B., 1924, A.M., 1930, Ph.D., 1936 (Pennsylvania); M.S.W., 1937 (Pennsylvania School of Social Work)
- RUTH WHITE FINK, A.M., *Associate Professor of Physical Education and Director of Physical Education for Women*
B.S., 1926, A.M., 1936 (Ohio State)
- GLEN H. FISHER, A.M., *Part-time Instructor in Anthropology*
A.B., 1945 (Manchester College); A.M., 1949 (North Carolina)
- *FOSTER FITZ-SIMONS, A.B., *Assistant Professor of Dramatic Art*
A.B., 1934 (North Carolina)
- RALPH GIBSON FLEMING, M.D., *Instructor in Medicine*
M.D., 1936 (Pennsylvania)
- ABRAM CLINE FLORA, JR., A.M., *Part-time Instructor in Economics*
A.B., 1943, A.M., 1949 (South Carolina)
- GERALDINE ALMA FOSTER, A.M., *Assistant Dean of the College of Arts and Sciences*
B.S., 1931 (St. Lawrence); A.M., 1942 (North Carolina)
- STANLEY E. FOWLER, M.A., *Instructor in Social Science*
A.B., 1947 (Baylor); M.A., 1948 (Peabody)

*Absent on leave, 1950-1951.

- FRANCIS HILL FOX, A.B., M.D., *Instructor in Medicine*
A.B., 1931 (Duke); M.D., 1935 (Pennsylvania)
- HERBERT JUNIUS FOX, A.B., M.D., *Instructor in Medicine*
A.B., 1929 (North Carolina); M.D., 1935 (Duke)
- KEENER CHAPMAN FRAZER, A.M., *Professor of Political Science*
A.B., 1920 (Wofford); A.M., 1921 (North Carolina)
- EDWARD EVERETT FREED, M.A., *Associate Professor of Motion Pictures
in the Departments of Radio and Dramatic Art*
A.B., 1923 (Illinois); M.A., 1933 (Michigan)
- LEON DAVID FREEDMAN, Ph.D., *Assistant Professor of Experimental
Medicine*
A.B., 1941, A.M., 1947, Ph.D., 1949 (Johns Hopkins)
- GEORGE EDWARD FRENCH, A.B., *Lieutenant, United States Naval Re-
serve, Lecturer in Naval Science*
A.B., 1931 (North Carolina)
- IDA HOWELL FRIDAY, A.B., M.P.H., *Instructor in Public Health Ed-
ucation*
A.B., 1941 (Meredith); M.P.H., 1947 (North Carolina)
- WILLIAM CLYDE FRIDAY, B.S., LL.B., *Assistant Dean of Students*
B.S., 1941 (North Carolina State); LL.B., 1948 (North Carolina)
- *WERNER PAUL FRIEDERICH, Ph.D., *Professor of German and Com-
parative Literature*
A.M., 1929, Ph.D., 1932 (Harvard)
- KARL HARTLEY FUSSLER, Ph.D., *Professor of Physics*
A.B., 1909 (Indiana); Ph.D., 1916 (Pennsylvania)
- ARCHER H. FUTCH, S.B., *Part-time Instructor in Physics*
S.B., 1949 (North Carolina)
- LOFTON LEROY GARNER, A.M., *Associate Professor of Mathematics*
A.B., 1925, A.M., 1927 (North Carolina)
- ALLEN GARRETT, A.M., *Instructor in Music*
A.B., 1947, A.M., 1949 (North Carolina)
- MITCHELL BENNETT GARRETT, Ph.D., LL.D., *Professor of Modern Euro-
pean History*
A.B., 1900, A.M., 1903, LL.D., 1942 (Howard College); Ph.D., 1910 (Cornell)
- WARFIELD GARSON, A.B., M.D., *Assistant Professor of Experimental
Medicine*
A.B., 1941 (U.C.L.A.); M.D., 1945 (Southern California)
- OSCAR DAVID GARVIN, M.D., M.P.H., *Visiting Assistant Professor of
Public Health Administration*
M.D., 1932 (Medical College of the State of South Carolina); M.P.H., 1939
(Johns Hopkins)

* Absent on leave, fall quarter, 1950.

- JAMES REUBEN GASKIN, A.B., *Acting Instructor in English*
A.B., 1942 (Chattanooga)
- LYNN GAULT, A.M., *Assistant Professor of Dramatic Art*
B.A., 1937 (Hiram College); A.M., 1939 (North Carolina)
- WILLIAM MONROE GEER, M.A., *Instructor in Social Science and Research Associate in the Institute for Research in Social Science*
A.B., 1935 (The Citadel); M.A., 1936 (Emory)
- WESLEY CRITZ GEORGE, Ph.D., *Professor of Histology and Embryology*
A.B., 1911, A.M., 1912, Ph.D., 1918 (North Carolina)
- SUDHISH GOVIND GHURYE, M.Sc., *Lecturer in Mathematical Statistics*
B.Sc., 1945, M.Sc., 1947 (Bombay)
- EDWARD HIRAM GIBSON, III, A.M., *Instructor in Social Science*
A.B., 1932, A.M., 1937 (North Carolina)
- FRANK KENNETH GIBSON, JR., A.M., *Part-time Instructor in Political Science*
A.B., 1947, A.M., 1948 (West Virginia)
- J. SULLIVAN GIBSON, Ph.D., *Associate Professor of Geography*
B.A., 1926 (Abilene Christian College); Ph.M., 1929 (Wisconsin); Ph.D., 1934 (Clark)
- *WILLIAM CHARLES GIBSON, B.S.C.E., *Instructor in Field Training*
B.S.C.E., 1936 (New York University)
- HUGO GIDUZ, A.B., *Professor of French*
A.B., 1905 (Harvard)
- FEDERICO GUILLERMO GIL, J.D., D.Pol.Sci., D.Dip.Law, *Associate Professor of Political Science*
J.D., 1938, D.Pol.Sci., 1940, D.Dip.Law, 1941 (Habana)
- BRADY BLACKFORD GILLELAND, A.M., *Part-time Instructor in Latin*
A.B., 1944 (Washington and Jefferson); A.M., 1948 (Oklahoma)
- †JOHN PHILIP GILLIN, Ph.D., *Professor of Anthropology and Research Professor in the Institute for Research in Social Science*
A.B., 1927, A.M., 1930 (Wisconsin); A.M., 1931, Ph.D., 1934 (Harvard)
- JAMES EDWARD GINTHER, M.A., *Part-time Instructor in English*
A.B., 1939 (College of Wooster); M.A., 1946 (Duke)
- JAMES LOGAN GODFREY, Ph.D., *Professor of English History*
A.B., 1931 (Roanoke); A.M., 1933 (North Carolina); Ph.D., 1942 (Chicago)
- EDWIN GOLIN, A.M., *Part-time Instructor in Psychology*
A.B., 1947, A.M., 1948 (Delaware)
- JOHN BORDEN GRAHAM, B.S., M.D., *Assistant Professor of Pathology*
B.S., 1938 (Davidson); M.D., 1942 (Cornell)
- WILLIAM ALEXANDER GRAHAM, A.B., M.D., *Lecturer in Obstetrics*
A.B., 1928 (North Carolina); M.D., 1932 (Pennsylvania)

*Resigned, January 1, 1951.

†Absent on leave, fall quarter, 1950.

- MARVIN LEROY GRANSTROM, M.S.S.E., *Assistant Professor of Sanitary Engineering*
 B.S., 1942 (Morningside College, Iowa); B.S. Civ. Eng'g., 1943 (Iowa State); M.S.S.E., 1947 (Harvard)
- MARGARET SPENCER GRAVATT, B.A., M.S.P.H., *Research Associate in Experimental Medicine*
 B.A., 1945 (Woman's College, U.N.C.); M.S.P.H., 1947 (North Carolina)
- FLETCHER MELVIN GREEN, Ph.D., *Kenan Professor of History*
 Ph.B., 1920 (Emory); A.M., 1922, Ph.D., 1927 (North Carolina)
- JAMES ARNOLD GREEN, Ph.D., *Instructor in Anatomy*
 B.A., 1941, Ph.D., 1950 (Illinois)
- PHILIP PALMER GREEN, Jr., A.B., LL.B., *Associate Research Professor in Public Law and Government*
 A.B., 1943 (Princeton); LL.B., 1949 (Harvard)
- BERNARD GEORGE GREENBERG, Ph.D., *Associate Professor of Biostatistics in the Institute of Statistics and the School of Public Health*
 B.S., 1939 (College of the City of New York); Ph.D., 1949 (North Carolina State)
- MAURICE HERZBERGER GREENHILL, A.B., M.D., *Visiting Associate Professor of Public Health Psychiatry; Associate Professor of Neuropsychiatry, Duke University School of Medicine*
 A.B., 1931 (Rochester); M.D., 1936 (Chicago)
- BRYAN B. GRESHAM, A.B., *Part-time Instructor in Mathematics*
 A.B., 1949 (North Carolina)
- VICTOR AUGUST GREULACH, Ph.D., *Associate Professor of Botany*
 A.B., 1929 (DePauw); M.S., 1933, Ph.D., 1940 (Ohio State)
- PAUL F. GUENTHER, M.A., *Instructor in German*
 A.B., 1946 (Denver); M.A., 1948 (Colorado)
- JUNE U. GUNTER, A.B., M.D., *Instructor in Pathology and Director of Laboratories at Watts Hospital*
 A.B., 1931 (North Carolina); M.D., 1936 (Jefferson Medical College)
- DAVID VANCE GUTHRIE, JR., *Instructor in Political Science*
 B.A., 1946, M.A., 1947 (Washington and Lee)
- PAUL NEWMAN GUTHRIE, Ph.D., *Professor of Economics*
 A.B., 1926 (Tennessee); B.D., 1932 (Union Theological Seminary); M.A., 1932, Ph.D., 1946 (Columbia)
- FRANZ GUTMANN, D.Ec., *Lecturer in Economics, Emeritus; Professor of Economics, Emeritus, University of Goettingen*
 D.Ec., 1904 (Strasbourg)
- JOHN MINOR GWYNN, Ph.D., *Professor of Education*
 A.B., 1918, A.M., 1927 (North Carolina); Ph.D., 1935 (Yale)
- CLIFTON L. HALL, M.A., *Visiting Lecturer in Education*
 B.A., 1921 (Bishops' University, Quebec); M.A., 1932 (McGill); M.A., 1941 (Columbia)
- *WALTER ALEXIS HALL, JR., D.D.S., M.S., *Professor of Prosthodontics*
 B.S., D.D.S., 1938 (Southern California); M.S., 1951 (Michigan)

*Beginning, March 1, 1951.

- EDWARD B. HAMER, A.B., *Part-time Instructor in French*
A.B., 1947 (Wofford)
- JOSEPH GREGOIRE DEROULHAC HAMILTON, Ph.D., Litt.D., *Kenan Professor of History and Political Science, Emeritus, and Consultant of the Southern Historical Collection*
M.A., 1900 (University of the South); Ph.D., 1906 (Columbia); Litt.D. (University of the South, Washington and Lee)
- FRANK WILLIAM HANFT, A.B., LL.M., S.J.D., *Professor of Law*
LL.B., 1924, A.B., 1929, LL.M., 1929 (Minnesota); S.J.D., 1931 (Harvard)
- JACQUES HARDRÉ, Ph.D., *Assistant Professor of French and Adviser in the General College*
Bacc.Sciences-Langues, 1936 (Paris); A.B., 1937 (Guilford); A.M., 1941, Ph.D., 1948 (North Carolina)
- JAMES PENROSE HARLAND, Ph.D., *Professor of Archaeology*
A.B., 1913, A.M., 1915, Ph.D., 1920 (Princeton)
- GEORGE MILLS HARPER, A.M., *Acting Instructor in English*
A.B., 1940 (Culver-Stockton College); A.M., 1947 (Florida)
- HUBERT HILL HARPER, JR., A.B., *Part-time Instructor in Latin*
A.B., 1948 (Birmingham-Southern)
- FREDERICK HOLLADAY HARRIS, A.M., *Instructor in Social Science*
A.B., 1934 (Randolph-Macon); A.M., 1943 (North Carolina)
- EARL HORACE HARTSELL, Ph.D., *Associate Professor of English*
A.B., 1924, A.M., 1935, Ph.D., 1942 (North Carolina)
- WALTER H. HARTUNG, Ph.D., *Professor of Pharmaceutical Chemistry*
A.B., 1918 (Minnesota); Ph.D., 1926 (Wisconsin)
- *RAYMOND W. HARWELL, S.B., *Part-time Instructor in Physics*
S.B., 1948 (North Carolina)
- DORIS BULLARD HAWKINS, S.M., *Instructor in Pharmacy*
S.B. in Phar., 1945, S.M., 1947 (North Carolina)
- RUTH WARWICK HAY, M.S., *Professor of Public Health Nursing*
B.A., 1916 (Ohio Wesleyan); M.S., 1925 (Western Reserve)
- GLEN HAYDON, Ph.D., *Kenan Professor of Music*
A.B., 1918, A.M., 1921 (California); Ph.D., 1932 (Vienna)
- DONALD BALES HAYMAN, A.M., *Associate Research Professor in Public Law and Government*
A.B., 1940 (Kansas); A.M., 1947 (North Carolina)
- GEORGE ALEXANDER HEARD, M.A., *Associate Professor of Political Science*
A.B., 1938 (North Carolina); M.A., 1948 (Columbia)
- BUNN HEARN, *Head Baseball Coach*
- MILTON SIDNEY HEATH, Ph.D., *Professor of Economics*
A.B., 1917 (Kansas); A.M., 1924, Ph.D., 1938 (Harvard)

*Resigned January 1, 1951.

- LANDON CARROLL HECK, A.B. in Math., A.B. in Physics, *Part-time Instructor in Physics*
A.B. in Math., 1942, A.B. in Physics, 1948 (Catawba)
- EDWARD MCGOWAN HEDGPETH, A.B., M.D., F.A.C.P., *University Physician and Instructor in Medicine*
A.B., 1927 (North Carolina); M.D., 1931 (Pennsylvania); F.A.C.P., 1944
- CLARENCE HEER, Ph.D., *Kenan Professor of Economics*
A.B., 1914 (Rochester); Ph.D., 1926 (Columbia)
- WALTER RITTER HEILMAN, JR., M.A., *Part-time Instructor in Spanish*
B.A., 1939 (Davidson); M.A., 1949 (Tennessee)
- MELVIN C. HELFERS, M.A., *Instructor in German*
A.B., 1937 (The Citadel); M.A., 1949 (Duke)
- ARCHIBALD HENDERSON, Ph.D., D.C.L., LL.D., Litt.D., *Kenan Professor of Mathematics, Emeritus*
A.B., 1898, A.M., 1899, Ph.D., 1902 (North Carolina); Ph.D., 1915 (Chicago); D.C.L. (University of the South); LL.D. (Tulane, William and Mary); Litt.D., (Oglethorpe, Catawba)
- HUBERT HENDERSON, A.M., *Part-time Instructor in Music*
A.B., 1941, A.M., 1950 (North Carolina)
- JAMES RICHARD HENDRICKS, S.M., *Part-time Instructor in Parasitology*
B.S., 1940 (Guilford College); S.M., 1948 (North Carolina)
- CATHERINE HENLEY, Ph.D., *Research Associate in Zoology*
A.B., 1943, Ph.D., 1949 (North Carolina); M.A., 1947 (Johns Hopkins)
- VIRGINIA HERRIN, M.S. in Ed., *Part-time Instructor in English*
A.B., 1932 (Agnes Scott); M.S. in Ed., 1941 (Southern California)
- HARRIET LAURA HERRING, A.M., *Associate Professor of Sociology and Research Associate in the Institute for Research in Social Science*
A.B., 1913 (Meredith); A.M., 1918 (Radcliffe)
- IVAN R. HERSHNER, JR., Ph.D., *Assistant Professor of Mathematics*
B.S., 1938, M.A., 1940 (Nebraska); A.M., 1941, Ph.D., 1947 (Harvard)
- EDWIN PELLE HIATT, Ph.D., M.D., *Associate Professor of Physiology*
A.B., 1933 (Wilmington College); M.A., 1934 (Haverford); Ph.D., 1940 (Maryland); M.D., 1951 (Duke)
- THOMAS FELIX HICKERSON, A.M., S.B., *Kenan Professor of Applied Mathematics*
Ph.B., 1904, A.M., 1907 (North Carolina); S.B. in Civ. Eng'g., 1909 (Massachusetts Institute of Technology)
- MICHAEL ARENDELL HILL, JR., A.M., *Professor of Mathematics and Associate Dean of the General College*
A.B., 1920, A.M., 1922 (North Carolina)
- REUBEN HILL, Ph.D., *Professor of Sociology and Research Professor in the Institute for Research in Social Science*
B.S., 1935 (Utah State); Ph.M., 1936, Ph.D., 1938 (Wisconsin)

- JOSEPH HILTON, A.M., *Instructor in Physical Education*
A.B., 1940, A.M., 1948 (North Carolina)
- *JACK JONES HINMAN, JR., M.S., C.E., *Visiting Professor in the Department of Sanitary Engineering*
A.B., 1911, M.S., 1915 (Butler); B.S.C.E., 1937, C.E., 1938 (Iowa)
- ALLAN WILSON HOBBS, Ph.D., *Professor of Applied Mathematics*
A.B., 1907 (Guilford College); A.B., 1908 (Haverford); Ph.D., 1917 (Johns Hopkins)
- RICHARD JUNIUS MENDENHALL HOBBS, A.B., LL.B., *Professor of Business Law*
A.B., 1909 (Guilford College); A.B., 1911 (Haverford); LL.B., 1914 (Columbia)
- SAMUEL HUNTINGTON HOBBS, JR., Ph.D., *Professor of Rural Sociology and Research Professor in the Institute for Research in Social Science*
A.B., 1916, A.M., 1917 (North Carolina); Ph.D., 1929 (Wisconsin)
- WASSILY HOFFDING, Ph.D., *Assistant Professor of Mathematical Statistics*
Ph.D., 1940 (Berlin)
- C. HUGH HOLMAN, Ph.D., *Assistant Professor of English*
B.S., 1936, B.A., 1938 (Presbyterian College); Ph.D., 1949 (North Carolina)
- †URBAN TIGNER HOLMES, JR., Ph.D., Litt.D., *Kenan Professor of Romance Philology*
A.B., 1920 (Pennsylvania); A.M., 1921, Ph.D., 1923 (Harvard); Litt.D., (Washington and Lee)
- SAMUEL M. HOLTON, Ph.D., *Assistant Professor of Education*
A.B., 1942 (Duke); B.S., 1943 (New York); M.A., 1947 (Yale); M.Educ., 1947 (Duke); Ph.D., 1948 (Yale)
- CHARLES WRIGHT HOOKER, Ph.D., *Professor of Anatomy*
A.B., 1930, A.M., 1932, Ph.D., 1933 (Duke)
- GEORGE FREDERICK HORNER, Ph.D., *Associate Professor of English*
A.B., 1921, A.M., 1924 (Pennsylvania State); Ph.D., 1938 (North Carolina)
- HAROLD HOTELLING, Ph.D., *Professor of Mathematical Statistics and Associate Director, Institute of Statistics*
A.B., 1919, M.Sc., 1921 (Washington); Ph.D., 1924 (Princeton)
- HENRY CHARLES HOUSE, JR., A.M., *Associate Professor of Physical Education*
A.B., 1931, A.M., 1943 (North Carolina)
- WILLIAM ADDISON HOVER, A.M., *Part-time Instructor in French*
B.A., 1947 (Cincinnati); A.M., 1949 (North Carolina)
- ROBERT A. HOWARD, M.A., *Visiting Sculptor*
B.A., M.A., 1949 (Tulsa)

*Fall quarter, 1950.

†Absent on leave, fall quarter, 1950.

- ALMONTE CHARLES HOWELL, Ph.D., *Professor of English and Secretary of the Faculty*
 A.B., 1917 (Denison); M.A., 1920 (Columbia); Ph.D., 1924 (North Carolina);
 Prof. Hon., 1948 (San Carlos, Guatemala)
- VINTON ASBURY HOYLE, Ph.D., *Professor of Mathematics*
 A.B., 1924, A.M., 1925 (North Carolina); Ph.D., 1930 (Princeton)
- ARTHUR PALMER HUDSON, Ph.D., *Kenan Professor of English*
 B.S., 1913, M.A., 1920 (Mississippi); A.M., 1925 (Chicago); Ph.D., 1930 (North Carolina)
- MAEBURN BRUCE HUNEYCUTT, A.M., *Instructor in Botany*
 A.B., 1946, A.M., 1949 (North Carolina)
- KERMIT HOUSTON HUNTER, A.M., *Part-time Instructor in English*
 A.B., 1931 (Ohio State); A.M., 1949 (North Carolina)
- RHODA HUNTER, A.M., *Assistant Professor of Radio*
 B.S., 1943 (State Teachers College, Indiana, Pa.); A.M., 1949 (North Carolina)
- MILTON HUPPERT, B.S., *Instructor in Bacteriology*
 B.S., 1940 (College of the City of New York)
- HOWARD RUSSELL HUSE, Ph.D., *Professor of French and Italian*
 Ph.B., 1913, Ph.D., 1930 (Chicago)
- DORIS HUTCHINSON, A.M., *Assistant Professor of Physical Education*
 B.S., 1939 (Woman's College, U.N.C.); A.M., 1947 (North Carolina)
- RALPH W. HYDE, A.B., *Part-time Instructor in English*
 A.B., 1947 (North Carolina)
- ROY LEE INGRAM, Ph.D., *Assistant Professor of Geology*
 S.B. in Geol., 1941 (North Carolina); M.S. in Geol. and Phys., 1943 (Oklahoma); Ph.D., 1948 (Wisconsin)
- J. LOGAN IRVIN, Ph.D., *Associate Professor of Biological Chemistry and Nutrition*
 B.S., 1934 (South Carolina); Ph.D., 1938 (Pennsylvania)
- HANS H. JAFFE, M.S., *Instructor in Experimental Medicine*
 B.S., 1941 (Iowa); M.S., 1942 (Purdue)
- RICHARD ELMER JAMERSON, Ed.D., *Professor of Physical Education*
 B.S. in Phys. Educa., 1932 (Rice); M.A. in Phys. Educa., 1934, Ed.D., 1949 (Teachers College, Columbia)
- ROBERT MINOR JAMES, M.S., C.P.A., *Assistant Professor of Accounting*
 B.S., 1943, M.S., 1948 (Illinois); C.P.A. (State of Illinois)
- NORMAN BERT JAVITT, A.B., *Part-time Instructor in Physiology*
 A.B., 1947 (Syracuse)
- WILLIAM SUMNER JENKINS, Ph.D., LL.B., *Professor of Political Science*
 A.B., 1924, A.M., 1925, Ph.D., 1927, LL.B., 1931 (North Carolina); M.A. in Military Government, 1943 (Columbia)
- CHARLES EDWIN JENNER, Ph.D., *Assistant Professor of Zoology*
 A.B., 1941 (Central College); A.M., 1949, Ph.D., 1951 (Harvard)

RICHARD JENTE, Ph.D., *Professor of the Germanic Languages and Literatures*

A.B., 1910, A.M., 1911 (Yale); Ph.D., 1917 (Heidelberg)

KATHARINE JOCHER, Ph.D., *Professor of Sociology and Assistant Director of the Institute for Research in Social Science*

A.B., 1922 (Goucher College); A.M., 1923 (Pennsylvania); Ph.D., 1929 (North Carolina)

CECIL JOHNSON, Ph.D., *Professor of History and Associate Dean of the General College*

A.B., 1922 (Mississippi College); M.A., 1924 (Virginia); Ph.D., 1932 (Yale)

EVELYN ELIZABETH JOHNSON, B.S., *Assistant Professor of Public Health Nursing in the Department of Field Training*

C.P.H.N., 1931, B.S., 1936, C.P.S.W., 1939 (Western Reserve)

GUY BENTON JOHNSON, Ph.D., *Professor of Sociology and Anthropology and Research Professor in the Institute for Research in Social Science*

A.B., 1921 (Baylor); A.M., 1922 (Chicago); Ph.D., 1927 (North Carolina)

JAMES HENRY JOHNSON, A.B., *Part-time Instructor in Spanish*

A.B., 1948 (North Carolina)

WILLIAM G. JOHNSON, B.S., *Part-time Instructor in Physics*

B.S., 1943 (Wake Forest)

JAMES DAVID JOHNSTON, A.M., *Part-time Instructor in English*

A.B., 1939 (Hampden-Sydney); A.M., 1949 (North Carolina)

CLAIBORNE STRIBLING JONES, Ph.D., *Associate Professor of Zoology and Adviser in the General College*

A.B., 1935 (Hampden-Sydney); M.A., 1940, Ph.D., 1944 (Virginia)

EDWARD EUGENE JONES, JR., A.B., *Instructor in Zoology*

A.B., 1947 (South Carolina)

FLOYD BURTON JONES, Ph.D., *Professor of Mathematics*

B.A., 1932, Ph.D., 1935 (Texas)

REECE ALEXANDER JONES, M.S., *Part-time Instructor in Geography*

B.A., 1939, M.S., 1940 (Tennessee)

ARTHUR MELVILLE JORDAN, Ph.D., *Professor of Educational Psychology*

A.B., 1907 (Randolph-Macon); A.M., 1909 (Trinity College); Ph.D., 1919 (Columbia)

ALBERT WILLOUGHBY JOWDY, JR., S.M., *Instructor in Pharmacy*

S.B. in Phar., 1943, S.M., 1949 (North Carolina)

KAI JURGENSEN, A.M., *Associate Professor of Dramatic Art*

A.B., 1937 (Montana); A.M., 1943 (North Carolina)

GEORGE KACHERGIS, M.F.A., *Assistant Professor of Art*

B.F.A., 1946, M.F.A., 1948 (The Art Institute of Chicago)

- MARGARET ELLEN KALP, B.A., M.A. in L.S., *Assistant Professor of Library Science*
B.A., 1936 (New Jersey College for Women); M.A. in L.S., 1942 (Michigan)
- LOUIS OSGOOD KATTSOFF, Ph.D., *Professor of Philosophy*
A.B., 1929, A.M., 1930, Ph.D., 1934 (Pennsylvania)
- CORNELIUS TIMPSON KAYLOR, Ph.D., *Associate Professor of Anatomy*
A.B., 1931 (Wesleyan); M.S., 1933 (Rutgers); Ph.D., 1936 (Princeton)
- ALAN KEITH-LUCAS, M.A., M.Sc. (Soc.Admin.), *Lecturer in Social Work*
B.A., 1931, M.A., 1935 (Trinity College, Cambridge); M.Sc. (Soc. Admin.), 1939 (Western Reserve)
- MARY FRANCES KELLAM, B.S., A.M., *Instructor in Physical Education*
B.S., 1944 (Woman's College, U.N.C.); A.M., 1948 (North Carolina)
- JOHN ESTEN KELLER, Ph.D., *Assistant Professor of Spanish*
B.A., 1940, M.A., 1942 (Kentucky); Ph.D., 1946 (North Carolina)
- *LUCILE KELLING, A.B., B.L.S., *Professor of Library Science*
A.B., 1917 (Whitman College); B.L.S., 1921 (New York State Library School)
- †GILBERT L. KELSO, B.A., M.P.H., *Associate Professor of Sanitary Science*
B.A., 1929 (Iowa); M.P.H., 1942 (Minnesota)
- ELIZABETH LOUANNA KEMBLE, Ed.D., *Professor of Nursing and Dean of the School of Nursing*
R.N., 1927 (Cincinnati); B.S., 1940 (New York University); M.A., 1943, Ed.D., 1948 (Teachers College, Columbia)
- JOHN FAWCETT KENFIELD, *Instructor in Physical Education*
- ALPHA K. KENNY, *Instructor in Public Health Records*
- MAURICE ARTHUR KIDDER, B.A., S.T.M., *James A. Gray Lecturer in Religion*
B.A., 1935 (New Hampshire); S.T.B., 1938 (Boston); S.T.M., 1946 (Yale)
- FRANK EFIRD KINARD, S.M., *Part-time Instructor in Physics*
A.B., 1947 (Newberry); S.M., 1950 (North Carolina)
- †ARNOLD KIMSEY KING, A.M., *Professor of Education and Associate Dean of the Graduate School*
A.B., 1925 (North Carolina); A.M., 1927 (Chicago)
- HARRY LEE KING, JR., B.A., *Part-time Instructor in Spanish*
B.A., 1936 (Richmond)
- JAMES EDWARD KING, JR., Ph.D., *Assistant Professor of History*
B.A., 1938 (Richmond); Ph.D., 1947 (Johns Hopkins)
- CHARLES ATKINSON KIRKPATRICK, D.C.S., *Associate Professor of Marketing*
A.B., 1928, A.M., 1929 (Duke); D.C.S., 1933 (New York University)

*Acting Dean of the School of Library Science, August 25, 1950—April 15, 1951.

†Beginning April 1, 1951.

‡Absent on leave, spring quarter, 1951.

- MARY L. KISER, M.A., *Part-time Instructor in Education*
A.B., 1931 (Woman's College, U.N.C.); M.A., 1935 (Teachers College, Columbia)
- FRANK WYSOR KLINGBERG, Ph.D., *Assistant Professor of History*
B.A., 1941, Ph.D., 1948 (U.C.L.A.)
- EDGAR WALLACE KNIGHT, Ph.D., *Kenan Professor of Education*
A.B., 1909, A.M., 1911 (Trinity College); Ph.D., 1913 (Columbia)
- SAMUEL BRADLEY KNIGHT, Ph.D., *Professor of Chemistry*
B.S., 1934 (Clemson); S.M., 1937, Ph.D., 1938 (North Carolina)
- WILLIAM J. KOCH, A.B., *Instructor in Botany*
A.B., 1947 (North Carolina)
- MYRON L. KOCHER, M.A., *Part-time Instructor in French*
A.B., 1948 (Wake Forest); M.A., 1949 (Middlebury)
- *FRANK JOSEPH KOTKKE, Ph.D., *Associate Professor of Economics*
A.B., 1937, A.M., 1938 (Northwestern); Ph.D., 1944 (Columbia)
- GEORGE KRZYWICKI, Ph.D., *Visiting Lecturer in Philosophy*
A.M., 1946, Ph.D., 1948 (Brussels)
- HASELL THOMAS LABORDE, A.M., *Part-time Instructor in Mathematics*
A.B., 1942, A.M., 1948 (South Carolina)
- WILLIAM FREDERICK LAForge, A.M., *Instructor in Social Science*
A.B., 1947, A.M., 1950 (New Hampshire)
- GEORGE SHERMAN LANE, Ph.D., *Kenan Professor of Germanic and Comparative Linguistics*
B.A., 1926, M.A., 1927 (Iowa); Ph.D., 1930 (Chicago)
- JOHN EDGAR LARSH, JR., Sc.D., *Professor of Parasitology*
A.B., 1939, M.S., 1940 (Illinois); Sc.D., 1943 (Johns Hopkins)
- JOHN WAYNE LASLEY, JR., Ph.D., *Professor of Pure Mathematics*
A.B., 1910, A.M., 1911 (North Carolina); Ph.D., 1920 (Chicago)
- FRANKLIN D. LAURENS, A.M., *Instructor in Social Science*
A.B., 1942, A.M., 1949 (North Carolina)
- ROBERT BAKER LAWSON, M.D., *Professor of Physical Education, Emeritus*
Student, 1897-1900 (North Carolina); M.D., 1902 (Maryland)
- †JAMES WALTER LAYMAN, Ph.D., *Professor of Psychology*
A.B., 1932, M.A., 1933 (Western Reserve); Ph.D., 1936 (Iowa)
- ‡MARTIN EDWIN LEAN, Ph.D., *Assistant Professor of Philosophy*
A.B., 1940 (Central College, Chicago); M.A., 1942 (Nebraska); Ph.D., 1948 (Columbia)
- §JOSEPH MERRITT LEAR, M.A., *Professor of Insurance, Emeritus*
A.B., 1900, A.M., 1902 (Randolph-Macon); M.A., 1915 (Columbia)
- STURGIS ELLENO LEAVITT, Ph.D., Litt.D., *Kenan Professor of Spanish*
A.B., 1908 (Bowdoin); A.M., 1913, Ph.D., 1917 (Harvard); Litt.D. (Bowdoin, Davidson)

* Absent on leave for one year, beginning spring quarter, 1951.

† Absent on leave, 1951-1952.

‡ Resigned, January 1, 1951.

§ Deceased, August 30, 1950.

- HUGH TALMAGE LEFLER, Ph.D., *Professor of History*
A.B., 1921, A.M., 1922 (Trinity College); Ph.D., 1931 (Pennsylvania)
- HARVEY EUGENE LEHMAN, Ph.D., *Assistant Professor of Zoology*
A.B., 1941 (Maryville College); A.M., 1944 (North Carolina); Ph.D., 1948 (Stanford)
- HARRY LEONHARDT, A.B., *Part-time Instructor in Psychology*
A.B., 1949 (Upsala College)
- HENRY WILKINS LEWIS, A.B., LL.B., *Research Professor in Public Law and Government*
A.B., 1937 (North Carolina); LL.B., 1940 (Harvard)
- ROBERT BOYD LINDSAY, M.D., *Associate University Physician and Instructor in Medicine*
B.S., 1936 (Davidson); M.D., 1940 (Jefferson)
- *JOE BURTON LINKER, Ph.D., *Professor of Mathematics*
A.B., 1918, A.M., 1920 (North Carolina); Ph.D., 1924 (Johns Hopkins)
- ROBERT WHITE LINKER, Ph.D., *Associate Professor of French*
A.B., 1925, A.M., 1928, Ph.D., 1933 (North Carolina)
- TERRELL W. LITTLETON, M.B.A., *Lieutenant, S.C., United States Navy, Associate Professor of Naval Science*
B.B.A., 1936; M.B.A., 1940 (Texas)
- CLEMENT SEARL LOGSDON, Ph.D., *Professor of Marketing*
B.S., 1924 (Georgetown); M.A., 1928, Ph.D., 1940 (Ohio State)
- ARTHUR HILL LONDON, S.B., M.D., *Lecturer in Pediatrics*
S.B., 1925 (North Carolina); M.D., 1927 (Pennsylvania)
- EUGENE R. LONG, Ph.D., *Assistant Professor of Psychology*
A.B., 1946, M.A., 1947, Ph.D., 1950 (Virginia)
- ROBERT L. J. LONG, B.S., *Lieutenant, United States Navy, Assistant Professor of Naval Science*
B.S., 1943 (United States Naval Academy)
- OLGA GERNOVA LYERLY, A.B., *Part-time Instructor in Psychology*
A.B., 1948 (Hunter College)
- SAMUEL B. LYERLY, A.M., *Part-time Lecturer in Psychology*
A.B., 1940, A.M., 1947 (North Carolina)
- EVALYN ABSHEAR LYNCH, B.A., M.S.W., *Lecturer in Social Work*
B.A., 1925 (Texas); M.S.W., 1949 (Pennsylvania School of Social Work)
- CLIFFORD PIERSON LYONS, Ph.D., *Professor of English*
A.B., 1925 (Cornell College); Ph.D., 1932 (Johns Hopkins)
- JOHN CORIDEN LYONS, Ph.D., *Professor of Romance Languages*
B.S., 1920, M.A., 1921 (William and Mary); Ph.D., 1927 (North Carolina)
- FREDERICK BAYS MCCALL, A.B., LL.B., *Professor of Law*
A.B., 1915 (North Carolina); LL.B., 1928 (Yale)
- GERALD RALEIGH MACCARTHY, Ph.D., *Professor of Geology and Geophysics*
A.B., 1921 (Cornell); A.M., 1924, Ph.D., 1926 (North Carolina)

*Absent on leave, spring quarter, 1951.

- JOSEPH PICKETT McCracken, M.D., *Instructor in Medicine*
M.D., 1937 (Duke)
- HAROLD GRIER McCURDY, Ph.D., *Associate Professor of Psychology*
A.B., 1930, Ph.D., 1938 (Duke)
- DOROTHY McCUSKEY, Ph.D., *Associate Professor of Education*
A.B., 1929 (College of Wooster); M.A., 1930 (Radcliffe); Ph.D., 1936 (Yale)
- WILLIAM BENSON McCUTCHEON, M.D., *Lecturer in Surgery*
M.D., 1921 (Medical College of Virginia)
- EDWARD GRAFTON McGAVRAN, A.B., M.D., M.P.H., *Professor of Epidemiology and Dean of the School of Public Health*
A.B., 1924 (Butler University); M.D., 1928 (Harvard Medical School); M.P.H., 1935 (Harvard School of Public Health)
- DAN MAYS MCGILL, Ph.D., C.L.U., *Julian Price Associate Professor of Life Insurance*
A.B., 1940 (Maryville); A.M., 1941 (Vanderbilt); Ph.D., 1947 (Pennsylvania); C.L.U., 1950 (American College of Life Underwriters)
- CLARENCE HENRY MCGREGOR, Ph.D., *Professor of Marketing*
B.S., 1925 (Kansas State Teachers College of Emporia); M.B.A., 1930 (Kansas); Ph.D., 1937 (Northwestern)
- ERNEST WILLIAM MACHEN, JR., A.B., J.D., *Associate Research Professor in Public Law and Government*
A.B., 1943 (Stetson); J.D., 1949 (North Carolina)
- WILLIAM LEE MACILWINEN, A.M., *Visiting Lecturer in Dramatic Art*
A.B., 1937 (Davidson); A.M., 1950 (North Carolina)
- RAYMOND W. MACK, A.M., *Part-time Instructor in Sociology*
A.B., 1949 (Baldwin-Wallace College); A.M., 1951 (North Carolina)
- ROBERT LAMBERT MCKEE, Ph.D., *Associate Professor of Chemistry*
B.S., 1938 (Rice); M.A., 1940, Ph.D., 1943 (Texas)
- WILLIAM JOHN MCKEE, Ph.D., *Professor of Education in Extension Teaching*
C.E., 1909 (Cornell); M.A., 1919, Ph.D., 1930 (Columbia)
- ERNEST LLOYD MACKIE, Ph.D., *Professor of Mathematics and Dean of Student Awards and Distinctions*
A.B., 1917 (North Carolina); A.M., 1920 (Harvard); Ph.D., 1927 (Chicago)
- LOREN CAREY MACKINNEY, Ph.D., *Professor of Medieval History*
A.B., 1913 (Lawrence College); A.M., 1916 (Wisconsin); Ph.D., 1925 (Chicago)
- CATHERINE FRANCES MACKINNON, A.B., M.S., *Associate Professor of Public Health Nutrition*
A.B., 1924 (Montana State University); M.S., 1936 (Michigan Medical School)
- WILLIAM ALBERT MCKNIGHT, A.M., *Instructor in Spanish*
B.S., 1932 (Davidson); A.M., 1937 (North Carolina)
- BERNARD W. McLEAN, B.S., *Major, United States Marine Corps, Assistant Professor of Naval Science*
B.S., 1940 (Tennessee)

- CHARLOTTE POPE MCLEOD, Sc.D., *Assistant Professor of Experimental Medicine*
B.S., 1936 (Miami); Sc.D., 1939 (Johns Hopkins)
- JOHN BLOUNT MACLEOD, A.M., LL.B., *Instructor in Social Science*
LL.B., 1922 (Wake Forest); A.B., 1939, A.M., 1947 (North Carolina)
- JOHN ALEXANDER MCMAHON, A.B., LL.B., *Associate Research Professor in Public Law and Government*
A.B., 1942 (Duke); LL.B., 1948 (Harvard)
- DOUGALD MACMILLAN, Ph.D., *Kenan Professor of English*
A.B., 1918, A.M., 1920, Ph.D., 1925 (North Carolina)
- WILLIAM DEBERNIERE MACNIDER, M.D., Sc.D., LL.D., *Kenan Research Professor of Pharmacology, Emeritus*
M.D., 1903 (North Carolina); Sc.D. (Medical College of Virginia); LL.D. (Davidson)
- DANIEL ALLAN MACPHERSON, Ph.D., *Professor of Bacteriology*
Ph.B., 1919, Sc.M., 1920 (Brown); Ph.D., 1929 (Chicago)
- JAMES ROBERTSON MCQUISTON, A.B., *Part-time Instructor in English*
A.B., 1947 (Southwestern, Memphis)
- HAROLD JOSEPH MAGNUSON, A.B., M.D., M.P.H., *Research Professor of Experimental Medicine*
A.B., 1934, M.D., 1938 (Southern California); M.P.H., 1942 (Johns Hopkins)
- GEORGE PHILIP MANIRE, Ph.D., *Assistant Professor of Bacteriology*
B.S., 1940, M.S., 1941 (North Texas State Teachers College); Ph.D., 1949 (California)
- VIRGIL I. MANN, Ph.D., *Assistant Professor of Geology*
B.A., 1942 (Macalester College); Ph.D., 1950 (Wisconsin)
- WILLIAM ROBERT MANN, Ph.D., *Assistant Professor of Mathematics*
A.B., 1941 (Rochester); Ph.D., 1949 (California)
- ISAAC HALL MANNING, JR., A.B., M.D., *Instructor in Medicine*
A.B., 1931 (North Carolina); M.D., 1935 (Harvard)
- WILLIAM J. MANNING, B.S., *Commander, United States Navy, Associate Professor of Naval Science*
B.S., 1939 (United States Naval Academy)
- EDWIN CARLYLE MARKHAM, Ph.D., *Smith Professor of Chemistry*
A.B., 1923 (Trinity College); Ph.D., 1927 (Virginia)
- PAUL A. MARROTTE, A.M., *Instructor in Social Science*
A.B., 1947 (New Hampshire); A.M., 1950 (North Carolina)
- *ROY K. MARSHALL, Ph.D., *Professor of Astronomy and Director of the Morehead Planetarium*
B.A., 1929 (Ohio Wesleyan); M.A., 1930, Ph.D., 1932 (Michigan)
- CHARLIE C. MARTIN, A.M., *Instructor in Social Science*
S.B., 1948, A.M., 1949 (North Carolina)

*Resigned, March 1, 1951.

- FREDERICK CARLYLE MARTIN, A.M., *Part-time Instructor in Spanish*
A.B., 1947, A.M., 1948 (Emory)
- GRUVER HOWARD MARTIN, A.B., *Part-time Instructor in Physics*
A.B., 1949 (Western Maryland)
- ALBERT VICTOR HUGO MASKET, Ph.D., *Associate Professor of Physics*
B.S., 1935 (New York University); M.S., 1936, Ph.D., 1938 (Virginia)
- JAMES IRVING MASON, JR., A.B., *Part-time Instructor in Political Science*
A.B., 1947 (North Carolina)
- WILTON MASON, Ph.D., *Assistant Professor of Music*
A.B., 1937, A.M., 1947, Ph.D., 1949 (North Carolina)
- ELTA MAE MAST, B.Ed., M.S.P.H., *Assistant Professor of Public Health Education*
B.Ed., 1942 (Illinois State Normal University); M.S.P.H., 1945 (North Carolina)
- JOSEPH A. MATTHEWS, B.S., *Lieutenant Commander, United States Navy, Associate Professor of Naval Science*
B.S., 1937 (Florence State Teachers College)
- NORMAN W. MATTIS, M.A., *Associate Professor of English*
A.B., 1926 (Pittsburgh); M.A., 1929 (Cornell)
- GENE W. MEDLIN, B.S., A.M., *Part-time Instructor in Mathematics*
B.S., 1948 (Wake Forest); A.M., 1950 (North Carolina)
- JOSEPH T. MEERS, M.S., *Part-time Instructor in Physics*
B.S., 1944 (Western Kentucky State College); M.S., 1947 (Kentucky)
- WINIFRED J. MELDRIM, A.B., *Part-time Instructor in Psychology*
A.B., 1946 (Florida State College)
- HAROLD DIEDRICH MEYER, A.M., LL.D., R.S.D., *Professor of Sociology*
A.B., 1912, A.M., 1916 (Georgia); LL.D. (Florida Southern College); R.S.D. (Salem College, Salem, W. Va.)
- DANIEL JUDSON MILBURN, A.M., *Part-time Instructor in English*
S.B., 1935, A.M., 1935 (Oklahoma A. and M.)
- AUGUSTUS TAYLOR MILLER, JR., Ph.D., *Professor of Physiology and Director of Fatigue Research Laboratory*
B.S., 1931, M.S., 1933 (Emory); Ph.D., 1939 (Michigan)
- MARY FRANCES MINTON, M.A., *Instructor in English*
A.B., 1942, M.A., 1948 (Southern Methodist)
- JUAN MIRANDA, *Instructor in Spanish*
- HERBERT HALL MITCHELL, M.S., *Instructor in Economics*
B.S., 1939, M.S., 1950 (Alabama)
- DAVID GEETING MONROE, LL.B., Ph.D., *Associate Professor of Political Science*
LL.B., 1926 (Baldwin-Wallace College); Ph.B., 1930 (Chicago); Ph.D., 1940 (Northwestern)

- JESSE J. MOORHEAD, B.S., *Lieutenant Colonel, United States Air Force, Professor of Air Science and Tactics*
B.S., 1937 (Clemson)
- LUCY SHIELDS MORGAN, Ph.D., *Professor of Public Health Education*
A.B., 1922, M.S., 1932 (Tennessee); M.A., 1929 (Columbia); Ph.D., 1938 (Yale)
- WILLIAM GARDNER MORGAN, A.B., M.D., *Associate University Physician and Instructor in Medicine*
A.B., 1927 (North Carolina); M.D., 1931 (Pennsylvania)
- JOSEPH L. MORRISON, A.B., *Assistant Professor of Journalism*
A.B., 1940 (North Carolina)
- JOHN CHARLES MORROW, III, Ph.D., *Assistant Professor of Chemistry*
S.B., 1944 (North Carolina); Ph.D., 1949 (Massachusetts Institute of Technology)
- ERNST MORWITZ, Dr. jur., *Lecturer in German*
Dr. juris utriusque, 1910 (Heidelberg)
- OLIN TERRELL MOUZON, Ph.D., *Professor of Economics*
B.S. in Commerce, 1933 (Southern Methodist); Ph.D., 1940 (North Carolina)
- EDWARD FRANCIS MOYER, A.M., *Part-time Instructor in French*
A.B., 1936, A.M., 1937 (North Carolina)
- PAUL HILDNER MUEHLKE, A.B., *Part-time Instructor in Physiology*
A.B., 1949 (New York University)
- CLYDE EDWARD MULLIS, A.M., *Associate Professor of Physical Education*
A.B., 1938, A.M., 1940 (North Carolina)
- RICHARD K. MURDOCH, Ph.D., *Visiting Assistant Professor of History*
A.B., 1936 (Harvard); M.A., 1940, Ph.D., 1947 (U.C.L.A.)
- JOHN RUSSELL MURPHY, M.A., *Assistant Football Coach and Instructor in Physical Education*
A.B., 1928 (Colorado); M.A., 1935 (Teachers College, Columbia)
- ROBERT J. MURPHY, B.S., M.D., *Visiting Assistant Professor of Public Health Administration*
B.S., 1936 (State College, Tennessee); M.D., 1940 (Vanderbilt)
- LOLA LEE MUSTARD, A.B., *Instructor in Journalism*
A.B., 1948 (North Carolina)
- THOMAS L. NABORS, A.B., *Part-time Instructor in Mathematics*
A.B., 1950 (North Carolina)
- EDWARD WILLIAM NAJAM, M.A., *Part-time Instructor in Spanish*
A.B., 1938 (Bowdoin); M.A., 1950 (Duke)
- ARNOLD SAMUEL NASH, M.Sc., M.A., M.Sc.Econ., D.D., *James A. Gray Professor of the History of Religion*
B.Sc., 1928, M.Sc., 1930, M.A., 1933 (Liverpool); M.Sc.Econ., 1937 (London); D.D., 1946 (Coe College)
- CHARLES LESLIE NELSON, A.B., *Part-time Instructor in Spanish*
A.B., 1948 (North Carolina)

- A. KENNETH NESS, *Resident Artist and Professor of Art*
Diploma, 1932 (The Art Institute of Chicago)
- WILLIAM S. NEWMAN, Ph.D., *Associate Professor of Music*
B.S., 1933, M.A., 1935, Ph.D., 1939 (Western Reserve)
- *ALBERT RAY NEWSOME, Ph.D., *Professor of History*
A.B., 1915 (North Carolina); M.A., 1922, Ph.D., 1929 (Michigan)
- GEORGE EDWARD NICHOLSON, JR., Ph.D., *Assistant Professor in the
Institute of Statistics*
A.B., 1940, A.M., 1941, Ph.D., 1948 (North Carolina)
- EDWARD WILLIAM NOLAND, Ph.D., *Professor of Sociology and Research
Professor in the Institute for Research in Social Science*
A.B., 1930, M.A., 1936 (West Virginia); Ph.D., 1944 (Cornell)
- JOHN WILLIAM ROY NORTON, A.B., M.D., M.P.H., *Visiting Associate
Professor of Public Health*
A.B., 1920 (Duke); M.D., 1928 (Vanderbilt); M.P.H., 1936 (Harvard School of
Public Health)
- MARY F. NUNN, A.M., *Part-time Instructor in Mathematics*
A.B., 1948 (Vassar); A.M., 1950 (North Carolina)
- HOWARD WASHINGTON ODUM, Ph.D., LL.D., Litt.D., L.H.D., *Kenan
Professor of Sociology and Research Professor in the Institute for
Research in Social Science*
A.B., 1904 (Emory); A.M., 1906 (Mississippi); Ph.D., 1909 (Clark); Ph.D., 1910
(Columbia); LL.D. (Emory, Harvard); Litt.D. (College of the Ozarks); L.H.D.
(Clark)
- INGRAM OLKIN, M.A., *Research Associate with the Department of
Mathematical Statistics*
A.B., 1947 (City College of New York); M.A., 1949 (Columbia)
- WILLIAM ANDERSON OLSEN, A.M., *Professor of English*
A.B., 1923 (Cornell); A.M., 1928 (North Carolina)
- JOHN TETTEMER O'NEIL, Ph.D., *Associate Professor of Finance and As-
sistant Dean of the School of Business Administration*
S.B., 1934 (North Carolina); M.B.A., 1936 (Harvard); Ph.D., 1948 (Northwestern)
- WALTER E. ORGANIST, A.B., *Part-time Instructor in Psychology*
A.B., 1940 (Pennsylvania State)
- MARK TAYLOR ORR, A.B., *Part-time Instructor in Political Science*
A.B., 1937 (North Carolina)
- EVERETT D. PALMATIER, Ph.D., *Assistant Professor of Physics*
B.Sc., 1938 (Manitoba); Ph.D., 1951 (Cornell)
- JOHN ALBERT PARKER, S.B., M.Arch., M.C.P., *Professor of Planning
and Research Professor in the Institute for Research in Social Sci-
ence*
S.B., 1931, M.Arch., 1933, M.C.P., 1946 (Massachusetts Institute of Technology)

*Absent on leave, winter quarter, 1951.

- J. ROY PARKER, A.B., *Professor of Journalism, Emeritus*
A.B., 1915 (Wake Forest)
- JOHN WILLIAM PARKER, A.M., *Professor of Dramatic Art*
A.B. in Educ., 1930, A.M., 1937 (North Carolina)
- HAROLD FRANCIS PARKS, Ph.D., *Instructor in Anatomy*
B.Ed., 1942 (Southern Illinois Normal University); Ph.D., 1950 (Cornell)
- ROSS LOMBARD PARKS, B.S., *Instructor in Chemistry*
B.S., 1943 (Davidson)
- GENE B. PARRISH, A.B., *Part-time Instructor in Mathematics*
A.B., 1949 (North Carolina)
- JAMES MILTON PARRISH, M.S., *Part-time Instructor in Economics*
B.S., 1943, M.S., 1948 (Alabama)
- FRED GEER PATTERSON, A.B., M.D., *Instructor in Medicine*
A.B., 1933 (North Carolina); M.D., 1937 (Pennsylvania)
- HUBERT CLIFTON PATTERSON, JR., A.B., M.D., *Instructor in Anatomy*
A.B., 1936 (Duke); M.D., 1937 (Harvard)
- REBECCA COY PATTERSON, Ph.D., *Part-time Instructor in English*
A.B., 1934, A.M., 1935, Ph.D., 1938 (Texas)
- THOMAS McEVOY PATTERSON, A.M., *Assistant Professor of Dramatic Art*
A.B., 1934, A.M., 1936 (Texas)
- JAMES WELCH PATTON, Ph.D., *Professor of History and Director of the Southern Historical Collection*
A.B., 1924 (Vanderbilt); A.M., 1925, Ph.D., 1929 (North Carolina)
- JAMES SINGLETON PATTY, A.M., *Part-time Instructor in French*
A.B., 1945, A.M., 1947 (North Carolina)
- AUBREY HAMPTON PAYNE, B.S., A.M., *Part-time Instructor in Mathematics*
B.S., 1943 (Appalachian State Teachers College); A.M., 1950 (North Carolina)
- ERLE EWART PEACOCK, M.B.A., C.P.A., *Professor of Accounting*
A.B., 1914 (Georgia); M.B.A., 1916 (Harvard); C.P.A. (State of North Carolina)
- WILLIAM HENRY PEACOCK, Ph.D., *Associate Professor of Physical Education*
A.B., 1932 (Maryville College); A.M., 1940, Ph.D., 1945 (North Carolina)
- JOHN HUNTER PEAK, A.M., *Part-time Instructor in Spanish*
A.B., 1941 (Hampden-Sydney); A.M., 1950 (North Carolina)
- RICHARD LEHMER PEARSE, M.D., *Lecturer in Obstetrics*
M.D., 1931 (Harvard)
- FRANCES MITCHELL PEDIGO, A.M., *Part-time Instructor in English*
A.B., 1932 (Florida State College for Women); A.M., 1946 (North Carolina)
- TALMAGE LEE PEELE, A.B., M.D., *Visiting Lecturer in Neurology*
A.B., 1929, M.D., 1934 (Duke)
- CARL HAMILTON PEGG, Ph.D., *Professor of History*
A.B. in Educ., 1927, A.M., 1927, Ph.D., 1930 (North Carolina)

- JEAN HOWARD PELLEGRIN, S.B. in L.S., M.A., *Instructor in Library Science and Librarian of the School of Library Science*
A.B., 1941 (Transylvania College); S.B. in L.S., 1942 (North Carolina); M.A., 1947 (Kentucky)
- EDWARD J. PELLICCIARO, B.S., *Part-time Instructor in Mathematics*
B.S., 1949 (Wagner College, Staten Island)
- GEORGE DIAL PENICK, S.B., M.D., *Instructor in Pathology*
S.B., 1943 (North Carolina); M.D., 1946 (Harvard)
- MICHAEL PENNELLA, *Master Sergeant, United States Air Force, Instructor in Air Science and Tactics*
- H. ARNOLD PERRY, Ed.D., *Professor of Education*
A.B., 1926, Ed.M., 1933 (Duke); Ed.D., 1943 (Columbia)
- WILLIAM DECATUR PERRY, Ed.D., *Associate Professor of Education and Director of the University Testing Service*
A.B. in Educ., 1929 (North Carolina); M.A., 1934 (Columbia); Ed.D., 1937 (Teachers College, Columbia)
- RALPH WILLIAM PFOUTS, M.A., *Lecturer in Economics*
A.B., 1942, M.A., 1947 (Kansas)
- CLARENCE PHILBROOK, Ph.D., *Associate Professor of Economics*
A.B., 1936, Ph.D., 1949 (Chicago)
- GUY BERRYMAN PHILLIPS, M.A., *Professor of Education and Dean of the School of Education, Director of the Summer School and of Teachers' Placement Bureau*
A.B., 1913 (North Carolina); M.A., 1942 (Columbia)
- JOHN NOBLE PHILLIPS, M.A., *Part-time Instructor in Philosophy*
B.S., 1946 (Northwestern); M.A., 1949 (Southern California)
- ANDREW WARREN PIERPONT, A.B., M.B.A., *Lecturer in Business Administration*
A.B., 1928 (Washington and Lee); M.B.A., 1931 (Harvard)
- WILLIAM WHATLEY PIERSON, Ph.D., Litt.D., LL.D., *Professor of History and Political Science and Dean of the Graduate School*
A.B., 1910, A.M., 1911 (Alabama); M.A., 1912, Ph.D., 1916 (Columbia); Litt.D. (Boston); LL.D. (Washington and Lee)
- TULLIO JOSEPH PIGNANI, M.S., *Part-time Instructor in Mathematics*
B.S., 1948 (State Teacher's College, Indiana, Pa.); M.S., 1949 (Bucknell)
- JOHN WESLEY PLATT, A.M., *Part-time Instructor in English*
A.B., 1939 (Wofford); A.M., 1948 (South Carolina)
- WILLIAM HOWARD PLEMMONS, Ph.D., *Professor of Education*
A.B., 1928 (Wake Forest); A.M., 1935 (Duke); Ph.D., 1943 (North Carolina)
- WILLIAM E. POE, B.S., LL.B., *Assistant Research Professor in Public Law and Government*
B.S., 1947 (Wake Forest); LL.B., 1950 (Harvard)
- LEON M. POLLANDER, *Lecturer in Journalism*

- MARY GRAY PORTER, A.B., *Instructor in German*
A.B., 1947 (Alabama)
- WILLIAM POTEAT, B.D., Ph.D., *Assistant Professor of Philosophy*
A.B., 1941 (Oberlin); B.D., 1944 (Yale); Ph.D., 1951 (Duke)
- LEE HARRIS POTTER, A.M., *Part-time Instructor in English*
A.B., 1948, A.M., 1950 (North Carolina)
- LOGAN PRATT, A.M., *Part-time Instructor in English*
A.B., 1934 (Virginia); A.M., 1950 (Emory)
- *ROBERT ARMSTRONG PRATT, Ph.D., *Professor of English*
A.B., 1929, Ph.D., 1933 (Yale)
- CARLETON ESTEY PRESTON, Ph.D., *Professor of Education, Emeritus*
A.B., 1899, A.M., 1900, Ph.D., 1902 (Harvard)
- CLINTON R. PREWETT, Ph.D., *Instructor in Education*
B.S., 1943 (Georgia); M.A., 1948 (Oklahoma); Ph.D., 1950 (North Carolina)
- DANIEL O'HAVER PRICE, Ph.D., *Associate Professor of Sociology and
Research Associate in the Institute for Research in Social Science*
B.S., 1939 (Florida Southern); A.M., 1942, Ph.D., 1948 (North Carolina)
- RUTH I. PRICE, M.S., *Assistant Professor of Physical Education*
B.S., 1926 (Columbia); M.S., 1936 (Southern California)
- JAMES ROY PRINCE, A.M., *Part-time Instructor in French*
A.B., 1931 (South Carolina); A.M., 1938 (North Carolina)
- †WILLIAM MEADE PRINCE, *Lecturer in Art*
- PERCY HALL QUINLAN, B.P.E., *Instructor in Physical Education*
B.P.E., 1919 (Springfield College)
- WALTER WAGNER RABB, A.M., *Assistant Professor of Physical Educa-
tion*
B.S., 1937 (North Carolina State); A.M. in Educ., 1941 (North Carolina)
- ALBERT ERNEST RADFORD, Ph.D., *Assistant Professor of Botany*
B.S., 1939 (Furman); Ph.D., 1948 (North Carolina)
- GEORGE JOHN RADMAN, A.M., *Instructor in Physical Education and
Assistant Football Coach*
A.B., 1940, A.M., 1947 (North Carolina)
- ANGUS C. RANDOLPH, A.B., M.D., *Psychiatric Consultant*
A.B., 1936 (Princeton); M.D., 1940 (Virginia)
- RICHARD BEVERLY RANEY, A.B., M.D., *Lecturer in Orthopedic Surgery*
A.B., 1926 (North Carolina); M.D., 1930 (Harvard)
- MURPHY DALE RANSON, S.B.Comm., *Instructor in Physical Education*
S.B. Commerce, 1924 (North Carolina)
- JEAN INGRAM REBENTISCH, R.N., M.A., *Associate Professor of Maternal
and Child Health*
R.N., 1927 (Methodist Hospital School of Nursing, Brooklyn); B.S., 1940, M.A.,
1943 (Teachers College, Columbia)

*Beginning, September 1, 1951.

†Absent on leave.

- JESSIE REHDER, M.A., *Instructor in English*
A.B., 1929 (Randolph-Macon); M.A., 1931 (Columbia)
- HERBERT WILLIAM REICHERT, Ph.D., *Assistant Professor of German*
B.A., 1938, M.A., 1940 (Columbia); Ph.D., 1942 (Illinois)
- ISAAC NEWTON REYNOLDS, B.S., *Part-time Instructor in Accounting*
B.S., 1948 (East Carolina Teachers College)
- OSCAR KNEFLER RICE, Ph.D., *Professor of Chemistry*
B.S., 1924, Ph.D., 1926 (California)
- WILLIAM PERRY RICHARDSON, A.B., M.D., M.P.H., *Research Professor of Public Health Administration*
A.B., 1926 (Wake Forest); M.D., 1928 (Medical College of Virginia); M.P.H., 1933 (Johns Hopkins)
- CHANDLER H. RIGDON, *Master Sergeant, United States Air Force, Instructor in Air Science and Tactics*
- JOHN ROBERT RILEY, A.B., *Associate Professor of Journalism*
A.B., 1933 (North Carolina)
- WILLIAM WILLIS RITTER, JR., S.B., A.B., *Part-time Instructor in Spanish*
S.B., 1946, A.B., 1948 (North Carolina)
- HERBERT ELLIS ROBBINS, Ph.D., *Professor of Mathematical Statistics*
A.B., 1935, A.M., 1936, Ph.D., 1938 (Harvard)
- NELLIE ROBERSON, B.S., A.B., *Library Extension Librarian*
B.S., 1902 (Richmond Woman's College); A.B., 1921 (North Carolina)
- EDWARD D. ROBERTSON, *Captain, United States Air Force, Assistant Professor of Air Science and Tactics*
- CHARLES BASKERVILL ROBSON, Ph.D., *Professor of Political Science*
A.B., 1919 (Davidson); A.M., 1924 (Princeton); Ph.D., 1930 (North Carolina)
- *WILLIAM ALEXANDER ROBSON, Ph.D., LL.M., *Burton Craige Visiting Professor of Jurisprudence*
B.S., 1922, Ph.D., 1924, LL.M., 1928 (London)
- ARTHUR ROE, Ph.D., *Professor of Chemistry*
B.A., 1933 (Oberlin); M.A., 1935 (Colorado College); Ph.D., 1938 (Northwestern)
- EUGENE WOODROW ROELOFS, Ph.D., *Associate Professor in the Institute of Fisheries Research*
B.S., 1936, M.S., 1938, Ph.D., 1941 (Michigan State)
- ROBERT PRESTON ROGERS, A.B., *Part-time Instructor in English*
A.B., 1948 (Vanderbilt)
- MICHAEL Z. RONMAN, Ed.M., *Instructor in Physical Education*
B.S., 1935, Ed.M., 1938 (Pennsylvania State)
- IRA WINFIELD ROSE, Ph.G., *Professor of Practical Pharmacy*
Ph.G., 1906 (North Carolina)
- NATHAN ROSEN, Sc.D., *Professor of Physics*
S.B., 1929, S.M., 1930, Sc.D., 1932 (Massachusetts Institute of Technology)

*Winter quarter, 1951.

- HERBERT ROSENSTOCK, S.M., *Part-time Instructor in Physics*
B.S., 1944 (Clemson); S.M., 1950 (North Carolina)
- WILLIAM EVERETT ROSENSTENGEL, Ph.D., *Professor of Education*
B.S. in Ed., 1923 (Northeast Missouri State Teachers College); A.M., 1927, Ph.D., 1931 (Missouri)
- ROBERT ALEXANDER ROSS, S.B., M.D., *Lecturer in Obstetrics*
S.B., 1920 (North Carolina); M.D., 1922 (Pennsylvania)
- PHIFER PAUL ROTHMAN, A.B., *Part-time Instructor in Spanish*
A.B., 1948 (North Carolina)
- SAMARENDRA NATH ROY, M.Sc., *Professor of Mathematical Statistics*
B.Sc., 1928, M.Sc., 1931 (Calcutta)
- CHARLES EVERETT RUSH, A.B., B.L.S., A.M., *Professor of Library Science, Director of Libraries, and Chairman of the Library Division*
A.B., 1905 (Earlham College); B.L.S., 1908 (New York State Library School); Hon. A.M. (Yale)
- BILLY MAURICE RUSSELL, A.B., *Instructor in Spanish*
A.B., 1948 (Birmingham-Southern)
- CHARLES PHILLIPS RUSSELL, A.B., *Professor of Journalism*
A.B., 1904 (North Carolina)
- HARRY KITSUN RUSSELL, Ph.D., *Professor of English*
A.B., 1923 (Davidson); A.M., 1928, Ph.D., 1931 (North Carolina)
- JOHN MORRIS RYAN, B.S., A.M., *Part-time Instructor in Economics*
B.S., 1949 (Georgia Institute of Technology); A.M., 1950 (North Carolina)
- *WILL CARSON RYAN, Ph.D., Ed.D., LL.D., *Kenan Professor of Education*
A.B., 1907 (Harvard); Ph.D., Ed.D., 1918, LL.D. (George Washington)
- ALTON GUY SADLER, M.S., C.P.A., *Associate Professor of Accounting*
A.B., 1930 (Duke); M.S., 1937 (North Carolina); C.P.A. (State of Georgia)
- *WILEY BRITTON SANDERS, Ph.D., *Professor of Sociology*
A.B., 1919, A.M., 1920 (Emory); A.M., 1921 (North Carolina); Ph.D., 1929 (Chicago)
- WILLINDA SAVAGE, Ed.D., *Assistant Professor of Education*
B.S., 1934, M.A., 1939 (Virginia); Ed.D., 1950 (Michigan)
- EVERETT WALTER SCHADT, M.A., *Part-time Instructor in Economics*
B.B.A., 1932 (Boston); M.A., 1936 (Texas)
- HOWARD JOHN SCHAEFFER, B.S. in Phar., *Part-time Instructor in Pharmacy*
B.S. in Phar., 1950 (Buffalo)
- GENEVIEVE YOST SCHEER, A.B., B.S. in L.S., *Serials Librarian*
A.B., 1928 (Missouri); B.S. in L.S., 1936 (Columbia)
- ROBERT SCHENKKAN, A.M., *Assistant Professor of Radio*
A.B., 1941 (Virginia); A.M., 1946 (North Carolina)

*Absent on leave, fall quarter, 1950.

- HERMAN MAX SCHIEBEL, A.B., M.D., *Lecturer in Surgery*
M.D., 1933 (Johns Hopkins)
- JAN PHILIP SCHINHAN, Ph.D., *Professor of Music*
A.B., 1931, M.A., 1933 (California); Ph.D., 1937 (Vienna)
- HANS SCHMIDT, B.S., *Part-time Instructor in Psychology*
B.S., 1949 (Northwestern)
- JAMES BERT SCHOLES, A.M., *Part-time Instructor in English*
A.B., 1942 (Middlebury); A.M., 1949 (Kansas)
- GUSTAV THEODOR SCHWENNING, Ph.D., *Professor of Business Administration*
B.H., 1920 (Springfield); M.A., 1921, Ph.D., 1925 (Clark)
- THOMAS ELISHA SCOTT, JR., A.M., *Instructor in French and Spanish*
A.B., 1937 (Emory); A.M., 1938 (North Carolina)
- TOM SCOTT, M.A., *Head Basketball Coach*
B.S., 1930 (Kansas State Teachers College); M.A., 1937 (Iowa)
- ROSS SCROGGS, B.S., *Director of Still Photography, Communication Center, and Instructor in Physics*
B.S., 1942 (North Carolina)
- HUGH NELSON SEAY, JR., B.A., *Part-time Instructor in Spanish*
B.A., 1949 (Randolph-Macon)
- STUART WILSON SECHRIEST, A.B., *Associate Professor of Journalism*
A.B., 1935 (North Carolina)
- MARGARET BUTLER SEELBINDER, A.M., *Part-time Instructor in Mathematics*
A.B., 1946 (Randolph-Macon Woman's College); A.M., 1950 (North Carolina)
- SAMUEL SELDEN, A.B., *Professor of Dramatic Art and Director of The Carolina Playmakers*
A.B., 1922 (Yale)
- FRED SEMENIUK, Ph.D., *Associate Professor of Pharmaceutical Chemistry*
B.Sc., 1939 (Alberta); Ph.D., 1947 (Purdue)
- LAWRENCE ALBRIGHT SHARPE, A.B., *Part-time Instructor in Spanish*
A.B., 1940 (North Carolina)
- ROBERT BOIES SHARPE, Ph.D., *Professor of English*
A.B., 1918 (Wesleyan); M.A., 1923 (Wisconsin); Ph.D., 1928 (Yale)
- PAUL EDMONDSON SHEARIN, Ph.D., *Professor of Physics*
A.B. in Educ., 1929, A.M., 1930 (North Carolina); Ph.D., 1934 (Ohio State)
- FREDERICK CARLYLE SHEPARD, Ph.D., *Adviser to Veterans and Adviser in the General College*
A.B., 1921, A.M., 1926, Ph.D., 1938 (North Carolina)
- GEORGE EDWARD SHEPARD, Ed.D., *Professor of Physical Education*
S.B., 1929 (North Carolina); M.A., 1940, Ed.D., 1948 (Columbia)

- CECIL GEORGE SHEPS, M.D., M.P.H., *Associate Professor of Public Health Administration and Research Associate in the Institute for Research in Social Science*
M.D., 1936 (Manitoba); M.P.H., 1947 (Yale)
- MINDEL CHERNIACK SHEPS, M.D., M.P.H., *Lecturer in Medical Information*
M.D., 1936 (Manitoba); M.P.H., 1950 (North Carolina)
- BASIL LAMAR SHERRILL, A.B., J.D., *Assistant Research Professor in Public Law and Government*
A.B., 1947, J.D., 1950 (North Carolina)
- CLAUDE C. SHOTTS, B.S. in E.E., B.D., *General Secretary, Y.M.C.A.*
B.S. in E.E., 1922 (Alabama); B.D., 1925 (Yale)
- GEORGE L. SIMPSON, JR., A.M., *Part-time Instructor in Sociology and Research Fellow in the Institute for Research in Social Science*
A.B., 1941, A.M., 1944 (North Carolina)
- *JOSEPH CARLYLE SITTERSON, Ph.D., *Professor of History*
A.B., 1931, A.M., 1932, Ph.D., 1937 (North Carolina)
- EARL ANDERSON SLOCUM, M.M., *Professor of Music*
B.Mus., 1931, M.M., 1936 (Michigan)
- IRENE SMART, *Instructor in Dramatic Art*
- HARRY SMITH, JR., M.A., *Part-time Instructor in Mathematics*
B.A., 1943, M.A., 1948 (Delaware)
- CARL GREY SNAVELY, M.A., *Head Coach of Football*
A.B., 1915 (Lebanon Valley College); M.A., 1933 (Bucknell)
- CLEMENS SOMMER, Ph.D., *Professor of the History of Art*
Ph.D., 1919 (Freiburg)
- DANIEL CREIGHTON SOSSOMON, A.M., *Instructor in Social Science*
A.B., 1942, A.M., 1948 (North Carolina)
- WALTER SPEARMAN, A.M., *Professor of Journalism*
A.B., 1929, A.M., 1937 (North Carolina)
- FRED FRANK SPRINGER-MILLER, A.B., *Instructor in German*
A.B., 1949 (Dartmouth)
- CORYDON PERRY SPRUILL, A.B., B.Litt. (Oxon.), *Professor of Economics and Dean of the General College*
A.B., 1920 (North Carolina); B.Litt., 1922 (Oxford)
- HERMAN HENRY STAAB, M.A., *Associate Professor of Romance Languages, Emeritus*
B.A., M.A., 1912 (University of the South)
- MRS. MARVIN HENDRIX STACY, *Dean of Women, Emeritus*
Graduate, 1907 (N. C. State Normal and Industrial College)
- ROBERT LEE STALLINGS, JR., S.M., *Associate Professor of Accounting*
B.S., 1938 (North Carolina State); S.M., 1947 (North Carolina)

* Absent on leave, fall quarter, 1950.

- *THOMAS MELVILLE STANBACK, JR., M.B.A., *Assistant Professor of Business Administration*
S.B., 1940 (North Carolina); M.B.A., 1942 (Harvard)
- LOIS FOOTE STANFORD, M.D., *Instructor in Medicine*
M.D., 1921 (Pennsylvania)
- WILLIAM RANEY STANFORD, A.B., M.D., *Instructor in Medicine*
A.B., 1915 (North Carolina); M.D., 1919 (Pennsylvania)
- DANIEL DEMPSEY STANLEY, A.B., *Part-time Instructor in Spanish*
A.B., 1949 (Georgia)
- JOHN MARCELLUS STEADMAN, III, Ph.D., *Assistant Professor of English*
A.B., 1940, M.A., 1941 (Emory); M.A., 1948, Ph.D., 1949 (Princeton)
- JOSEPH FLAKE STEELMAN, A.M., *Instructor in Social Science*
A.B., 1943, A.M., 1947 (North Carolina)
- MELVIN SANFORD STEINBERG, S.B., *Part-time Instructor in Physics*
S.B., 1949 (North Carolina)
- STERLING AUBREY STOUDEMIRE, Ph.D., *Professor of Spanish*
A.B., 1923, A.M., 1924, Ph.D., 1930 (North Carolina)
- FLOYD STOVALL, Ph.D., *Professor of English*
A.B., 1923, M.A., 1924, Ph.D., 1927 (Texas)
- JOSEPH WARD STRALEY, Ph.D., *Associate Professor of Physics*
B.S. in Ed., 1936 (Bowling Green State University); M.Sc., 1937, Ph.D., 1941 (Ohio State)
- WILLIAM RINGGOLD STRAUGHN, JR., M.S., *Assistant Professor of Bacteriology*
B.S., 1935 (Penn. State Teachers College); M.S., 1940 (Cornell)
- HAMMOND STRAYHORN, A.M., *Instructor in Physical Education*
S.B., 1938, A.M., 1949 (North Carolina)
- OTTO STUHLMAN, JR., Ph.D., *Professor of Physics*
B.A., 1907 (Cincinnati); M.A., 1909 (Illinois); Ph.D., 1911 (Princeton)
- HENRY TRACY STURCKEN, A.M., *Part-time Instructor in Spanish*
A.B., 1947 (College of Charleston [S. C.]); A.M., 1950 (North Carolina)
- CLIFFORD MAX STURDEVANT, D.D.S., *Associate Professor of Operative Dentistry*
D.D.S., 1943 (Emory)
- ROGER EDWARD STURDEVANT, D.D.S., *Professor of Operative Dentistry*
D.D.S., 1916 (Nebraska)
- JACK SUBERMAN, M.A., *Part-time Instructor in English*
A.B., 1946, M.A., 1947 (Florida)
- BENJAMIN ALBRITTON SUMMERLIN, JR., A.B., *Part-time Instructor in Spanish*
A.B., 1948 (North Carolina)

* Absent on leave, 1950-1951.

- ALBERT IRVING SUSKIN, Ph.D., *Associate Professor of Latin and Adviser in the College of Arts and Sciences*
A.B. in Educ., 1931, A.M., 1932, Ph.D., 1937 (North Carolina)
- WILLIAM OWEN SHEPPARD SUTHERLAND, JR., Ph.D., *Acting Instructor in English*
A.B., 1942, A.M., 1947, Ph.D., 1950 (North Carolina)
- BENJAMIN FRANKLIN SWALIN, Ph.D., *Professor of Music in Extension; Director, North Carolina Symphony Orchestra*
B.S., 1928, M.A., 1930 (Columbia); Ph.D., 1932 (Vienna); Diplomas, 1926, 1928 (Institute of Musical Art, New York City); Diplomas, 1932 (Hochschule für Musik, Vienna)
- MARGARET CATHERINE SWANTON, M.D., *Instructor in Pathology*
A.B., 1943 (North Carolina); M.D., 1946 (Johns Hopkins)
- ERNEST WILLIAM TALBERT, Ph.D., *Professor of English*
A.B., 1929 (San Jose State College); M.A., 1931, Ph.D., 1936 (Stanford)
- HENRY TAUBER, Ph.D., *Associate Professor of Experimental Medicine*
Ph.D., 1927 (Vienna)
- EUGENE E. TAYLOR, B.S., M.D., M.P.H., *Instructor in Public Health Administration*
B.S., 1942 (Idaho); M.D., 1945 (Washington University, St. Louis); M.P.H., 1950 (North Carolina)
- EUGENE FRANCIS TAYLOR, S.B., *Part-time Instructor in English*
S.B., 1948 (Fordham)
- GEORGE COFFIN TAYLOR, Ph.D., Litt.D., *Kenan Professor of English, Emeritus*
A.B., 1897 (South Carolina); A.M., 1899 (Harvard); Ph.D., 1906 (Chicago); Litt.D. (South Carolina)
- HARDEN FRANKLIN TAYLOR, A.B., Sc.D., *Consultant in the Institute of Fisheries Research*
A.B. (Trinity College); Sc.D. (Duke)
- JAMES ALEXANDER TAYLOR, A.B., M.D., *Instructor in Medicine and Assistant University Physician*
A.B., 1939 (North Carolina); M.D., 1943 (Harvard)
- DOROTHY TERRY, Ph.D., *Assistant Professor of Psychology*
A.B., 1943, A.M., 1945, Ph.D., 1950 (Wisconsin)
- JAMES D. THAYER, Ph.D., *Assistant Professor of Experimental Medicine*
B.S., 1929, M.S., 1931, Ph.D., 1936 (Washington)
- WILLIAM WAYT THOMAS, JR., A.B., *Instructor in Social Science*
A.B., 1947 (North Carolina)
- HERMAN ORA THOMPSON, Ph.D., *Associate Professor of Pharmacy*
S.B. in Phar., 1937 (North Carolina); M.S., 1940, Ph.D., 1944 (Purdue)
- MARY LINDSAY THORNTON, A.B., A.M., *Librarian, North Carolina Collection*
A.B., 1939, A.M., 1943 (North Carolina)

- JAMES STERLING TIPPETT, B.S., *Visiting Lecturer in Extension Teaching*
B.S., 1915 (Missouri)
- HAROLD L. TITUS, A.M., *Instructor in Russian*
A.B., 1940 (McGill); A.M., 1941 (Harvard)
- HENRY ROLAND TOTTEN, Ph.D., *Professor of Botany*
A.B., 1913, A.M., 1914, Ph.D., 1923 (North Carolina)
- PEDRO NICHOLAS TRAKAS, M.A., *Part-time Instructor in Spanish*
A.B., 1944 (Wofford); M.A., 1945 (Mexico)
- HENRY WILLIS TRAUB, A.B., *Part-time Instructor in Latin*
A.B., 1950 (Duke)
- RALPH MCCOY TRIMBLE, C.E., S.M., *Professor of Applied Mathematics*
C.E., 1921 (Virginia); S.M., 1927 (North Carolina)
- EUNICE NICKERSON TYLER, Ph.D., *Associate Professor of Public Health Education*
Ph.B., 1931 (Brown); M.P.H., 1936, Ph.D., 1946 (Yale)
- SHEPPARD YOUNG TYREE, JR., Ph.D., *Associate Professor of Chemistry*
B.S., 1942, Ph.D., 1946 (Massachusetts Institute of Technology)
- BERTHOLD LOUIS ULLMAN, Ph.D., *Kenan Professor of the Classical Languages and Literatures*
A.B., 1903, Ph.D., 1908 (Chicago)
- RUPERT BAYLESS VANCE, Ph.D., LL.D., *Kenan Professor of Sociology and Research Professor in the Institute for Research in Social Science*
A.B., 1920 (Henderson-Brown); A.M., 1921 (Vanderbilt); Ph.D., 1928 (North Carolina); LL.D. (Hendrix College)
- CHARLES DURWARD VAN CLEAVE, Ph.D., *Associate Professor of Anatomy*
A.B., 1925 (Colorado); Ph.D., 1928 (Chicago)
- HAROLD P. VAN COTT, A.B., *Part-time Instructor in Psychology*
A.B., 1948 (Rochester)
- MAURICE TAYLOR VAN HECKE, Ph.B., J.D., *Professor of Law*
Ph.B., 1916, J.D., 1917 (Chicago)
- WALTER WEDDLE VAUGHAN, A.B., M.D., *Lecturer in Radiographic Anatomy*
A.B., 1929 (North Carolina); M.D., 1933 (Jefferson Medical College)
- ROBERT Z. VAUSE, JR., M.A., *Part-time Instructor in Mathematics*
B.S., 1943 (South Carolina); M.A., 1947 (Duke)
- GUELDA ELLIOTT VON BECKERATH, A.B., *Business Administration Librarian*
A.B., 1943 (North Carolina)
- ELAINE VON OESSEN, B.A., A.B. in L.S., *Instructor in Library Science*
B.A., 1938 (Lenoir-Rhyne); A.B. in L.S., 1940 (North Carolina)

- ROGERS COLUMBUS WADE, S.B., *Part-time Lecturer in Accounting*
S.B., 1929 (North Carolina)
- PAUL WOODFORD WAGER, Ph.D., *Professor of Political Science and Research Professor in the Institute for Research in Social Science*
B.S., 1917 (Hobart College); A.M., 1920 (Haverford); Ph.D., 1927 (North Carolina)
- JAMES HATTON WAHAB, A.M., *Part-time Instructor in Mathematics*
B.S., 1940 (William and Mary); A.M., 1950 (North Carolina)
- JAMES R. WALKER, A.B., *Major, United States Air Force, Assistant Professor of Air Science and Tactics*
A.B., 1948 (Washburn Municipal University)
- PHILIP A. WALKER, A.M., *Instructor in Social Science*
A.B., 1940 (North Carolina); A.M., 1942 (Emory)
- THOMAS EDWARD WALKER, A.M., *Part-time Instructor in English*
S.B. in Ed., 1948, A.M., 1949 (Missouri)
- REBEKAH HUGGINS WALSTON, A.B., *Instructor in Art*
A.B., 1950 (North Carolina)
- CHARLES ROBERT WALTER, JR., Ph.D., *Assistant Professor of Chemistry*
B.A., 1943, Ph.D., 1949 (Virginia)
- *DON H. WALTHER, Ph.D., *Assistant Professor of Spanish and Portuguese*
A.B., 1938 (Miami University); A.M., 1940, Ph.D., 1948 (North Carolina)
- FREDERICK HENRY WEAVER, A.M., *Dean of Students*
A.B., 1937 (North Carolina); A.M., 1950 (Harvard)
- ALEXANDER WEBB, JR., A.B., M.D., *Lecturer in Surgical Anatomy*
A.B., 1933 (North Carolina); M.D., 1937 (Harvard)
- JAMES MURRAY WEBB, A.B., M.C.P., *Associate Professor of Planning*
A.B. in Architecture, 1937 (California); M.C.P., 1946 (Massachusetts Institute of Technology)
- WILLIAM SMITH WELLS, Ph.D., *Professor of English and Dean of the College of Arts and Sciences*
A.B., 1929, A.M., 1930 (Southern California); Ph.D., 1935 (Stanford)
- ROBERT HASLEY WETTACH, M.A., LL.B., S.J.D., *Professor of Law*
A.B., 1913, M.A., 1914, LL.B., 1917 (Pittsburgh); S.J.D., 1921 (Harvard)
- THOMAS VAN HORN WHEELER, A.M., *Part-time Instructor in English*
A.B., 1948 (Maryville); A.M., 1950 (Tennessee)
- RICHARD ARNOLD WHITE, *Instructor in Physical Education*
- WILLIAM ALEXANDER WHITE, Ph.D., *Associate Professor of Geology*
A.B., 1930 (Duke); A.M., 1931, Ph.D., 1938 (North Carolina); M.S., 1934 (Montana School of Mines)
- ARTHUR MURRAY WHITEHILL, JR., Ph.D., *Assistant Professor of Economics*
B.S., 1942, M.A., 1943, Ph.D., 1945 (Virginia)

*Absent on leave, winter and spring quarters, 1951.

- MAURICE WHITTINGHILL, Ph.D., *Associate Professor of Zoology*
A.B., 1931 (Dartmouth); Ph.D., 1937 (Michigan)
- WILLIAM M. WHYBURN, Ph.D., LL.D., *Kenan Professor of Mathematics*
A.B., 1922, M.A., 1923, Ph.D., 1927 (Texas); LL.D. (Texas Technological College)
- WILLIAM LEON WILEY, Ph.D., *Professor of French*
A.B., 1921 (Chattanooga); A.M., 1925, Ph.D., 1930 (Harvard)
- LENA MAE WILLIAMS, A.B., A.M., S.B. in L.S., *Order Librarian*
A.B., 1930, A.M., 1931, S.B. in L.S., 1944 (North Carolina)
- JOHN E. WILSON, Ph.D., *Assistant Professor of Biological Chemistry and Nutrition*
S.B., 1941 (Chicago); M.S., 1944 (Illinois); Ph.D., 1948 (Cornell)
- LOUIS ROUND WILSON, Ph.D., Litt.D., LL.D., L.H.D., *Professor of Library Science and Administration*
A.B., 1899, A.M., 1902, Ph.D., 1905 (North Carolina); Litt.D. (Denver); LL.D. (Haverford, North Carolina); L.H.D. (Catawba)
- REX SHELTON WINSLOW, Ph.D., *Professor of Economics and Director, Bureau of Business Services and Research, School of Business Administration*
A.B., 1923 (Simpson College); A.M., 1929 (Illinois); Ph.D., 1936 (North Carolina)
- ARTHUR SIMEON WINSOR, Ph.D., *Professor of Mathematics*
A.B., 1914, A.M., 1915 (Mount Allison College); Ph.D., 1927 (Johns Hopkins)
- THEODORE FREDERICK PAUL WISCHKAEMPER, M.S., *Part-time Instructor in Economics*
B.S., 1943, M.S., 1947 (A. and M. College of Texas)
- HARRY DEMERLE WOLF, Ph.D., *Professor of Economics*
B.S., 1922 (Kansas State Teachers College); A.M., 1923, Ph.D., 1926 (Chicago)
- IRVIN S. WOLF, Ph.D., *Associate Professor of Psychology*
A.B., 1937 (Manchester College); M.A., 1939, Ph.D., 1948 (Indiana)
- ROBERT EARL WOLVERTON, A.M., *Part-time Instructor in Latin*
A.B., 1948 (Hanover); A.M., 1949 (Michigan)
- EDWARD JAMES WOODHOUSE, B.A., LL.B., *Professor of Political Science*
B.A., 1903 (Randolph-Macon); LL.B., 1907 (Virginia)
- GEORGE MILTON WOODWARD, M.A., *Lecturer in Economics*
A.B., 1932, M.A., 1933 (Vanderbilt)
- JOHN BROOKS WOOSLEY, Ph.D., *Kenan Professor of Finance*
A.B., 1912 (Guilford College); A.B., 1913, A.M., 1914 (Haverford); Ph.D., 1931 (Chicago)
- JOHN JOSEPH WRIGHT, A.B., M.D., M.P.H., *Professor of Public Health Administration*
A.B., 1931, M.D., 1935 (Vanderbilt); M.P.H., 1939 (Johns Hopkins)

- EARL WYNN, M.S., *Professor of Radio and Communication and Director of the Communication Center*
A.B., 1932 (Augustana College); M.S., 1934 (Northwestern)
- FRANCES LYDIA YOCOM, A.B., B.L.S., M.A. in L.S., *Catalogue Librarian*
A.B., 1921 (Oberlin); B.L.S., 1931 (Western Reserve); M.A. in L.S., 1939 (California)
- DAVID ALEXANDER YOUNG, A.B., M.D., *Lecturer in Psychiatry*
A.B., 1928 (North Carolina); M.D., 1931 (Harvard)
- JOHN E. YOUNG, A.B., *Instructor in Radio*
A.B., 1948 (North Carolina)
- JOHN WILLIAM ZARKER, A.B., *Part-time Instructor in Latin*
A.B., 1950 (Franklin and Marshall)

GRADUATE APPOINTMENTS, 1950-1951

Teaching Fellows

*EDMUND BERKELEY, M.S.....	Botany
†SUSAN WOODSON BOWEN, B.S.....	Chemistry
WILLIAM BURLIE BROWN, M.A.....	History
LEONARD PATTILLO BURTON, M.A.....	Mathematics
ALLEN HARRIS CHAPPEL, B.A.....	German
†SCOTT JULIUS CHILDRESS, B.S.....	Chemistry
HERBERT JOSEPH DOHERTY, JR., M.A.....	History
LOUIS EDGAR DOLLARHIDE, M.A.....	English
CHARLES ELMO FERGUSON, A.B.....	Economics and Business Administration
WINFRED LAMAR GODWIN, A.M.....	Sociology
EMILIE VIRGINIA HAYNESWORTH, M.A.....	Mathematics
MABEL LUCILLE HENRY, A.B.....	Romance Languages
RICHARD LEE HOUGH, M.A.....	Political Science
GLENN WALTON HUDSON, A.B.....	Romance Languages
JAMES EDWARD KUPPERIAN, M.S.....	Physics
EDWARD CHARLES LEONARD, JR., S.B.....	Chemistry
FRANK HARPER MOORE, A.M.....	English
ANNA LYDIA MOTTO, M.A.....	Classics
WILLIAM PAPANESTOR, A.B.....	Psychology
WILLIAM MOORE PETERSON, A.M.....	English
MERTON EUGENE SIMONS, M.S.....	Geology
STANLEY ALBERT SIMPSON, A.B.....	History
WALTER ALLEN SPIVEY, A.B.....	Economics and Business Administration

*For explanation of symbols, see p. 67.

MARIAN MINTURN WALTER, A.B.....	Romance Languages
VIRGIL SCOTT WARD, M.Ed.....	Education
MELDRUM BARNETT WINSTEAD, JR., A.M.....	Chemistry
§RAYMOND LOUIS WYATT, B.S.....	Botany
LILLIAN MARGOT YOUNGS, B.A.....	Zoology

Graduate Assistants

JOHN WINFRID AGER, A.B.....	Chemistry
BERNARD JOSEPH ALLEY, B.S.....	Chemistry
ROY HORTON BAILEY, S.B.....	Chemistry
†HENRY CHRISTOPHER BANNON, M.S.....	Music
JAMES RALPH BARNWELL, B.S.....	Physical Education
†LOIS ELIZABETH BARR, M.A.....	English
MIRIAM MARSH BARTEAUX, M.S.....	Botany
FRANK BARTLETT, JR., B.M.....	Music
§BARBARA LOUISE BENNETT, A.M.....	English
COLLINS BENNETT, B.S.....	Physical Education
EDWARD BERNASEK, B.S.....	Chemistry
MELVIN BERNSTEIN, M.M.....	Music
GEORGE LEE BIRELINE, JR., B.F.A.....	Art
DONALD ROBERT BORING, B.S.....	Physical Education
JACQUELEENE BOWEN, B.S.....	Chemistry
AVA JEAN BRANCH, A.B.....	English
EDWARD ALBERT BRYANT, A.B.....	Art
TANNYE OLIVIA BURNETT, B.S.....	Physical Education
§MARK BURNHAM, A.M.....	Physical Education
WILLIAM PINCKNEY CAVIN, M.A.....	Chemistry
EDITH CHEN, A.M.....	Psychology
JOHN LESTER CLEMENTS, A.B.....	Physical Education
JACK REED COLLIER, M.S.....	Zoology
SARAH WINIFRED COMPTON, B.S.....	Botany
RICHARD GARNER COX, A.B.....	Music
DORIS LEE CRAIG, B.A.....	Chemistry
CRAYTON McCANTS CRAWFORD, B.S.....	Chemistry
*BETTIE MEADE CREIGHTON, A.B.....	Art
FRETWELL GOER CRIDER, B.S.....	Chemistry
RICHARD ERNEST DAHLBERG, A.A.....	Geology
§JAMES EARL DANIELEY, A.M.....	Chemistry
JAMES TALMAGE DOBBINS, JR., B.S.....	Chemistry
DON FEHRING DRIGGS, M.A.....	Education
CHESTER OSCAR ENSIGN, JR., S.B.....	Geology

ROY JACKSON FAHL, B.S.....	Chemistry
EDWARD CLEMENT FITZPATRICK, JR., B.A.....	Dramatic Art
JOSEPH BURTON FINLAY, A.M.....	Chemistry
ANN BLOCKER FLEMING, A.B.....	Classics
FABIUS HAYWOOD FOWLE, S.B.....	Physical Education
THOMAS CECIL FRAZIER, A.B.....	Chemistry
EFRIM FRUCHTMAN, B.S.....	Music
ANN COFFIN GARSON, B.F.A.....	Art
VERNON RUSSELL GEYER, S.B.....	Geology
*AUGUSTUS WASHINGTON GRAHAM, S.B.....	Chemistry
JACK RAYMOND GRAHAM, A.B.....	Chemistry
OSCAR WILMONT GUPTON, A.B.....	Physical Education
JOSEPH WALTER GURTIS, JR., A.B.....	Physical Education
ROGER THACKSTON GUTHRIE, B.S.....	Chemistry
JAMES EDWARD HAAR, A.B.....	Music
HOMER ARTHUR HARTUNG, B.A.....	Chemistry
CHARLES LEROY HENRY, M.S.....	Chemistry
GEORGE WASHINGTON HOLMES, III, M.A.....	Education
GERALD LEON HONAKER, A.B.....	Dramatic Art
GAYLOR EUGENE HOOKS, B.S.....	Physical Education
WILLIAM GARY HOOKS, S.B.....	Geology
DORIS MCCHESENEY HOWELL, M.S.....	Geology
KENNETH L. HOY, S.B.....	Pharmacy
JAMES KNIGHT HUMMER, M.S.....	Chemistry
WILLIAM STRONG HUMMERS, JR., B.S.....	Chemistry
SAMUEL KENNETH JACKSON, A.B.....	Chemistry
WILLIAM BOWMAN JEFFRIES, B.S.....	Zoology
JAMES MURRAY JENNINGS, B.A.....	Geology
RICHARD HEEZIN JOHNS, S.B.....	Chemistry
ROBERT MARVIN JOHNS, B.S.....	Botany
SIDNEY PICKETTIE JOHNSON, B.S.....	Botany
CHARLES ALFRED KELLOGG, B.A.....	Dramatic Art
WILLARD EUGENE KENNEY, B.S.....	Physical Education
JOHN VINCENT KILLHEFFER, B.S.....	Chemistry
*ROBERT FRANCIS KING, M.M.....	Music
WILLIAM FREDERICK LITTLE, A.B.....	Chemistry
VIRGINIA ANNE LYNCH, A.B.....	Music
GEORGE WILLIAM MCKINNEY, A.B.....	Dramatic Art
MARY CARLISLE McMASTER, A.B.....	Zoology
ARNOLD LAWRENCE McPETERS, S.B.....	Chemistry
WILLIAM FREDERICK MARKGRAF, S.B.....	Geology

WILLIAM CONNIE MATHIS, S.B.	Chemistry
EUGENE JULIUS MEZEY, B.S.	Chemistry
ALAN CONINGSBY MOORE, B.S.	Physical Education
ROBERT VERNON MOORE, A.M.	Chemistry
EMMETT JEFFERSON MURPHY, M.A.	Sociology
THOMAS JACKSON NICHOLS, B.M.	Music
DAN NYIMICZ, A.B.	Physical Education
GEORGE MCKEE OTTO, B.F.A.	Music
CHARLES STUART PATTERSON, B.S.	Chemistry
JAMES EDWARD PAYNE, B.A.	Geology
ROLAND JOSEPH PELLEGRIN, M.A.	Sociology
WILLIAM KORNEGAY PERRY, B.A.	Physical Education
MILLER HARRELL PETERSON, B.S.	Chemistry
HENRY EARLY PHELPS, S.B.	Bacteriology
WILFRED THOMAS PLANT, JR., B.S.	Physical Education
MAURICE CARY POWERS, A.B.	Geology
†MARTHA ELLEN QUERY, A.B.	Psychology
LOUIS DUBOSE QUIN, A.M.	Chemistry
JOHN ALEXANDER REA, B.A.	English
JOHN HERMAN RECKNAGEL, JR., B.S.	Geology
JOE ANTHONY ROMANO, A.B.	Physical Education
JAMES EARL SANSING, B.S.	Chemistry
ROBERT BERNARD SELIGMAN, S.B.	Chemistry
JAN SHORE, A.B.	History
JAMES POTTS SIFFORD, B.S.	Physical Education
NORMA SUE SLIGH, A.B.	Zoology
CHARLES WELSTEAD SMITH, M.S.	Zoology
ERNEST MARSHALL SMITH, JR., A.B.	Geology
PAUL NOBLE SOMERVILLE, B.S.	Mathematical Statistics
SALLY SOUTHERLAND, A.M.	Physical Education
EMILY MILDRED STACY, A.B.	Botany
JOHN ISRAEL STEVENS, A.B.	Chemistry
SARA GATLIN STEWART, B.A.	Dramatic Art
ERVIN JOHN STRAUB, B.S.	Physical Education
JOSEPH BRADLEY STROUP, A.B.	English
HAMILTON BENTON TATUM, B.S.	Chemistry
CLARK R. TAYLOR	Physical Education
†JAY MERRIMON THOMAS, B.S.	Psychology
MARKS PURRINGTON UNDERWOOD, B.S.	Chemistry
PAUL THOMAS VON BRAMER, S.B.	Chemistry
ROLLIN HERBERT WALICK, A.B.	Chemistry

*RICHARD ROBERT WATTS, B.S.....	Botany
ROBERT LAMAR WEAVER, M.A.....	Music
ROBERT WICKHAM WHETSTONE, M.A.....	Education
MILBURN JUDSON WHITE, M.A.....	Education
NATHANIEL STELL WHITE, JR., A.B.....	Dramatic Art
WILLIAM LEE WILEY, A.B.....	Chemistry
ROBERT FRANKLIN WILLIARD, B.S.....	Zoology
EDITH WINSLOW, B.A.....	English
BURRELL L. WOOD, JR., M.S.....	Chemistry
*RAYMOND LOUIS WYATT, B.S.....	Botany

Research Assistants

§MARY EDNA ANDERS, A.M., Institute for Research in Social Science
GEORGE WALTER BAKER, A.M., Institute for Research in Social Science
§ERNEST ALFRED THOMSON BARTH, B.S., Institute for Research in Social Science
BRUCE JESSE BIDDLE, B.A., Institute for Research in Social Science
ROBERT OSCAR BLOOD, JR., A.B., B.D., Institute for Research in Social Science
†RUTH MATHILDE CONNOR, M.S., Institute for Research in Social Science
ALFRED MAXEY DENTON, JR., B.S., Institute for Research in Social Science
MEYER DWASS, M.A., Mathematical Statistics
EDGAR HOWARD ELAM, JR., B.A., Institute for Research in Social Science
JOHN KENNETH FOLGER, A.M., Institute for Research in Social Science
ROBERT LOUIS GOLBY, A.B., Biological Chemistry
E. KATHLEEN GOLDIE-SMITH, M.S., Botany
JOHN CHARLES GOULD, A.B., Institute for Research in Social Science
CHARLES MEADE GRIGG, A.M., Institute for Research in Social Science
¶NORRIS G. GRUBB, A.B., Institute for Research in Social Science
GLADYS ANN HOLDEN, B.S., Institute for Research in Social Science
WILLIAM KELVEY HUBBELL, A.B., Institute for Research in Social Science
GUY BENTON JOHNSON, JR., A.B., Institute for Research in Social Science
NORBERT LAWRENCE KELLY, M.A., Institute for Research in Social Science

WALLACE EARL LAMBERT, M.A., Institute for Research in Social Science

ERNEST LEWIS, JR., B.A., Institute for Research in Social Science

†SAMUEL EDWIN LOFTIN, B.S., Institute for Research in Social Science

WELTON JOHN McDONALD, M.A., Institute for Research in Social Science

RAYMOND WRIGHT MACK, A.B., Institute for Research in Social Science

HARRY WILLIAM MARTIN, M.A., Institute for Research in Social Science

JAMES JOSEPH MASLOWSKI, B.A., Institute for Research in Social Science

LEONARD MATIN, B.A., Institute for Research in Social Science

DOROTHY MAE MULBERRY, B.S., Romance Languages

§SIEGFRIED HENRY RIES, M.Ph., Institute for Research in Social Science

EDWARD MARVIN STEEL, JR., A.M., Institute for Research in Social Science

†MARJORIE LEE TALLANT, A.B., Institute for Research in Social Science

EVERETT PALMER TRUEX, A.M., Economics

SEWARD WEBER, A.B., Institute for Research in Social Science

ROBERT SMITH WEYNAND, B.S., Institute for Research in Social Science

CLAUDINE GIBSON WIRTHS, M.S., Institute for Research in Social Science

THEODORE WILLIAM WIRTHS, M.A., Institute for Research in Social Science

Research Fellows

HORACE ADAMS, JR., A.B., DuPont Postgraduate Fellow in Chemistry

§FREDERICK L. BATES, A.B., Institute for Research in Social Science

SUDHISH GOVIND GHURYE, M.S., General Education Board Fellow in Mathematical Statistics

FRANK LEONARD HENDRIX, M.S., Ernest H. Abernethy Fellow in Southern Industry

CHARLES ALFRED HOWE, A.M., Merrell Fellow in Chemistry

VINTON ASBURY HOYLE, JR., A.B., Ledoux Fellow in Chemistry

FRANKLIN WARD JAMES, B.S., Tennessee Eastman Fellow in Chemistry

NORMAN BERT JAVITT, A.B., U.S. Public Health Service Fellow in Physiology

§KENNETH CAMERON WAGNER, B.A., Institute for Research in Social Science

Non-Service Fellows

- ELISABETH ANN BOWLES, A.B., Consolidated University Fellow
 YEN-TSAI CHANG, Diploma in Pharmacy, American Foundation for
 Pharmaceutical Education Fellow
 BENJAMIN FRANKLIN COOPER, S.B., American Foundation for Phar-
 maceutical Education Fellow
 JOHN EDMOND GONZALES, M.A., Waddell Memorial Fellow in History
 MARIE-THERESE LAVIGNE, Lic.d'Ens.Phil., Mary Taylor Williams Fel-
 low in Philosophy
 ELIZABETH ANN LESUER, A.B., Bertha Colton Williams Fellow in Phi-
 losophy
 JOHN WALTER MARTIN, JR., B.S., American Foundation for Pharma-
 ceutical Education Fellow
 EDWIN ARTHUR MILES, A.M., Waddell Memorial Fellow in History
 EDWARD JOHN NAUSS, B.A., Bertha Colton Williams Fellow in Philos-
 ophy
 BLACKWELL PIERCE ROBINSON, A.M., North Carolina Society of the
 Cincinnati Fellow in History
 HOWARD WISE RUSSELL, B.A., Graham Kenan Fellow in Philosophy
 THOMAS BLYTHE SCOTT, JR., M.A., Mary Taylor Williams Fellow in
 Philosophy
 WILLIAM JOHNSON SHEFFIELD, S.M., North Carolina Pharmaceutical
 Research Foundation Fellow
 WILLIAM WEST TAYLOR, B.S., North Carolina Pharmaceutical Re-
 search Foundation Fellow
 WILLIAM GIPSY TOLAND, M.A., Graham Kenan Fellow in Philosophy
 JAMES GEORGE YOUNG, B.S., American Foundation for Pharmaceutical
 Education Fellow

Scholars

- LEMUEL FRANKLIN BLITZ, M.A., Service Scholar in Political Science
 †ELIZABETH RUSH BUELL, B.A., Service Scholar in the Institute for
 Research in Social Science
 †LOUISE HARGROVE DAVIS, A.B., Service Scholar in the Institute for
 Research in Social Science
 †MARY ALICE SHERK ELAM, B.A., Service Scholar in the Institute for
 Research in Social Science
 RICHARD MICHAEL FORBES, B.A., Service Scholar in the Institute for
 Research in Social Science
 †NORMAN EUGENE JARRARD, A.B., University Scholar in English
 JOSEPH MOORHEAD JOHNSTON, B.S., Special Scholar in Education

- †BOBBY FRANK MANER, B.S., University Scholar in History
ROBERT ALFRED MILLER, A.B., University Scholar in Romance Languages
GEORGE EHRMAN MUNS, JR., A.M., Service Scholar in Music
ANN DE WOLF PERRY, A.B., University Scholar in English
||ELIZABETH JEAN ROBERTS, A.M., Service Scholar in the Institute for Research in Social Science
MARY LOIS STATON, M.A., Special Scholar in Education

Note: *Fall and winter quarters only.

†Beginning winter quarter.

‡Fall quarter only.

§Spring quarter only.

||Winter quarter only.

¶Until November 1, 1950.

Part Two

GENERAL INFORMATION

THE UNIVERSITY

Historical Sketch of the University of North Carolina

The University of North Carolina, conceived in 1776, chartered in 1789, the cornerstone of its first building laid in 1793, opened its doors to students in 1795—the first state university in the United States.

The origin of the University may be traced to Section XLI of the North Carolina Constitution of 1776, which declared that “all useful learning shall be duly encouraged and promoted in one or more universities.” Sponsored by William Richardson Davie, “father of the University,” the University was chartered by the General Assembly through an act passed December 11, 1789, which declared that “in all well regulated Governments, it is the indispensable duty of every Legislature to consult the Happiness of a rising Generation, and endeavor to fit them for an honorable Discharge of the Social Duties of Life, by paying the strictest attention to their Education.” On December 21, 1789, the General Assembly passed an accompanying act providing for the erection of buildings and for the support of the University through escheats and arrearages due the state.

A special meeting of the Board of Trustees was held at Fayetteville on December 18, 1789, to accept Benjamin Smith's offer of 20,000 acres of land. The first regular meeting of the trustees occurred at Fayetteville on November 15, 1790, as required by the charter. In 1792, a committee headed by Frederick Hargett selected New Hope Chapel, now Chapel Hill, as the site for the University. On October 12, 1793, Davie, as Grand Master of Masons, laid the cornerstone of Old East, the first building. Formal opening exercises were held January 15, 1795, but the first student did not arrive “on the hill” until February 12. For two weeks he was the student body. At the end of the term there were two professors and forty-one students.

The University began its career with a gift of land warrants for 20,000 acres, cash amounting to \$2,706.41, and a loan of \$10,000 (afterwards converted into a gift) made by the legislature in 1791 as a result of the interest and leadership of Davie as a member of the House. By constant struggle and periodic appeals for private benefactions, the institution grew despite general poverty, opposition to taxation, denominational hostility, and sectional controversies between eastern and western North Carolina. The General Assembly made no specific appropriations for its maintenance until 1881, but

through the act passed in 1789 it exempted the University from taxation and made it the beneficiary of escheats and arrearages due the state; and in 1867 it appropriated \$7,000 to pay to officers indebtedness incurred during and immediately after the Civil War.

Before 1804, the University was under a succession of "presiding professors." This was not a satisfactory system, and in 1804, Joseph Caldwell was elected the first president. Under Caldwell (1804-1812, 1817-1835), the University grew from a small classical school into a creditable liberal arts college. After 1815, natural sciences were placed on terms of equality with the humanities.

When Caldwell was succeeded by David L. Swain in 1835, the University was widely known as a center of sound scholarship and teaching. During his long tenure (1835-1868), Swain devoted his administration to a program of drawing the institution and the state close together. More emphasis was placed on subjects designed to prepare men for public service—history, law, rhetoric, and public speaking. The ideal of public service overshadowed general culture prior to 1860. During these years, the enrollment of the University reached a peak of 456 (1858), and its alumni included one president of the United States, one vice-president, seven cabinet officials, ten United States senators, forty-one representatives in Congress, fifteen state governors, and many state judges and legislators. From 1814, when a University alumnus first became governor, until the present time, twenty-six of the forty-four governors of North Carolina have studied at Chapel Hill.

The University remained open during the Civil War, although most of its faculty and students joined the Confederate armies. Reconstruction, however, closed its doors for five years (1870-1875). Through the efforts of the alumni and Mrs. Cornelia Phillips Spencer, a Chapel Hill resident, the University was reopened in 1875.

By the constitution adopted in 1868 the General Assembly has "power to provide for the election of Trustees of the University of North Carolina, in whom, when chosen, shall be vested all the privileges, rights, franchises and endowments thereof in anywise granted to or conferred upon the trustees of said University; and the General Assembly may make such provisions, laws and regulations, from time to time, as may be necessary and expedient for the maintenance and management of said University." The governor of the state is, ex officio, president of the Board of Trustees.

The same constitution, in connection with "Benefits of the University," further states: "The General Assembly shall provide that

the benefits of the University, as far as practicable, be extended to the youth of the State free of expense for tuition; also, that all the property which has heretofore accrued to the State, or shall hereafter accrue, from escheats, unclaimed dividends, or distributive shares of the estates of deceased persons, shall be appropriated to the use of the University."

From its reopening to 1951, the University has had eight presidents, each of whom made a distinct contribution to its expansion and progress. Dr. Kemp Plummer Battle (president 1876-1891) reorganized the University in 1875, established the first summer normal session in the South (1877), secured the first regular appropriation for maintenance (1881), and wrote a two-volume history of the University. George Tayloe Winston (1891-1896) "made its campus the dwelling place of dynamic democracy and a citadel against the forces of intolerance and bigotry." Edwin Anderson Alderman (1896-1900) opened its doors to women. During the administration of Francis Preston Venable (1900-1914), the University's financial condition improved, the physical plant was considerably expanded, athletics were encouraged, and creative scholarship was required of the faculty. The brief administration of Edward Kidder Graham (1914-1918) was notable for the enlargement of the University's service to the state at large, increased resources for administrative and building purposes, and a strengthening of student morale and honor standards. President Harry Woodburn Chase (1919-1930) guided the University through a period of rapid physical expansion, and during this time the University achieved an international reputation for high standards of scholarship and freedom in research and teaching. Student enrollment increased rapidly, and maintenance appropriations reached \$894,379 in 1928-1929, the high point up until that time. Increasing emphasis was shown in the social sciences and graduate work. The Graduate School was reorganized in 1920, the University of North Carolina Press was incorporated in 1922, and the Institute for Research in Social Science was organized in 1924. Professional schools of law, medicine, pharmacy, engineering, education, and commerce attained a standing which gave the University its widening reputation.

Under President Frank Porter Graham (1930-1949) the University continued to make progress. The administrative consolidation of the University, the North Carolina College for Women at Greensboro, and the North Carolina State College of Agriculture and Engi-

neering at Raleigh into the University of North Carolina was effected in 1932. New schools and divisions were added at Chapel Hill—Library Science in 1931, the General College in 1935, and Public Health in 1936. The Institute of Government became a part of the University in 1942, and the School of Education, discontinued in 1933 was re-instituted in 1948. The \$3,000,000 Morehead Building and Planetarium was completed in 1949, and a Department of Astronomy was added in the winter quarter, 1950.

The Division of Health Affairs was organized in 1949 and includes the schools of Medicine, Public Health, and Pharmacy; the new schools of Nursing and Dentistry; and the University Hospital. It was established for the purpose of integrating the work of all of the health professional schools and the hospital in their teaching and research programs within the University.

In 1950, by action of the Board of Trustees, a School of Social Work and a School of Journalism were established, and the School of Commerce became the School of Business Administration.

In the development of the consolidation process, Robert Burton House was selected by President Graham and duly confirmed by the Trustees in 1934 to serve as Dean of Administration of the University at Chapel Hill. In 1945, Dean House's title was changed by the Trustees to Chancellor of the University at Chapel Hill and Vice-President of the University of North Carolina.

In World War II the service of the University and its alumni was particularly noteworthy. More than 10,000 students and alumni, not including Navy and Army personnel sent to Chapel Hill for training, entered the armed forces. More than 300 lost their lives in service. Some 20,000 officers and cadets in naval aviation were trained in the United States Navy Pre-Flight School, established in 1942. A naval ROTC unit, which was established in 1940 and still continues, was the core of the Navy's V-12 program at the University. Army and Army Air Corps groups were trained on the campus. Many members of the faculty were given leaves of absence for war service, and a number of University departments were engaged in research programs for the armed forces, for government, and for industry. Throughout the war period the University maintained also its normal curriculum offerings.

On March 22, 1949, Governor W. Kerr Scott appointed President Graham to the Senate of the United States. Pending the election of a new president, Controller W. D. Carmichael, Jr., was designated

Acting President. By the unanimous vote of the entire membership of the Board of Trustees, Gordon Gray was elected President of the University on February 6, 1950. He assumed full responsibility for the office on September 23, 1950, and was officially inaugurated as president on October 10, 1950.

With the growth of the University has come a need for the re-defining of the relation of the faculty to the University. On November 6, 1942, the General Faculty authorized the appointment of a committee, under the chairmanship of the late Professor John M. Booker, to study faculty government and prepare a report embodying a uniform set of principles defining the powers, duties, and status of the various divisions which constitute the University. The committee, known as the Committee on University Government, submitted its report in sections during the next eight years. On May 10, 1950, the General Faculty adopted, in its entirety, the new instrument known as "Faculty Legislation on University Government," with the provision that it go into effect in January, 1951.

The chief departure from previous legislative practice in University government made by the new legislation is in its establishment of a Faculty Council as the governing body. The Council, elected for three-year staggered terms from all the divisions of the University and embracing all ranks of professorship on a proportional basis, has assumed all the legislative functions of the General Faculty except the power to amend the "General Faculty Legislation." Consisting of ex officio and elected members, the Council meets on the first Friday of each month during the academic year for the transaction of University business. Names of the present Council, together with the dates of their terms, appear on pages 15-16.

Growth of the University at Chapel Hill is depicted in enrollment figures. In the fall of 1920 students in residence numbered some 1,300; in 1930, 2,700; and in the fall of 1941 enrollment reached 4,108—up to then an all-time high. Because of the G. I. Bill and the general pressure for university and college education since the conclusion of the war, enrollment at Chapel Hill has rapidly increased and in 1948-1949 reached 7,603, the highest figure to date. The evidence indicates continued increased enrollment as facilities are provided.

The physical plant of the University is valued at approximately \$20,000,000. In the past thirty years there have been three notable periods of expansion. The first occurred in the 1920's, the second in the late 1930's and early 1940's, and the third during World War

II, when the University expanded its facilities to accommodate Navy and Army training programs on the campus. The 1947 legislature projected a fourth period of building activity when it made appropriations of \$7,844,800 for permanent improvements with which to expand the two-year School of Medicine at Chapel Hill to a four-year school with a teaching hospital, build three new dormitories, greatly increase the capacity of the library, and expand the University's utilities and service plants. Also appropriations have been made for the building of a new wing for Public Health; buildings for the schools of Nursing and Dentistry; and new quarters for Business Administration, Law, and Chemistry.

The University has already embarked upon a new era of service to the state. With a bright past and the opportunities for an even more brilliant future, the University of North Carolina looks ahead with confidence and challenge.*

Organization and Degrees

The University is organized into a General College (which gives the general academic work of the first two years), a College of Arts and Sciences, and twelve schools which have jurisdiction over degrees as shown below:

THE COLLEGE OF ARTS AND SCIENCES

- Bachelor of Arts
- Bachelor of Arts in Journalism†
- Bachelor of Science in Chemistry
- Bachelor of Science in Geology
- Bachelor of Science in Physics
- Bachelor of Science in Medical Technology
- Bachelor of Science in Public Health Nursing
- Bachelor of Science in Public Health
- Bachelor of Science in Bacteriology
- Bachelor of Science in Industrial Relations
- Bachelor of Science in Mathematics
- Bachelor of Science in Dentistry (with the School of Dentistry)
- Bachelor of Arts and Laws (with the School of Law)
- Bachelor of Science in Medicine (with the School of Medicine)
- Bachelor of Music

*For more detailed information concerning the University, see Kemp Plummer Battle's two-volume *History of the University of North Carolina*, published 1907-12; and Archibald Henderson's *The Campus of the First State University*, published 1949.

†Awarded by the College of Arts and Sciences through 1950-1951.

THE SCHOOL OF BUSINESS ADMINISTRATION

- Bachelor of Science in Business Administration
- Bachelor of Science in Business Administration and Laws
(with the School of Law)

THE SCHOOL OF EDUCATION

- Bachelor of Arts in Education
- Bachelor of Science in Science Teaching
- Bachelor of Science in Health Teaching

THE SCHOOL OF JOURNALISM

- Bachelor of Arts in Journalism

THE GRADUATE SCHOOL

- Master of Arts
- Master of Arts in Education
- Master of Arts in Creative Art
- Master of Education
- Master of Science
- Master of Science in Industrial Relations
- Master of Science in Library Science
- Master of Science in Personnel Administration
- Master of Science in Public Health
- Master of Science in Sanitary Engineering
- Master of Social Work
- Master of Music
- Master of Public Health
- Master of Regional Planning
- Master of School Librarianship
- Doctor of Public Health
- Doctor of Philosophy

THE SCHOOL OF LAW

- Bachelor of Laws
- Doctor of Law
- Bachelor of Arts and Laws (see above)
- Bachelor of Science in Business Administration and Laws
(see above)

THE SCHOOL OF LIBRARY SCIENCE

- Bachelor of Science in Library Science

THE SCHOOL OF SOCIAL WORK

(see above)

DIVISION OF HEALTH AFFAIRS**THE SCHOOL OF MEDICINE**

Bachelor of Science in Medicine (see above)

THE SCHOOL OF PUBLIC HEALTH

(see above)

THE SCHOOL OF DENTISTRY

Bachelor of Science in Dentistry (see above)

Doctor of Dental Surgery

THE SCHOOL OF PHARMACY

Bachelor of Science in Pharmacy

THE SCHOOL OF NURSING

Bachelor of Science in Nursing

SUMMER SESSION

In the Summer Sessions are offered many courses for which regular University credit is allowed, including special courses designed primarily for the teachers of the state. Practically all the work offered is of collegiate grade and may be counted toward some degree from the University.

Department of Naval Science

A Naval Reserve Officers Training Corps Unit is maintained at the University of North Carolina under the provisions of Public Law No. 729, which authorizes such units at fifty-two colleges and universities throughout the United States.

For detailed information with respect to the Naval Reserve Officers Training Corps Unit the reader is referred to Part IV of this catalogue, pages 316-20.

Department of Air Science and Tactics

With the cooperation of the United States Air Force a course in Air Science has been established at the University. Under this program students may enroll in the Air Force Reserve Officers Training Corps for a four-year course of formal instruction in Air Science and Tactics.

For detailed information with respect to the Air Force Reserve Officers Training Corps Unit the reader is referred to Part IV of this catalogue, pages 210-14.

Admissions

Undergraduate students may be admitted to the General College, to the School of Pharmacy, to the College of Arts and Sciences, to the School of Business Administration, to the School of Education, and to the School of Journalism of the University. Application blanks for admission may be secured by writing the Director of Admissions. Applications with complete records should be submitted at least fifteen days before the opening of the term in which a student desires to enroll.

WOMEN STUDENTS: Women students are eligible to enter the School of Pharmacy, the College of Arts and Sciences, the School of Business Administration, the School of Education, and the School of Journalism on the same basis as men. Only those women who are permanent and bona fide residents of Chapel Hill are eligible for admission to the General College.

AGE: Each applicant must be sixteen years of age before or by the actual date of his first registration.

CHARACTER: Each applicant is required to furnish satisfactory evidence of good character.

HEALTH: Each applicant is required to submit with his application for admission a medical history properly completed by his physician. Each registrant is required to have a physical examination by the University Physician immediately before the period of his first registration.

ADMISSION TO FRESHMAN STANDING

Formal application for admission to freshman standing in the General College or in the School of Pharmacy (for specific requirements of the School of Pharmacy see the Pharmacy Catalogue) may be made by a certificate showing graduation or its equivalent from an accredited high school with fifteen acceptable units and a statement that the applicant has attained the certifying average of the school last attended. Fifteen units are required. Of these, ten and one-half must be in academic subjects and must include four in English, two in one foreign language, one and one-half in algebra, one in plane geometry, one in a social science (preferably history of the United

States), one in a natural science. The remaining four and one-half are elective. Not more than four units in vocational subjects may be allowed toward admission. Specific foreign language requirements will be found in the curricula outlined on pages 135-42. A student may be admitted with a deficiency of one-half unit in algebra, one unit in plane geometry, and two units in foreign language if he presents fifteen other acceptable units.

REMOVING DEFICIENCIES: The algebra deficiency may be removed by passing Mathematics R or 7 here or by special examination given by the Department of Mathematics. A deficiency in plane geometry may be removed by a special examination given by the Department of Mathematics, or by summer work at an approved high school. A deficiency in a foreign language may be removed by passing the elementary part of the language here. It is very desirable that applicants with deficiencies seek to clear these during the summer immediately preceding the fall opening at which they expect to matriculate. *All entrance deficiencies must be removed before registration for the fourth quarter in residence, not counting the summer quarter.*

A graduate of a non-accredited high school or mature student who cannot meet the formal requirements may qualify for admission by special entrance examination.

The right is reserved to reject the application of any applicant who ranked in the lower half of his graduation class in high school. For cause the Committee on Admissions may disapprove any application for admission.

ADMISSION OF NON-RESIDENTS: An applicant who is a non-resident of North Carolina may be required to supplement his application and transcript with a personal interview with a representative of the University, a written examination, and other information requested by the Committee on Admissions. He will be expected to have ranked, academically, in the highest one-fourth of his graduating class.

SPECIAL STUDENTS

Persons twenty-one years of age or over who cannot meet the requirements for admission as degree candidates, or others desiring to improve themselves professionally, may be admitted as special students, with the approval of the dean of the college concerned, to pursue a non-degree program. Application is made through the Director of Admissions, and satisfactory evidence of the students' ability to profit from the program desired must be furnished. The applicant

should have an interview with the dean having supervision over the work to be taken.

Special students are on probation. They are required to pass all of their courses in order to be eligible to continue in the University.

ADMISSION TO THE COLLEGE OF ARTS AND SCIENCES AND TO THE SCHOOLS OF BUSINESS ADMINISTRATION, EDUCATION, AND JOURNALISM

Admission to the College of Arts and Sciences and to the Schools of Business Administration, Education, and Journalism is based upon the satisfactory completion of the first two years of college work given in the General College of this University (pages 131-42) or its equivalent certified by another institution of recognized academic standing.

Satisfactory completion of the first two years of college work is interpreted to mean that a C average or better is achieved. Provisions may be made for the removal of a deficiency in the exact requirements of the first two years.

ADMISSION TO ADVANCED STANDING

A person seeking admission to the University on the basis of work at another recognized college or university is required to present a properly certified transcript of his record at that college or university at least fifteen days before the opening of the term in which the applicant desires to enroll. Application blanks may be secured by writing to the Director of Admissions. Each transfer student must submit a fee of \$5.00. If the applicant is not accepted, the fee is returned; if he is accepted and enrolls as a student, the fee will be applied against the bill at his first registration; if he is accepted but does not enroll, the fee will be forfeited regardless of the reason involved.

Each transferred record will be evaluated in terms of requirements here. A transferring student is expected to present at least a C average on the work taken at other institutions. A course passed with the lowest passing grade at another institution does not give hours credit toward graduation, but may be used to satisfy a subject requirement in the University. No credit is allowed for work done at non-standard or non-accredited colleges and universities unless a substantiating examination is passed here in each subject for which credit is sought. Any record submitted for advanced standing may be rejected in whole or in part, and validating examinations may be required in any or all subjects.

Applicants who have ever attended for any period of time a college or university are required to present properly certified transcripts

or records of such attendance. It will be considered a violation of the honor code if any applicant makes a false statement in his application for admission with reference to previous college or university attendance in order to gain admission on the basis of a high school record alone.

The University is not an accrediting agency. It accepts the accreditation of the North Carolina State Department of Education in so far as high and preparatory schools and colleges (junior colleges or four-year institutions) are concerned. Outside of North Carolina the University depends upon the accreditation of the departments of education of the various states, upon the accreditation of the state universities or institutions of comparable rank, and upon the accreditation of regional accrediting agencies.

ADMISSION TO GRADUATE AND PROFESSIONAL SCHOOLS AND THE SUMMER SESSION

For the requirements for admission to the graduate and professional schools, the applicant should address his inquiry to the dean of the school in which he desires to enroll or consult the special catalogue of that school. For admission to the Summer Session only, the applicant should write to the Director of the Summer Session.

The College Year

The college year is divided into fall, winter, spring, and summer quarters of approximately twelve weeks each, the summer quarter being divided into two terms of about six weeks each. The School of Law divides its work into two semesters, also conducting a summer session coinciding in extent with one summer term in academic subjects. There is a Christmas recess of approximately two weeks.

Religious Influence

The deep concern of the University for the religious life of the student is symbolized by the centrally located YMCA and YWCA building. Functioning in the heart of the campus and led by outstanding directors, these Christian Associations minister to a large group of students. In addition to their own programs and services, the YMCA and YWCA serve as channels of communication into the campus for the various denominational groups.

The churches of Chapel Hill, representing most of the denominations, provide an effective ministry to the students in their services of worship and weekly religious programs. The larger denominations

also make available, through their state and national boards, the services of young pastors who work exclusively with students. These pastors, having official faculty recognition, work in close cooperation with the campus religious agencies.

The University has recently established a Department of Religion, offering courses in the history, literature, and interpretation of religion. All students thus have the opportunity to study with competent professors who can lead them to a better understanding and appreciation of their religious faith.

The Council on Religious Life, whose chairman is the Chancellor of the University, includes in its membership the deans of the colleges, heads of departments, college pastors, YMCA and YWCA directors, and other key persons on the campus. The Council, divided into four committees, serves to coordinate all religious activities, to provide counseling service for students, to supervise chapel and convocations, and to sponsor new approaches to religious emphasis among the students. The Department of Religion is a direct outgrowth of this Council's study and interest.

Physical Education

A thorough physical examination is given to students at the time of entrance. All students are classified on the basis of the examination, and an effort is made to adapt the program to the individual's particular needs.

Physical education is required of all undergraduate men three periods each week for the first two years; and of all undergraduate women two periods each week for the first three years. A three-quarter-hour course in hygiene is required of all freshmen. Upperclassmen are offered the opportunity to major in the field of health and physical education.

Encouragement is given to athletic sports and to all kinds of physical activity. The program of intercollegiate athletics includes a great variety of seasonal competitive games, with the idea of promoting maximum participation by members of the student body.

In addition to intercollegiate athletics the University fosters an unusually extensive program of intramural athletics. During the 1950-1951 school year the program involved 65 per cent 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 with his fellows and to learn teamwork and good sportsmanship.

Medical Attention

In order to provide proper attention for the student, the University employs five full-time physicians and maintains a well-appointed infirmary, with a modern X-ray unit under the direction of a full-time technician, and with a laboratory for diagnostic purposes under the direction of two full-time technicians. The infirmary is under the immediate supervision of the University Physician and is provided with ten experienced nurses who are under the general supervision of a head nurse. At the discretion of his attending physician a student may be admitted to its wards, and for such services as may be rendered by the staff no charges are made. But the student will be required to pay for any additional service (consultation, special nurses, and operations), recommended by the attending physician and approved by the parent or guardian.

THE DIVISION OF STUDENT WELFARE

The Division of Student Welfare was established to coordinate and promote the work of all University agencies and organizations affecting the welfare of students. Its work is understood to embrace all University relationships with students other than formal instruction.

The function of the Welfare Board is twofold: first, that of a coordinating agency for the various officers of instruction and administration whose work directly affects student welfare; second, that of affording regular clearance between these officers of the University and representative student leaders. The Chancellor is a member, ex officio, of this board.

The Welfare Board

FREDERICK HENRY WEAVER, *Chairman*

LEE ROY WELLS ARMSTRONG	JOSEPH MORGAN GALLOWAY
JOHN SAMUEL BENNETT	EDWARD MCGOWAN HEDGPETH
KATHERINE KENNEDY CARMICHAEL	RAYMOND LEWIS JEFFERIES, JR.
DUDLEY DEWITT CARROLL	CECIL JOHNSON
OLIVER KELLY CORNWELL	ARNOLD KIMSEY KING
HARRY WOLVEN CRANE	EDWIN SIDNEY LANIER
GAY WILSON CURRIE	ERNEST LLOYD MACKIE
ROBERT ALLISON FETZER	ELIZABETH PARKER
WILLIAM CLYDE FRIDAY	WILLIAM DECATUR PERRY

GUY BERRYMAN PHILLIPS
 JOSEPH MARYON SAUNDERS
 CLAUDE CORNELIUS SHOTTS
 WILLIAM MELVIN SHUFORD

CORYDON PERRY SPRUILL, JR.
 CLAUDE EDWARD TEAGUE
 JAMES EDGAR WADSWORTH
 WILLIAM SMITH WELLS

Because of the close relationship of this division to student life, there is an Advisory Committee composed of students appointed annually by the Chancellor of the University on the joint nomination of the President of the Student Body and the Chairman of the Board. The following were appointed for 1950-1951.

Student Advisory Committee

KATHLEEN DAVIS
 COLVIN THEODORE LEONARD, JR.
 HERBERT THOMAS MITCHELL
 WARREN DALE MORRISON, JR.

RICHARD JAMES MURPHY
 JOSEPH ROY PARKER, JR.
 JOHN LASSITER SANDERS
 SIDNEY BUMPASS TURNER, JR.

STUDENT GOVERNMENT

Officers of the Student Body, 1950-1951

JOHN LASSITER SANDERS*President of the Student Body*
 HERBERT THOMAS MITCHELL*Vice-President of the Student Body*
 BANKS COOPER TALLEY, JR.*Secretary-Treasurer of the Student Body*

The student body of the University is self-governing. The functions of this government are both disciplinary and administrative. These functions are exercised by executive, legislative, and judicial branches of representative government under a student constitution.

The executive department consists of the President of the Student Body, assisted by the Vice-President and the Secretary-Treasurer, all elected by the student body at large.

Legislative power is vested in:

Student Legislature. The body is the legislative branch of student government and is composed of fifty members elected annually. In addition to enacting nearly all the rules governing students here at the University, it has the responsibility for the annual budget of operations, for the supervision of a number of committees, and for the proper performance of many constitutional duties.

Coed Senate. Composed of representatives elected by the women students, the Senate is responsible for drafting all rules governing

coeds and for coordination of women's activities. Dormitory presidents and sorority house managers form the Interdormitory Committee within the Coed Senate, enabling those groups to work closely in interpreting social regulations and house rules.

The judiciary comprises the Student Council, the Men's Council, the Women's Council, and special councils for dormitories and fraternities.

Student Council Members

LARRY FRANCIS BOTTO, *Chairman*

KYLE DURLAND BARNES	ROBERT JASON HOLMES
HELEN DELANO BOWIE	RICHARD HAMPTON JENRETTE
FRANCES WOOD DRANE	NANCY JEAN SMITH, <i>Clerk</i>
ROBERT MAYER EVANS	CAROLYN BISHOP THORNTON

Men's Council Members

HORACE EDNEY STACY, JR., *Chairman*

BYNUM RHODES BROWN	JAMES CARLISLE MCLEOD, JR.
ROBERT LOUIS EMANUEL	ALLAN FRANCIS MILLEDGE
JOSEPH JAMES GRAY, JR.	ELMER BRIAN TRIPP
BENJAMIN RUSSELL HARWARD	HENRY TAYLOR VADEN, <i>Clerk</i>
ROBERT PEEL HOLMES, III	

Women's Council Members

WINIFRED HOSKINS HARRISS, *Chairman*

ANN MARGARET ARIAIL	JUDITH ANN SANFORD, <i>Clerk</i>
JEAN CLAY BLOOM	RUTH WILKINS SIKES
ANNE LOGAN BREWER	CAROLYN BARBARA WHIPPLE
SALLY BLAND COX	MARY INGRAHAM WOOD

The following three councils serve as governing bodies for specific campus groups:

Interdormitory Council. The functions of this agency are the regulation of living conditions in the men's dormitories and the maintenance of good living standards by dormitory residents.

Interfraternity Council. As the governing body for social fraternities in the University, this council attempts to further the ideals of fraternities through the unification of programs and action of the various chapters on the campus.

Panhellenic Council. This group is composed of representatives of the five campus national fraternities for women and the stray Greek organization. A clearing house for common problems and the regulating group for rush week, the Council also plans and directs various projects throughout the year.

No detailed code of rules is designed to govern student behavior. High standards of morality under the Honor System and of gentlemanly conduct under the Campus Code constitute the core of student responsibility and policy. The student councils, consisting entirely of student members, are the responsible courts in which violators of the Honor System and the Campus Code are tried. If a student is found guilty of violating the Honor System or the Campus Code, he may be suspended from the University for an indefinite period. Indefinite suspension is the established penalty, although there has been some variation in sentences from one student generation to another. Among the offences traditionally requiring suspension are cheating, stealing, lying, drunkenness, and gambling.

UNIVERSITY ORGANIZATIONS

The organizations listed below offer opportunity for interested students to participate in activities which appeal to them and to become acquainted with others in the University having similar interests. Fuller information about them, and other organizations not listed, may be secured from the Dean of Students and the officers of the organizations.

Religion and Student Welfare

The Young Men's Christian Association, organized at the University in 1859, is a fellowship of Carolina students, faculty, and friends seeking to discover and practice the Christian way of life in all their relationships and activities. The program and service of the Association are developed by its active members on the basis of student needs. Membership is open to all men.

The Young Women's Christian Association is the religious, social, and welfare agency for women students. Its purpose is to unite students in a desire to realize a full and creative college life. Its office is in the Y.M.C.A. Building.

The Council of Religion includes in its members the presidents of all student religious organizations on the campus. It is interdenominational and interfaith in character and seeks to coordinate the work of the individual student religious organizations. It also studies the total religious needs of the campus, suggests ways of meeting these needs more adequately, and initiates proposals for strengthening the programs of its member organizations and advancing the religious work of the campus.

Debate and Discussion

The Senate of the Dialectic Literary Society and *The General Assembly of the Philanthropic Literary Society*, founded 1795, offer opportunity to participate in debates and discussion and to learn parliamentary procedure.

The Debate Council is an outgrowth of the debating societies on the campus. It is composed of students who are selected by the forensic squad, one member for each of the debating societies, and two faculty advisers.

The Carolina Forum cooperates with other organizations in procuring, coordinating, and presenting to the campus speakers of national and international note in government, labor, industry, education, etc.

The Carolina Political Union, a group of students and faculty members, holds regular forums for the discussion of current political and economic problems and brings to the campus speakers prominent in national and state political life.

Learned Societies

The Elisha Mitchell Scientific Society, an organization of students and faculty members interested in science, holds monthly meetings for the presentation and discussion of papers and maintains a journal which is widely circulated.

The Philological Club, meets monthly during the academic year for presentation of papers dealing with languages and literature in all fields. A journal founded by the club is widely circulated.

Music and Dramatic Art

Musical Organizations center their activities in Hill Hall, whose auditorium seats eight hundred and contains a four-manual concert

organ. Hill Hall houses a collection of records, scores, books on music, and phonographs for audition purposes. Among organizations open to students and faculty are:

- Glee Clubs for Men and Women
- Symphony Orchestra
- University Band
- Chapel Hill Choral Club

The Carolina Playmakers, the University dramatic organization, gives ample opportunity to students for the writing, production, and acting of plays, as well as for the design of scenery, stage settings, and lighting effects. For further information see page 420.

Sports and Sportsmanship

Intramural Activities provide a program of competitive sports and recreational activities for voluntary participation by students and faculty members. Competition is conducted within the fraternity division and the dormitory-independent division. A play-off between the division champions then determines the University championship. In addition, badminton, fencing, and dance clubs are sponsored annually by the Intramural Department. No additional fees are charged students for any phase of the intramural activities.

The Women's Athletic Association provides for every woman student opportunities for participation in many recreational activities and tournaments. Its program is organized and conducted by a student cabinet of elected officers, appointed sorority and dormitory representatives, and appointed sports managers. Membership is open to all women students.

The University Club seeks to promote and maintain enthusiasm and good sportsmanship in all University events and contests by sponsoring pep rallies, entertaining visiting teams, and building school spirit.

Foreign Languages and Customs

Foreign Language Clubs, including *Le Cercle Français*, *El Club Español*, and *Delta Phi Alpha* (honorary German fraternity), meet regularly for the purpose of developing facility in understanding and speaking the foreign languages and of discussing topics relating to the life, customs, and literature of the countries where the languages are native.

The Cosmopolitan Club is an organization for the foreign students on campus. Its purpose is to provide a means by which these students can join together in social activities and various educational trips and programs.

Social and Miscellaneous

The University Veterans Association, composed of students and faculty who are veterans of the Second World War, provides an organization for consideration of problems of interest primarily to veterans.

Carolina Independent Coed Association was organized in 1941 to promote friendship and social life among the independents on campus. All non-sorority girls are invited to join.

Town Girls Association is open to Chapel Hill residents. It provides an organization for local coeds and is aimed toward aiding the freshman women in the University. The group has a room set aside for its use on the second floor of the Y.M.C.A. Building.

The University Dance Committee has as its objective the role of host at University dances and the task of maintaining order at dances sponsored by campus organizations. It is composed of representatives from several campus organizations.

HONOR AND RECOGNITION SOCIETIES

Phi Beta Kappa, national scholarship fraternity founded at the College of William and Mary in 1776, has its Alpha of North Carolina Chapter here, established in 1904. Juniors and seniors who meet the requirements in scholastic achievement and character are invited to become members.

Sigma Xi, founded at Cornell University in 1886 for the purpose of encouraging original investigation in science, has a chapter here established in 1920. Membership is contingent upon evidence of excellence in research in one of the sciences. Advanced undergraduates and graduates who show promise in scientific research may be elected to associate membership, to be promoted to full membership later if deemed worthy.

Phi Eta Sigma, national freshman scholarship fraternity for men, was founded at the University of Illinois in 1923 to encourage and reward high scholastic attainment and thus promote good study habits

early in college life. The chapter here was established in 1947. The freshman men who make at least half A's and the rest B's their first quarter or their first three quarters are eligible for membership.

Beta Gamma Sigma, national scholastic honor society for students in commerce and business administration, was founded in 1913 by the union of three local societies at the Universities of Wisconsin, California, and Illinois. Its Alpha of North Carolina Chapter was established here in 1933. Juniors and seniors in the School of Business Administration who achieve sufficiently high scholastic standing become eligible for membership.

Rho Chi was founded at the University of Michigan in 1922 to encourage high scholastic achievement and fellowship among students in pharmacy. Its Xi Chapter was established here in 1929 and students in the School of Pharmacy who qualify in scholarship, character, personality, and leadership are elected to membership.

Order of the Coif, honor society for men in schools of law, was founded at the University of Illinois in 1902. Its chapter here was established in 1928. Students who have sufficiently high scholastic standing at graduation in the School of Law are elected to membership.

Order of the Golden Fleece, senior honor society for men, was founded here in 1903. It selects each year from the men in the junior class, or above, those considered to possess the highest qualifications in character, ability, achievement, and leadership.

The Valkyries, senior honorary organization for women, similarly recognizes and honors the outstanding women students, the number selected each year not exceeding 2 per cent of the women enrolled. It was established here in 1941.

Order of the Grail was founded here in 1920 as an honorary service organization. Each year thirteen outstanding rising junior and senior men are honored with membership, the number almost evenly divided between fraternity and non-fraternity men. Its purpose was to help provide social life to all students by sponsoring informal script dances, to award scholarships to needy and deserving students, and to serve the campus generally.

Order of the Old Well was founded here in 1949 for the purpose of recognizing and honoring campus service and accomplishment on a point basis. Whereas the Golden Fleece, the Valkyries, and the Grail

select their honorees on an intangible appraisal basis, the Old Well honors those juniors and seniors, both men and women, who achieve at least a certain minimum number of points—all activities such as scholarship, student government, athletics, forensics, publications, dramatics, music being evaluated by a proper distribution of points.

Alpha Epsilon Delta, pre-medical honor society, was founded at the University of Alabama in 1926. Its Beta of North Carolina Chapter was established here in 1936. Its object is to encourage excellence in scholarship and to promote cooperation and common interests among the pre-medical students.

Alpha Kappa Delta, sociology recognition society for men, was founded at the University of Southern California in 1920 for the purpose of promoting scholarship and research among the advanced students in sociology. The Alpha of North Carolina Chapter was established here in 1931.

Alpha Phi Omega, national campus service fraternity, was founded at Lafayette College in 1925. Its purpose is to bind together college men in the fellowship of the Scout Oath and Law, to develop friendship, and to promote service to humanity. The Rho Chapter was established here in 1930.

Chi Delta Phi, national literary recognition society for women, was organized at the University of Tennessee in 1919. The Tau Chapter was established here in 1925. It attempts to associate interested women of literary ability in promoting the ideals of a liberal education.

Delta Phi Alpha, recognition society for students of German, was founded at Wofford College in 1929, its Beta Rho Chapter being established here in 1938. It aims to promote interest in the language, literature, and culture of German speaking people.

Pi Mu Epsilon, recognition society for students of mathematics, grew out of the Mathematics Club at Syracuse University. It was incorporated under the laws of New York in 1914. Its North Carolina Beta Chapter was established here in 1948. The purpose of the society is to promote interest in the study of undergraduate and graduate mathematics.

Pi Sigma Alpha, a national honor society for students in political science, established a chapter here in 1949. It was founded at the University of Texas in 1920. Eligibility for membership is based on high scholastic achievement in the subject.

Scabbard and Blade, national military society, has as its qualifications for membership good scholarship, leadership, initiative, and character. The organization was founded at the University of Wisconsin in 1904, the chapter was established here in 1949.

Sigma Gamma Epsilon, national honor society for students in the earth sciences, was founded at the University of Kansas in 1915. High scholarship and active interest in one of these fields are requirements for membership. The Alpha Alpha Chapter of the fraternity was established here in 1932.

PUBLICATIONS

The Publications Board of the University is the publishing and policy-forming agency for three student publications—*The Daily Tar Heel*, *Tarnation*, and *The Yackety-Yack*. Composed of two faculty members appointed by the Chancellor and four student members elected by the student body, the Board has complete control over the financial policies of the publications under its jurisdiction and employs a financial coordinator to implement its policy decisions. *The Daily Tar Heel*, *Tarnation*, and *The Yackety-Yack* are financed by appropriations from student fees and by advertising. The editor of each is elected by the student body, and he appoints his staff subject to the approval of the Publications Board.

The Daily Tar Heel is the student newspaper. Published six times a week, it holds membership in both the United Press Association and the Associated Press Association. The paper is completely edited and prepared by students and gives opportunity for practical experience to both journalism and business students.

Tarnation, the campus humor magazine, appears five times during the academic year. The contents—cartoons, sketches, and stories—are contributed by students.

The Yackety-Yack is the yearbook. This publication presents in pictorial form a record of campus achievements and activities during the academic year.

A fourth campus publication is the *Carolina Quarterly*, a magazine devoted to providing a literary outlet for local writers. Not under the jurisdiction of the Publications Board, this journal is published by a student committee assisted by a faculty advisory committee composed

of three members of the English faculty and two members of the Journalism faculty. The advisory committee selects the student staff. Financed by subscription, the *Quarterly* appears three times a year. Contributors to this magazine include students, faculty, and writers outside the University community.

EXPENSES

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

Tuition and Other Fees for Each Quarter

Each student whose bona fide residence has not been established in North Carolina for at least the six months immediately prior to his first registration in the University must pay a higher rate of tuition than that paid by a legal resident of North Carolina. The residence of a minor is that of his parents or guardian. The residence of an adult remains with his parents unless he has independently set up one of his own.

Bona fide residence in North Carolina means that the student is not in the state primarily to attend the University and that his status as a resident has not been set up merely as a technical bar to the higher tuition charge. Mere ownership of property or payment of taxes apart from residence does not qualify one as a resident, nor may a student qualify by living in North Carolina the six months immediately prior to his first registration unless he continues so to live during the whole period of his stay at the University.

Students are presumed to know their correct residence status and to state the facts concerning it truthfully on their application and registration blanks. Students in doubt should state their cases in writing to the Chancellor, preferably in advance of registration. Students who misrepresent the facts of their residence status for the purpose of defrauding the University will be dealt with as are all other violators of the Honor System.

The tuition rates for students registered in the General College, College of Arts and Sciences, School of Education, School of Business Administration, School of Journalism, School of Social Work, and Graduate School are as follows:

Residents of North Carolina, each quarter.....	\$ 50.00
Non-residents of North Carolina, each quarter.....	120.00

In addition to the tuition charge, the fees payable at the beginning of each quarter are listed as follows:

FEES:	<i>General College, Arts & Sciences, Journalism, and Education</i>	<i>Business Administration</i>	<i>Social Work and Graduate</i>
Matriculation	\$21.00	\$21.00	\$21.00
Student Activities	5.00	5.00	3.85
Materials		2.00	
Laundry Deposit	10.00	10.00	10.00

The matriculation fee covers use of physical education facilities, infirmary, library, cost of registration, and membership in the Athletic Association. The student activities fee covers general campus activities supported by all regular students. The reading and materials fee applies only to students registered in the School of Business Administration.

Laundry Deposit

Students are required to make an initial deposit of \$10.00 at the beginning of each quarter to cover laundry service at the University Laundry, and an additional deposit if the first is exhausted. Any amount not used will be refunded at the close of the spring quarter.

Laboratory Fees

Each student taking a laboratory course must pay, in addition to tuition, a fee to help cover the cost of conducting laboratory experiments. The courses carrying laboratory or materials fees and the amounts are as follows:

Anatomy 101, 102, 103, 104, 106	\$ 5.00
Anatomy 107ab	15.00
Anthropology 41, 74, 122, 126, 127, 128, 130, 132, 220, 229	1.00
Anthropology 79	3.00
Art 77, 83	7.50
Art 93abc	2.50 each
Art 44, 45, 46, 48, 49, 50, 55, 80, 81, 84, 86, 87, 109, 110	7.50
Art 54, 85, 108, 111, 112, 113	10.00
Art 82	12.00
Art 104, 105, 106	15.00
Art 120, 121, 122, 240, 241, 242, 243, 250abc, 252abc, 253abc	20.00
Astronomy 31, 32	3.00
Bacteriology 51	4.00
Bacteriology 107, 112	6.00
Bacteriology 110	7.50
Bacteriology 101, 104, 115, 116, 117, 151	10.00
Bacteriology 120, 220	12.00
Bacteriology 301, 302, 303	to be determined

Biological Chemistry 101, 102, 103, 201, 202, 203, 301, 302, 303	10.00
Botany 1	2.00
Botany 41, 42, 43, 102, 103, 104, 111, 112, 113, 141, 151, 153, 154, 155, 157, 158, 166, 176, 211, 212, 213, 251, 252, 253, 301, 302, 303	4.00
Botany 45	6.00
Botany 121, 122, 221, 222, 223	8.00
Botany 145, 147	10.00
Chemistry 1, 2, 3, 83	3.00
Chemistry 31, 41, 42, 51, 61, 62, 63, 145, 146, 147, 148, 154, 161, 163, 164, 165, 166c, 167c, 168c, 181, 182, 183, 196, 231, 341, 351, 361, 381, 391	10.00
Chemistry 101, 267	to be determined
City and Regional Planning 191	2.00
City and Regional Planning 170	3.00
Business Administration 156, 159, 173, 175, 177, 179, 255, 273, 274	3.00
Business Administration 71, 72	3.00
Business Administration 157	6.00
Composition Condition Laboratory	5.50
Dramatic Art 40, 55	1.50
Dramatic Art 61, 63, 64, 65, 66, 67, 70, 71, 75, 193, 200, 202	2.00
Dramatic Art 57, 155, 156, 157, 201	3.00
Dramatic Art 85	5.00
Dramatic Art 86, 90	10.00
Economics 171, 172, 173	3.00
Economics 170	3.00
Education 62, 64, 78, 79, 80, 82, 84a, 84b, 86, 88, 90, 92(per 10 to 15 hours)	20.00
Education 71, 135	2.00
Education 221	5.00
English 40, 41, 44, 55, 56	1.50
Folklore 122, 127, 128, 132	1.00
French 84	10.00
Geography 39, 75	2.00
Geography 38	3.00
Geography 71, 117, 171	5.00
Geography 64, 118, 164	3.50
Geology 1, 41, 42, 61, 64, 121, 122, 123, 127, 164, 166, 224, 225, 226, 227, 228, 229, 265, 281, 282, 283, 284	3.50
Geology 102, 103, 104, 105, 106, 107, 108, 109, 117, 144, 145, 168, 169, 221, 222, 223, 241, 242, 243, 244, 245, 246, 247, 248, 249, 261, 262, 285, 286, 287, 288, 289	5.00
Geology 101, 128, 129, 147	10.00
German 1x, 2x, 3x	10.00
History 1, 2, 175	1.00
Journalism 53, 54, 55, 57, 59, 62, 63, 67, 72, 73	2.00
Journalism 80	5.00
Mathematics 41, 42	1.00
Mathematics 51, 52	4.00
Music 41, 54, 55, 56	1.00
Pharmaceutical Chemistry 282	1.00
Pharmaceutical Chemistry 64	5.00
Pharmaceutical Chemistry 61, 62, 63, 171, 172, 173, 241b, 242b, 243b, 271b, 272b, 273b, 391	10.00
Pharmacognosy 42	6.00
Pharmacognosy 45	6.00
Advanced Pharmacognosy 142	4.00
Advanced Macro-pharmacognosy 145	10.00

Advanced Micro-pharmacognosy 147	10.00
Research in Materia Medica and Pharmacognosy 391, 392, 393	10.00
Pharmacology 55	5.00
Pharmacology 161, 162, 301, 302, 303	10.00
Pharmacology 171a, 171b, 171c	15.00
Pharmacy 12	5.00
Pharmacy 21, 91, 92, 93	7.50
Pharmacy 24, 45, 65, 162, 163, 191, 192, 193, 251, 252, 253, 271, 391	10.00
Physical Education 221	5.00
Physics 42, 52, 53, 55, 56, 57, 61, 62, 120, 141, 158, 162	3.00
Physics 20, 24, 25, 34, 35	4.00
Physics 45, 91, 92, 280	5.00
Physics 51	15.00
Physiology 51, 141, 301, 302, 303	5.00
Physiology 106	7.50
Physiology 142, 201, 202, 206, 211, 212	10.00
Political Science 41, 42, 52, 53, 81, 82, 87, 101, 105, 121, 123, 126, 127, 132, 133, 134, 141, 142, 144, 145, 147, 151, 155, 156, 157, 158, 162, 165, 166, 167, 175, 181, 185, 210, 221, 225, 231, 235, 241, 286, 301, 305, 311, 321, 331, 361	1.00
Psychology 125, 130, 132, 135, 225, 226, 230, 232	2.00
Psychology 24, 25, 147, 148, 149, 150, 151, 152, 153, 181, 201, 202, 205, 247, 249, 250, 251, 252, 253, 341, 342	3.00
Public Health 121, 135, 281	3.00
Public Health 165, 261	3.50
Public Health 131, 151, 233, 234, 262, 272, 273, 274	4.00
Public Health 163, 164	5.00
Public Health 232	8.00
Public Health 361, 371, 381	10.00
Public Health 332	15.00
Radio 70, 71, 72, 73, 75, 81	2.00
Radio 42	3.00
Radio 85	5.00
Radio 86, 90	10.00
Social Science 1, 2	1.00
Social Work 215, 216, 217, 218, 219, 220, 221	25.00
Social Work 101, 134, 174	1.00
Sociology 51, 52, 113, 122, 128, 133, 167, 168, 171, 174, 181, 182, 186, 190, 198, 208, 215, 218, 220, 229	1.00
Sociology 191, 197, 253	2.00
Spanish 84	10.00
Zoology 1	3.00
Zoology 41, 42, 106, 107, 108, 109, 110, 111, 112, 209, 210, 211, 212, 213, 215, 222	7.50
Zoology 316	7.50 or more
Zoology 330, 331, 332, 333, 334, 335, 336, 337, 338, 339	(per 5 hours) 7.50
Zoology 104, 105	10.00
Zoology 103	12.50

Laboratory Breakage Deposits

Students taking certain courses in chemistry, pharmacy, and medicine are required to make a deposit to cover breakage of equipment, use of more than normal expendable supplies and materials, and de-

preciation on unusual equipment. These deposits range from \$7.00 to \$15.00. The unused portion of the deposit is refunded at the end of the quarter.

Application Fee

Each application for admission to advanced standing must be accompanied by a transcript evaluation fee of \$5.00. If the applicant is not accepted the fee is returned; if he is accepted and enrolls as a student, the fee will be applied against his bill at his first registration; if he is accepted but chooses not to enroll as a student the fee will be forfeited.

Charges for Credit Obtained by Examination

Students who take examinations for credit for advanced standing will be charged \$1.00 for each quarter hour of credit secured by examination.

Delayed Registration

Any student registering later than the time appointed for his registration must pay an additional fee of \$5.00. No appeal from the late registration charge will be granted, unless the delay is due to circumstances clearly beyond the student's control. Such an appeal must be made in writing to the Chancellor, must show justification for the delay in registering, and must bear the approval of the dean of the division of the University in which the applicant is enrolled.

Transcripts of Record

One transcript will be furnished without charge. Additional transcripts will be furnished only upon payment of \$1.00 for each copy.

Graduation Fee

The graduation fee is \$10.00, payable when application for degree is made. A cap and gown rental fee of \$2.50 is made to recipients of bachelors' degrees, \$3.75 to recipients of masters' degrees, and \$5.00 to recipients of doctors' degrees.

Refunds

A student withdrawing within the first week of any quarter is charged only a registration fee of \$5.00. If he withdraws after the first week, his bill will be prorated on the basis of one-eighth for each week (or part of a week) he attends. No refund will be made after the eighth week of any quarter.

Payment of Bills

Bills for the fall quarter are payable at the time of registration. Bills for the winter and spring quarters are payable at the Cashier's office on the first class day of the quarter, and thereafter according to a schedule announced. Failure to pay or make the proper arrangements for payment results in the assessment of a extra fee of \$5.00.

ROOM AND BOARD

Dormitory Accommodations for Men

Accommodations for approximately 3,000 men students are available in the University dormitories. In addition, many students find places for themselves in private homes or fraternity houses.

All rooms in the dormitories are completely furnished. Students will, however, provide their own pillows, bed linen (for single beds), blankets, and towels.

Room rent ranges from \$6.00 to \$15.00 a month for each occupant, the price depending upon the location of the room. Rooms are leased for the scholastic year. Application for a room should be made to the University Cashier and should be accompanied by a deposit of \$6.00.

Dormitory Accommodations for Women

Six dormitories provide excellent accommodations for 620 women students. Spencer, Smith, McIver, Alderman, and Carr Halls are for undergraduates, while Kenan Hall is reserved for graduate and professional students.

Women students not living in their own homes are required to reside in a dormitory unless permission to live elsewhere is granted by the Dean of Women. Ordinarily such permission is granted in exceptional cases only.

Application for a room should be made to the Dean of Women, and should be accompanied by a deposit of \$6.00.

Rooms are rented upon the basis of the entire scholastic year. Payment is made in three installments, the first of which is due September first. The amount of each installment is determined by the annual rental price of the room and the length of each term.

Residents of Spencer Hall are required to board there. Residents of the women's buildings are given preference for vacancies in Spencer Hall dining room, but are privileged to board at any of the available boarding places.

All rooms are furnished. However, students are required to provide pillows, bed linen (for single beds), blankets, towels, and curtains.

The cost of room and board and details concerning payments may be found in the Handbook for Women Students or by correspondence with Dr. Katherine K. Carmichael, Dean of Women.

Boarding Accommodations

The University operates for the benefit of the students the conveniently located Lenoir Hall Cafeteria and the Carolina Inn Cafeteria. Well-balanced menus are offered at standard prices.

SUMMARY OF ESTIMATED EXPENSES FOR THE COLLEGE YEAR OF THE AVERAGE MALE STUDENT WHO IS A RESIDENT OF NORTH CAROLINA

Board at \$45 a month, estimated vacations eliminated	\$405.00
Dormitory room, at \$8.33 a month	75.00
*Tuition	150.00
Matriculation and students' fees, estimated for freshman year	78.00
Laundry deposit	30.00
Books and supplies, estimated for year	25.50
Laboratory fees, estimated for the average freshman	10.00
TOTAL FOR NORTH CAROLINA RESIDENT.....	\$773.50

FINANCIAL AID

The income from a number of endowed scholarships is available for students who can show academic attainment along with definite financial need. The University also has certain funds which may be loaned to worthy students who can show definite need. In addition, there are part-time jobs involving various kinds of work which enable some students to earn a part of their expenses. Information about all these types of assistance may be obtained by writing the Director of Student Aid.

Fellowships and Scholarships

THE LEDOUX FELLOWSHIP IN CHEMISTRY. (Established in 1911 by Dr. Albert R. Ledoux.) The holder of this fellowship, which provides \$300 annually, is expected to devote himself to research in chemistry.

*Information concerning tuition for professional schools is available in the catalogues of the schools of Law, Medicine, Dentistry, Pharmacy, Public Health, and Library Science.

THE GRAHAM KENAN FELLOWSHIP IN PHILOSOPHY. (Established in 1921 by Mrs. Graham Kenan.) This annual fellowship, established in memory of an alumnus and trustee of the University, is supported by the income from an endowment of \$25,000.

THE ERNEST H. ABERNETHY FELLOWSHIP IN SOUTHERN INDUSTRY. (Established in 1944.) The holder is required to do research in an industry of importance to the South and to prepare a thesis as the result of the study.

THE MOORE SCHOLARSHIPS. (Established in 1881.) Bartholomew Figures Moore, of Raleigh, bequeathed \$10,000, the interest of which shall be devoted to paying the tuition of students. In 1940 James Moore, the son of the donor, raised the sum to \$15,000.

THE MARY RUFFIN SMITH SCHOLARSHIPS. (Established in 1885.) Miss Mary Ruffin Smith bequeathed to the University in memory of her brother, Dr. Francis Jones Smith, 1,460 acres of land, known as Jones' Grove, in Chatham County. The will provides that rents of the land, or the interest on the purchase money, if sold, shall be used to pay the tuition of such needy students as the faculty shall appoint.

THE MARY ANN SMITH SCHOLARSHIPS. (Established in 1891.) Miss Mary Ann Smith bequeathed \$37,000 for the foundation of scholarships, the number of scholarships to be determined by the amount of the income.

THE CAMERON SCHOLARSHIPS. (Established in 1892.) The heirs of Paul Carrington Cameron founded in his memory ten scholarships of the value of \$75 each.

THE SPEIGHT SCHOLARSHIPS. (Established in 1892.) The late Mrs. Mary Shepherd Speight bequeathed \$10,000 to the University. The income shall be used to pay the tuition of needy students; if tuition is ever made free, the income shall be used toward paying the salaries of professors.

THE WEIL SCHOLARSHIP. (Established in 1898.) A fund established by Mr. Henry Weil, of Goldsboro, North Carolina, furnishes one scholarship of the value of \$75.

THE ARMFIELD SCHOLARSHIPS. (Established in 1901 and 1904.) These scholarships were founded by the late Mr. Eugene M. Armfield, of High Point, North Carolina, a member of the Class of 1888.

THE KENNETH MURCHISON SCHOLARSHIPS. (Established in 1904.) These scholarships were founded by Mrs. Shirley Carter, of Baltimore, Md., and the late Mrs. James Sprunt, of Wilmington, North Carolina, in memory of their father.

THE DONALD FAIRFAX RAY SCHOLARSHIP. (Established in 1919.) Mrs. N. W. Ray, of Fayetteville, North Carolina, established this scholarship in memory of her son, Donald Fairfax Ray, a graduate of the University, who died while in the service of his country.

THE HOLT SCHOLARSHIPS. (Established in 1920.) Four scholarships are maintained by the income from the Holt Loan Fund, established by Mr. Lawrence S. Holt, Jr. They are awarded to a member of each of the four classes in the academic department. Applications are considered after the opening of the University in the fall.

THE ALUMNI SCHOLARSHIPS. These scholarships have been established by the gifts of alumni, and they vary in stipends according to the funds in hand.

THE R. H. LEWIS SCHOLARSHIPS. Four scholarships, endowed by the University Gymnasium Association and called the R. H. Lewis Scholarships, are assigned by the President, and are to be used for tuition in the academic department.

THE GEORGE NEWBY TOMS SCHOLARSHIPS. (Established 1926.) Mr. C. W. Toms, in memory of his son, George Newby Toms, has granted the income from a fund of \$10,000 as scholarships to worthy students, preference being given to students from Durham and Perquimans counties in North Carolina.

THE MARY K. BROWN MEMORIAL SCHOLARSHIP. This scholarship was established in 1931 by Mrs. James M. Brown in memory of her daughter, who for several years was secretary of the School of Commerce of the University. This scholarship is awarded to a worthy student who is dependent upon his own efforts to secure an education.

THE GENERAL ROBERT RANSOM SCHOLARSHIP. This \$200 scholarship, controlled by the United Daughters of the Confederacy in North Carolina, is awarded each year to a lineal descendant of a Confederate veteran.

WILLIAM BLOUNT RODMAN SCHOLARSHIPS. Two scholarships assigned to students at the University from the memorial trust fund created by Colonel W. B. Rodman in memory of his father, William

Blount Rodman. They are assigned by the State Superintendent of Public Instruction, Trustee of the fund.

THE DANIEL G. FOWLE SCHOLARSHIP. An annual scholarship of \$100 was founded in 1928 by Mrs. Walter F. Stearns (Mary H. Fowle) in memory of her father, Governor Daniel G. Fowle. Mrs. Stearns reserves the right to award the scholarship to a member of her own family; otherwise it will be awarded by the Superintendent of the Raleigh Schools and the Principal of the Raleigh High School to one Raleigh student on the basis of merit, character, and scholarship.

THE MARK R. BRASWELL SCHOLARSHIPS. (Established in 1938.) In memory of Dr. Mark R. Braswell, Class of 1888, of Rocky Mount, North Carolina, a fund of \$20,000 has been created for the endowment of scholarships valued at \$200 each to be awarded annually to entering freshmen by the Braswell Scholarship Committee. Four scholarships are awarded annually for a tenure of one year each. The Committee, at its discretion, may extend the tenure, thus enabling the award to be made to a previous holder. The qualifications for award are character, all-round development, high scholastic attainment, and financial need.

THE HERBERT WORTH JACKSON MEMORIAL SCHOLARSHIPS. (Established in 1938.) Endowed by Mrs. Annie H. Jackson of Richmond, Virginia, as a memorial to her husband, Herbert Worth Jackson, of the Class of 1886, and supplemented in 1940 by an additional gift by Herbert Worth Jackson, Jr. The fund maintains two \$2,000 scholarships, awarded to entering freshmen, who shall be native-born residents of North Carolina, nominated by their high schools or preparatory schools. One candidate only may be certified by each school to the University Scholarship Committee, which in turn shall select from all boys thus certified twenty, who shall come to Chapel Hill for interviews with the Jackson Scholarship Committee. The basis of selection shall be high scholastic rank, character, qualities of leadership, achievements, physical health and vigor, and promise of future distinction. A four-year award is made every two years: 1951, 1953, 1955, etc.

BERNARD-GRAIL SCHOLARSHIPS. (Established in 1938.) One or more scholarships of \$150 each, maintained by interest from the Grail Loan Fund. These scholarships were established in memory of Professor William Stanley Bernard who, as faculty adviser, was a source of inspiration and guidance to the Order of the Grail.

THE COUNCIL-MASSEY SCHOLARSHIP. Established in 1941 by C. Knox Massey of Durham, North Carolina, in honor of his father, C. W. Massey, University alumnus, civic and educational leader of Durham, and C. T. Council, University trustee, manufacturer, civic and educational leader of Durham. Scholarships are awarded from time to time as the interest from a principal fund of \$25,000 makes them possible.

THE H. V. WILSON SCHOLARSHIP FOR STUDIES IN MARINE BIOLOGY. (Established originally in 1937, supported subsequently from a fund established jointly by Dr. Henry V. Wilson, Jr., and former students and friends of Professor Wilson.) The holder of this \$100 scholarship is expected to pursue graduate studies or research at the seacoast during the summer of award.

THE KAY KYSER SCHOLARSHIPS. (Established in 1941.) A scholarship in music and a scholarship in dramatic art, established by Mr. Kay Kyser, Class of 1927, each providing one year's study in the University, including tuition, room, and board. Selection of the recipients, made by the Kay Kyser Scholarship Committee each year, is based on character, scholastic rank, qualities of leadership, achievements and promise of future distinction in music or dramatic art.

THE WILLIAMS FELLOWSHIPS IN PHILOSOPHY. (Established in 1941.) Established by the will of Dr. Henry Horace Williams in honor of his mother, Mary Taylor Williams, and his wife, Bertha Colton Williams. The number, value, and recipients of these fellowships are decided each year by the professors in the Department of Philosophy of the University.

THE MARVIN B. SMITH, JR., MEMORIAL SCHOLARSHIP. (Established in 1944.) Established and endowed in 1944 by Mr. and Mrs. M. B. Smith, Sr., Miss Alyse Smith, and J. Harold Smith, of Burlington, North Carolina, as a memorial to their son and brother, Marvin B. Smith, Jr., of the Class of 1926. The fund maintains four scholarships, valued at \$400 each, and annually awarded to entering freshmen who plan to have their major work in the School of Business Administration. Applicants must be residents of North Carolina. The tenure of the scholarship is four years, provided the holder maintains high moral and scholastic standards. The basis of selection shall be high scholastic rank, character, promise of business leadership, and financial need.

THE CHI PSI SCHOLARSHIP. (Established in 1946 by the Trustees of the Chi Psi Fraternity Educational Trust.) One scholarship, not to exceed \$200, to be awarded annually by the University Scholarship Committee to a regularly enrolled junior or senior student member of the Chi Psi Fraternity who has exhibited promise in scholarship and qualities of leadership.

THE ANDREW BERSHAK INTERFRATERNITY SCHOLARSHIP. (Established in 1948.) Established from contributions from University of North Carolina students who are members of various social fraternities as a memorial to Andrew Bershak, Class of 1938. The fund maintains a scholarship valued at \$2,000 covering a four-year tenure (\$500 a year) subject to maintenance of high standing by the recipient as a student at the University. The basis of selection shall be high scholastic rank, character, qualities of leadership, and financial need.

JOSEPHUS DANIELS SCHOLARSHIP. In accordance with the will of the late Josephus Daniels, funds have been provided to establish a scholarship valued at \$500 a year for four years to be awarded to a North Carolina student. This award is made on the basis of scholarship, character and citizenship, and financial need.

THE WILLIAM ISAAC WITKIN SCHOLARSHIP FUND. The income from a fund of \$10,000 to be used as scholarships to be awarded each year by the University Scholarship Committee in accordance with its usual regulations. This fund was established by Mr. Isaac Witkin, of New York City, in gratitude for and in commemoration of the safe return from war service of his son, William Isaac Witkin, Class of 1943.

THE CHARLIE JUSTICE SCHOLARSHIP. One scholarship maintained by interest from a fund of \$10,000 raised by the Tar Heel Club of Durham, North Carolina, from friends and admirers of Charlie Justice, outstanding University athlete, Class of 1950. The scholarship is to be awarded each year by the University Scholarship Committee to a graduate of a North Carolina high school who has demonstrated outstanding ability as a football player and who can otherwise qualify for a University scholarship.

THE ERIC SCHWARZ MEMORIAL SCHOLARSHIP. This scholarship of \$250 is awarded annually by the University Scholarship Committee as a memorial to Eric Schwarz, a freshman at the University in 1943-1944 who was killed in action in Germany, February 18, 1945. The scholarship is provided by his parents, Dr. and Mrs. Berthold T. D. Schwarz of Montclair, New Jersey. The award is made to an entering freshman with special talents in music.

These scholarships are not open to students in the Schools of Law, Medicine, Dentistry, Library Science, Public Health, Social Work, and Nursing. For scholarships open to students in these schools, please see the special bulletins of the schools.

This list does not include certain annual contributions for scholarships, which are not on an endowment basis.

APPLICATION FOR SCHOLARSHIP

All applications for scholarships must be filed in the Student Aid Office. The University Scholarship Committee makes the awards, annually, on or about May 15 and from time to time during the year. All applications must be in the regular form prescribed by the University. Forms are supplied on request to the Director of Student Aid.

Free Tuition

Free tuition is given to residents of North Carolina who have physical handicaps. Information and application forms are available upon request to the Director of Vocational Rehabilitation Division, State Department of Public Instruction, Raleigh, North Carolina.

Loan Funds

THE DEEMS FUND. (Established in 1879.) A fund of \$600 was established by the Reverend Charles Force Deems, D.D., late pastor of the Church of the Strangers, New York City, formerly a professor in the University, in memory of his son, Lieutenant Theodore Disoway Deems. In 1881, the fund was enlarged by a gift of \$10,000 from Mr. William H. Vanderbilt.

THE MARTIN FUND. Interest from this fund, established by the bequest of Mr. Thomas D. Martin, of Raleigh, became available for loans during the session of 1908-1909.

THE HOGUE FUND. Interest from a fund of \$4,000, established by the Reverend R. W. Hogue, of Baltimore, Maryland, is to be loaned to worthy students in the University.

THE HEWITT FUND. Interest from a fund of \$18,700, established in 1916 by the bequest of Mr. Joseph Henry Hewitt, of Princess Anne County, Virginia, will be used for loans to "needy and deserving students" of the University.

THE HOLT FUND. The principal of a fund of \$10,000, established by Mr. Lawrence S. Holt, Jr., of Burlington, North Carolina, is to be

loaned to "worthy and needy students of the University." In addition, four scholarships in the University have been set up from the income of the fund.

THE VICTOR S. BRYANT FUND. The principal and interest of a fund of \$7,500, established by the bequest of Mr. Victor S. Bryant, of Durham, North Carolina, will be used for loans to "worthy and needy young men" at the University.

THE SEELY FUND. A fund of \$1,000 has been established by Mr. F. L. Seely, of Asheville, North Carolina, the principal of which is to be loaned to worthy and needy students, and the income therefrom to be added to the principal.

THE E. S. BLACKWOOD MEMORIAL LOAN FUND was created by bequest of Miss Katherine B. Underwood, of New York City, and consists of \$10,000 "to be used as a loan fund for needy students." This fund is administered in the same manner as the Deems Fund.

THE A. B. ANDREWS LOAN FUND. In May, 1925, the five children of the late Colonel A. B. Andrews (William J. Andrews, Class of 1891; Alexander B. Andrews, Class of 1893; Mrs. W. M. Marks; John H. Andrews, Class of 1897; and Graham H. Andrews, Class of 1903) established a fund of \$2,500 of which the principal and interest are to be loaned to worthy students. This fund has been increased to \$4,750 through subsequent gifts from Mr. Alexander B. Andrews, of Raleigh, North Carolina. The A. B. Andrews Loan Fund is administered as are other loan funds from the University and is established as a memorial to Colonel A. B. Andrews, a noted railroad builder in North Carolina and a Trustee of the University. It is requested by the donors that assistance from this fund be rendered first to students from those counties of North Carolina in which Colonel Andrews built railroads and second to students from those counties through which lines of the S.A.L., Norfolk-Southern, and Southern Railway systems run.

THE J. E. LEAR FUND. This fund of \$5,244 became available in 1924. The fund was the result of installation work done by the senior class in electrical engineering under the supervision of Professor J. E. Lear.

THE JOSEPH E. POGUE LOAN FUND. This fund of \$1,000 was presented to the University in April, 1930, by Mrs. Joseph E. Pogue as a memorial to her husband, the late Mr. Joseph E. Pogue. The principal and interest are to be loaned to deserving students.

THE EDMONDS LOAN FUND. This fund of a little over \$800 has been set up by the Class of 1910 as a memorial to W. R. Edmonds, a member of that class.

GRAIL LOAN FUND. In June, 1930, the Order of the Grail, an undergraduate organization at the University of North Carolina, gave \$1,400 to be known as the Grail Loan Fund. Additional gifts by the Order of the Grail and income from interest have increased the fund to \$3,000. The principal of this fund is loaned to worthy students and the income is used to support the Bernard-Grail Scholarships.

THE ALDEN JOSEPH BLETHEN, III, MEMORIAL LENDING FUND. During the fall of 1930, Colonel C. B. Blethen, of Seattle, Washington, gave \$2,000 to be known as the Alden Joseph Blethen, III, Memorial Lending Fund. This he did as a memorial to his son, A. J. Blethen, III, a member of the Class of 1934. The principal of the fund is to be loaned to deserving students.

THE ROCKINGHAM COUNTY ALUMNI LOAN FUND. In 1932, a fund of \$713.32 was advanced by the Rockingham County Alumni Association. It is subject to recall by the Association.

THE RHO CHI LOAN FUND. The Xi Chapter of the Rho Chi Honorary Society has established a loan fund for deserving students of pharmacy.

THE CHARLES L. COON MEMORIAL LOAN FUND. A fund of \$1,415 established by the administrators of the Charles L. Coon Memorial Loan Fund of Wilson, North Carolina, in September, 1934. The funds to be loaned to graduates of the Charles L. Coon High School of Wilson, North Carolina, upon the written approval of the school's superintendent and the chairman of the Board of Trustees.

AMERICAN ASSOCIATION OF UNIVERSITY WOMEN LOAN FUND. (Established 1936.) A fund of approximately \$1,800 established by the local chapter of the American Association of University Women and administered by the University Loan Funds Office. Loans are made to women students enrolled in the Graduate School and in the School of Library Science. Applications are subject to approval by a committee of the Association upon recommendation of the Dean of the Graduate School or the Dean of the School of Library Science. Loans are limited in time to two years and require interest at the rate currently charged by the University for its regular loans.

THE JOHN B. WEAVER LOAN FUND. In 1937, a fund of \$1,915 was established by Dr. William Jackson Weaver of Asheville, North Carolina, in memory of his father, John B. Weaver. It is administered under the same terms as the Deems Fund.

THE SHERMAN LOAN FUND. A fund established in 1939 by Dr. Joshua Sherman, Class of 1906, of Lancaster, Pennsylvania, and amounting at present to \$1,419.28. The fund is available for student loans on the usual terms.

THE MAJOR DAVID C. AND MARTHA REEVES EDWARDS LOAN FUND. A fund established June 10, 1940, by a gift of \$1,000 as a memorial to a father and mother of Alleghany County who educated four sons at the University. Donors have requested that assistance from this fund be rendered first to relatives, second to students from Alleghany County, and third to other students from North Carolina and states adjacent to North Carolina. In any case, however, the recipient of the loan must comply with all requirements imposed by the University Loan Fund Committee.

THE WINSTON-SALEM DRUGGISTS' LOAN FUND. Organized Druggists of Winston-Salem in 1942 gave \$200 to be loaned to worthy students of pharmacy.

THE LOAN FUND OF THE CLASS OF 1942. The class gift of \$350 in 1942 was set up as a loan fund under the usual terms for the administration of such funds.

DAVID ANDERSON ALLEN FUND. Established in 1945 by the wife (Jennie Ann Efirid Allen) and children (Paul Haywood and Mary Ann) of David Anderson Allen, who graduated with the Class of 1938. Lieutenant Allen died in the service of his country on March 19, 1945, on the *U. S. S. Franklin*. The income from this fund is available as a loan or gift to deserving students at the University from Mecklenburg County, North Carolina.

THE DR. JOHN R. EDWARDS LOAN FUND. This fund was established in 1945 by a gift of \$1,500 to the University by Dr. B. O. Edwards, of Asheville, North Carolina, as a memorial to his son, the late Dr. John R. Edwards, a graduate of the University. This amount was later supplemented by an additional \$1,500 from Dr. Edwards' daughter, Mrs. Foster Mackenzie, making the total fund \$3,000. The principal and interest are to be loaned to deserving students, with preference given to North Carolina premedical students.

THE OLIVIA DUNN STUDENT LOAN FUND. (Established in 1946.) A fund of approximately \$25,000 established at the bequest of Mary Olivia (Birdie) Dunn of Wake County as a memorial to her mother. The fund is to be loaned to worthy students in accordance with the usual terms of the University Student Loan Funds.

THE SALLIE A. HUNT DENTAL MEMORIAL LOAN FUND. This fund was established in 1950 by a gift of \$1,000 to the University from Dr. R. Fred Hunt of Rocky Mount, North Carolina, as a memorial to his mother, the late Sallie A. Hunt who was born in Nash County. The principal and interest are to be loaned to deserving North Carolina junior and senior (preferably senior) dental students.

The Emergency Student Loan Fund

In the winter and spring of 1932, the University faced a genuine emergency growing out of an announced reduction of state appropriations by 30 per cent, and the fact that between five hundred and seven hundred students were without funds with which to continue their schooling. When this situation was presented by President Graham, students (\$2,057.14), faculty (\$2,035.38), the people and community organizations of Chapel Hill (\$970.22), various chapters of the D.A.R., U.D.C., and other committees of women, began building a student loan fund. Alumni and friends of the University everywhere contributed to raise the total of new loan resources to \$109,000, known collectively as "The Emergency Student Loan Fund." The portions of that fund which for some appropriate reason were separately established are listed below. Unless otherwise indicated, the funds are loaned on the same terms as is the Deems Fund.

THE W. C. COKER LOAN FUND. A fund of \$500 established February 2, 1932, by Dr. W. C. Coker, head of the Department of Botany of the University.

THE JESSIE KENAN WISE LOAN FUNDS. A loan fund of \$25,000 established February 4, 1932, by Mrs. Jessie Kenan Wise, of Wilmington, North Carolina, and another loan fund of \$47,000 in securities, the income from which may be loaned to students immediately, and the principal of which may be similarly used when made available through sale of the securities as opportunity for sale on favorable terms may arise.

THE BURTON CRAIGE LOAN FUND. A fund of \$1,000 established February 6, 1932, by Mr. Burton Craige, class of 1897, of Winston-Salem, North Carolina.

THE BLAIR LOAN FUND. A fund of \$500 established March 2, 1932, by the Honorable David H. Blair, class of 1898, and Mrs. David H. Blair, of Washington, D. C.

THE SARAH WATTS MORRISON LOAN FUND. A fund of \$1,000 established March 4, 1932, by Mrs. Sarah Watts Morrison of Durham and Charlotte, North Carolina.

THE STUDENT LOAN FUND OF THE NORTH CAROLINA CONGRESS OF PARENTS AND TEACHERS, INC. A fund of \$750 loaned to the student loan funds by Mrs. J. W. Burke, Treasurer, by authority of the organization named above.

THE SARAH GRAHAM KENAN LOAN FUND. A fund of \$1,000 established March 7, 1932, by Mrs. Sarah G. Kenan, of Wilmington, North Carolina, to be used first by a designated student. When repaid, Mrs. Kenan will indicate its further usage.

THE MILO M. PENDLETON LOAN FUND. A fund of \$1,000 established March 15, 1932, by Mrs. Katharine Pendleton Arrington as a memorial to her brother, Milo M. Pendleton, of the Pharmacy Class of 1902.

THE RICHMOND, VIRGINIA, ALUMNI ASSOCIATION LOAN FUND. A fund of \$320 given in 1932 by the organization named above with the request that it be set so as to receive annual additions from the donors.

THE EDRINGTON SPENCER PENN AND CHARLES ASHBY PENN, JR., LOAN FUND. A fund of \$1,000 established April 14, 1932, by Mrs. Charles Ashby Penn, of Reidsville, North Carolina.

THE C. W. TOMS LOAN FUND. A fund of \$1,000 established May 19, 1932, by Mr. C. W. Toms, class of 1889, of New York City, in memory of his son, the late George Newby Toms, class of 1928.

THE MARGARET MCCAULL CARMICHAEL LOAN FUND. On May 25, 1932, a fund of \$1,000 was established by W. D. Carmichael, Class of 1897.

THE ANNIE LOUISE WATTS HILL LOAN FUND. A fund of \$1,000 established by Mr. John Sprunt Hill, of Durham, North Carolina, on June 4, 1932, as a memorial to his wife.

THE GEORGE BASLEY HISS LOAN FUND. A fund of \$10,000 established in 1932 by Mrs. Bertha T. Hiss, of Charlotte, North Carolina, in memory of her husband, George Basley Hiss.

APPLICATION FOR LOANS

Applications for loans will be considered when made in person by students registered in the University. The funds are limited in amount and are loaned only on the security of two approved signatures and at a low rate of interest.

Self-Help Work

There are jobs available for students wishing to earn part of their expenses. Students work in the libraries, dining halls, Graham Memorial, Book Exchange, dormitories, Woollen Gymnasium, Kenan Stadium, Buildings Department, and other University divisions and offices. All jobs are assigned by the Self-Help Committee, solely on the bases of scholastic merit, financial need, and good character. Holders of jobs are required to maintain a scholastic average of at least C from year to year. Jobs off the campus, in Chapel Hill homes and in business firms, are not assigned by any committee or division of the University. Such work is secured by the efforts of the student, the Director of Student Aid helping wherever possible. All inquiries about an application for work should be mailed to the Director of Student Aid before May 15, after which the jobs are assigned.

It is difficult for first-year students to do self-help work and carry successfully a full schedule of academic work. They are urged to devote full time, if possible, to their studies and related activities.

The Committee assigns the available jobs to those who, in its judgment, are most urgently in need of financial aid and who show high scholastic achievement. Each applicant is notified by personal letter of the Committee's decision on his application.

MEDALS AND PRIZES

THE MANGUM MEDAL IN ORATORY. (Established in 1878.) A gold medal founded by the Misses Mangum, late of Orange County, in memory of their father, Willie Person Mangum, Class of 1815, is continued by two lines of his descendants as follows: Mr. Willie P. Mangum Turner of Winston-Salem, North Carolina, and Mr. Willie P. Mangum Weeks of Washington, D. C., Class of 1915. This medal is awarded to that member of the senior class who, in the opinion of a group of judges, gives the most excellent oration at an annual oratorical contest.

THE EBEN ALEXANDER PRIZE IN GREEK. (Established in 1887.) A prize of \$10 is offered annually to that member of the sophomore class who shall present the best rendering into English of selected passages of Greek not previously read.

THE BINGHAM PRIZE IN DEBATE. (Established in 1889.) This prize was established by the late Mr. R. W. Bingham in memory of his great-grandfather, father, and brother, and is continued by Mr. Barry Bingham. It is awarded annually to that student who, while actively participating in debating, shall have been most useful in the support of this activity.

THE BRYAN PRIZE IN POLITICAL SCIENCE. (Established in 1903.) A prize will be given annually for the best thesis in political science. The fund was established by the late William Jennings Bryan.

THE ARCHIBALD HENDERSON PRIZE IN MATHEMATICS, formerly THE WILLIAM CAIN PRIZE. (Established in 1908.) A gold medal is offered annually to that student who shall take the highest rank in Mathematics 32-33 (or in Mathematics 34-35-36). No student will be recommended for the prize unless he attains to grade B.

THE MILDRED WILLIAMS BUCHAN PRIZE. (Established in 1920.) A fund of \$1,000 was given by Mr. Edward Robertson Buchan in memory of his wife. The income of this fund is to provide a prize in the Department of Philosophy.

THE PATTERSON MEDAL. (Established in 1924.) A gold medal is offered annually by Dr. Joseph F. Patterson in memory of his brother, John Durant Patterson. This medal is awarded for general excellence in athletics to a student selected by a special committee.

CHI OMEGA PRIZE IN SOCIOLOGY. A prize of \$25 is awarded by the local chapter of the Chi Omega Fraternity to the undergraduate woman student who writes the best paper on some subject in the field of sociology or public administration. The subject will be submitted to the undergraduate student body some time before the fifteenth of February. Papers must be handed in by the fifteenth of May. The Department of Sociology will select the subject and judge the papers. The prize will be awarded at commencement.

THE BUXTON WILLIAMS HUNTER MEDAL IN PHARMACY. A gold medal is offered annually by Mr. D. R. Davis, of Williamston, in honor of his uncle, Mr. Buxton Williams Hunter, of New Bern, and is

awarded to that student who has shown outstanding qualities of leadership and scholarship and who has done conspicuous work in the Student Branch of the N.C.P.A.

THE LEHN AND FINK GOLD MEDAL IN PHARMACY. (Established in 1924.) This medal is given annually by Lehn and Fink of New York City, and is awarded to the student in the graduating class making the highest average during the four years of study.

THE ALGERNON SYDNEY SULLIVAN AWARD. (Established in 1928.) To be bestowed annually upon one man and one woman of the graduating class who have best demonstrated an attitude of unselfish interest in the welfare of their fellowmen. The award shall not be based upon scholastic, athletic, or other collegiate attainments.

THE DELTA SIGMA PI AWARD. (Established in 1931.) This award is given annually to the senior in the School of Business Administration who has the highest academic average.

THE ROLAND HOLT CUP IN PLAYWRITING. (Established in 1936 by Mrs. Roland Holt in memory of her husband.) This award is made each year by the Department of Dramatic Art for excellence in playwriting.

THE JOHN JOHNSTON PARKER, JR., MEDAL FOR UNIQUE LEADERSHIP IN STUDENT GOVERNMENT. (Established in 1941.) This gold medal is given annually by Judge and Mrs. John J. Parker in memory of their son, John Johnston Parker, Jr., Class of 1937, who rendered distinguished and sacrificial leadership as President of the Student Council in one of the critical years in the history of Student Government. This medal is awarded by a special committee appointed by the President of the University to that student who has demonstrated most clearly the highest qualities of leadership in perpetuating the spirit of honor and the process of student self-government.

THE PHI BETA KAPPA AWARD. (Established in 1941.) An award amounting to \$100 is given annually by the local Chapter of the Phi Beta Kappa National Honorary Fraternity to that member of the rising junior class (eligible for self-help work) who has made the highest scholastic average during his freshman and sophomore years.

THE ERNEST H. ABERNETHY PRIZE IN STUDENT PUBLICATION WORK. Mr. Ernest H. Abernethy, 1922, of Atlanta, established in 1941 an annual award of a plaque and \$50 in cash, which is to be presented to

the student who is adjudged by a committee to have done the most distinctive work during the current year in the field of student publications.

THE FOY ROBBERSON, JR., MEDAL. A gold medal is offered by Dr. and Mrs. Foy Roberson in memory of their son, Foy, Jr., Class of 1940, varsity basketball 1939 and 1940; Second Lieutenant, Army Air Corps; killed in collision at sea, December, 1941. Awarded annually for the chief contribution to team morale in basketball.

THE JOSEPHUS DANIELS SCHOLARSHIP MEDAL. (Established in 1941.) A gift from the family of the Honorable Josephus Daniels to be invested and the income used to provide annually the Josephus Daniels Scholarship Medal for the University of North Carolina unit of the Naval Reserve Officers Training Corps.

THE VALKYRIE CUP AWARD. (Established in 1941.) The Valkyries are given funds annually from the Coed Senate to make this award available to the senior woman adjudged most outstanding on the University campus.

THE ALPHA CHI SIGMA PRIZE IN CHEMISTRY. (Established in 1942.) A prize of \$100 is awarded annually by the local Chapter of the Alpha Chi Sigma Fraternity to the undergraduate student of chemistry selected by a committee as best exemplifying high scholarship, leadership, and personality.

THE ALBERT RICHMOND BOND AWARD IN ENGLISH LITERATURE. This award was established in 1947 by Professor Richmond P. Bond in memory of his father. It is awarded annually by the Department of English to the member of the graduating class with the highest distinction in English literature.

THE WILLIAM CHAMBERS COKER AWARD IN SCIENCE. (Established in 1948.) A cash award of \$50 is awarded annually by the Elisha Mitchell Scientific Society to the graduate student whose thesis or dissertation shall be adjudged the best of those submitted for a graduate degree in the Science Division.

THE ALPHA KAPPA PSI SCHOLARSHIP KEY. Alpha Tau Chapter of Alpha Kappa Psi, a professional fraternity in commerce, awards annually the Alpha Kappa Psi scholarship key to the male senior student pursuing a degree in the School of Business Administration who has attained the highest scholastic average for three years of collegiate work in this University.

CAROLINA-DUKE PRIZE IN LITERARY CRITICISM. (Established in 1949.) A prize of \$100 is offered by Professor Norman Foerster for the best critical essay submitted by a student at the University of North Carolina at Chapel Hill or a student at Duke University. It is awarded at the discretion of the donor.

REGULATIONS

Special Notice to Students

This catalogue, issued in the spring of each year, is intended to give such a description of the work of the University and such a digest of its rules as are needed by the students. Neither the courses announced nor the rules given are valid beyond the succeeding year, for before the end of the succeeding year a new catalogue will have been issued superseding all previous catalogues. Ordinarily a student may expect to be allowed to secure a degree in accordance with the requirements of the curriculum laid down in the catalogue in force when he first entered the University, or in any one subsequent catalogue published while he is a student; but the faculty reserves the right to make changes in curricula, as in rules, at any time when in its judgment such changes are for the best interests of the students and the University.

Registration

All students are expected to present themselves for registration in accordance with the plan of registration established for the current year. All students registering here for the first time will report for physical examination to the Infirmary and present at registration a clearance card from the University Physician. Failure to attend to this matter before registering causes extra expense to the University and entails for the student the payment of an extra charge of five dollars (\$5.00).

Registration for credit for any course is limited to the first three full days of instruction of a quarter, unless the late registration is approved by the instructor concerned and the dean.

Payment of Bills

Bills for the fall quarter are payable at the time of registration. Bills for the winter and spring quarters are payable at the Cashier's office on the first class day of the quarter, and thereafter according to a schedule announced. Failure to pay or to make proper arrangements for payment results in the assessment of an extra fee of \$5.00.

Delayed Registration

Any student registering later than the time appointed for his registration must pay five dollars (\$5.00) as an additional fee for delayed registration. *No appeal from the imposition of the late registration charge of five dollars will be granted, unless the delay results from circumstances clearly beyond the student's control.* Such appeals must be made in writing to the Chancellor, must show justification for the delay in registering, and must bear the approval of the dean of the division of the University in which the appellant is enrolled.

Arrangement of Courses

Attention is called to the reduction of credit for freshman and sophomore courses when taken late in the student's career. Only half credit is allowed if a required freshman course is taken after a student begins his junior year or if a required sophomore course is taken after he begins his senior year.

No student will be allowed to take fewer than three full courses a quarter, unless he has the permission of his dean. A load up to eighteen hours a week may be taken without any restrictions; one of nineteen or twenty hours a week requires a scholastic average of at least C in the preceding quarter; one of twenty-one or more hours a week requires a scholastic average of at least B in the preceding quarter and the approval of the student's dean. A student may not take more than twenty-two hours a week.

A student desiring to change his courses must make written application, which, after approval by his faculty adviser, will be considered by the dean. The written permission of the dean must be presented at Registration Hall.

Changes in registration are limited to the first three full days of instruction of a quarter.

Assignment of Rooms

The rooms in the University dormitories and accommodations for families are assigned to students by the Housing Officer, subject to the special regulations given below.

The University reserves the right to require any student whom it considers, for any reason, an undesirable tenant to vacate a room in the University dormitories.

In order to retain his room for the next scholastic year, each student must file with the Cashier before April 20 an application and a

deposit of \$6.00 as an option. The rooms thus applied for will be retained until September 1, when first payment of rent is due. The option deposit will be forfeited in case the applicant does not himself pay the rent and occupy the room. Rooms not applied for or made vacant by failure to pay at the proper date will be assigned in the order of application.

The right to occupy a room is not transferable and terminates with the expiration of the lease. Any attempt on the part of an occupant of a room to sell or transfer his right to occupancy will be considered a fraudulent transaction and will result in forfeiture of the room by the new lessee.

The occupant of a room will be held directly responsible for any damage done to his room or to its furniture.

No dogs shall be kept in the University dormitories, trailer courts, Victory Village, Abernethy Hall, or Carolina Inn Apartments. Breach of this regulation leads to forfeiture of the room.

Conduct

By order of the Board of Trustees the faculty is directed to discipline or dismiss from the University any student who is known to engage in drinking intoxicating liquors, gambling, hazing in any form (presence at hazing is regarded as participation), or to be guilty of dissolute conduct. See also Student Government, pages 85-87.

Students persistently neglectful of duty, or addicted to boisterous conduct or rowdiness, may be required to leave the University.

Students, unless bona fide residents of Chapel Hill, when suspended from the University for disciplinary reasons, must leave the campus and Chapel Hill within forty-eight hours or forfeit the right to readmission at any time.

Attendance

Regular attendance upon meetings of classes is considered a student obligation.

The responsibility for attendance is placed in the hands of the instructors in the various courses. Departments may make uniform regulations governing attendance if they so desire. No "allowed" number of cuts is automatically granted to a student in any course.

Instructors will keep a daily record of attendance and report to the Central Office of Records the name of any student who has been absent three consecutive meetings of a class.

Instructors will warn a student who has been absent more than seems reasonable. Further absences give instructors the right to request the dean concerned to exclude such a student from the class. If the dean is aware of extenuating circumstances, he will confer with the instructor before action is taken.

Any student who has attained the honor roll during two successive quarters will be exempt during the ensuing quarter from the regulations governing absences and exempt thereafter as long as he maintains the honor roll average. To the foregoing regulation there are to be the following exceptions: (a) the privilege of absences does not apply to requirements of attendance relative to written or laboratory work or to quizzes and examinations; (b) the privilege earned by the student will be forfeited if immediately before or after holidays he is absent without excuse; (c) it is understood that the instructor in any course has the right to consider participation by the student in class discussion as a necessary part of the work upon which he bases the final grade. Thus a student having the honor roll privilege who absents himself more than the instructor thinks is reasonable for this purpose may earn a lower grade, as a result of non-attendance, than would be shown by the examination grade alone.

Departments or instructors may, on occasion, permit a student to attend or engage in an educational activity other than that of the class as a substitute for class attendance.

The deans are expected to use their judgment in the matter of allowing a student to remain in residence after having been dropped from one or more classes. The deans will also cooperate with the instructors in bringing students to a realization of the consequences of excessive absences.

Instructors will report to the Central Office of Records all absences occurring at the beginning of each quarter and immediately before and after holidays. A fee of \$2.50 is charged the student for each absence immediately before and after a holiday within a quarter, with the proviso that the total fee shall not exceed \$7.50.

Absences from class attendance for cause may be excused. Such absences are those resulting from (a) participation in recognized University activities, as those of the Glee Club, debating and athletic teams, and the Playmakers, when occurring away from Chapel Hill—such excuses are to be issued in advance by the Recorder; (b) actual illness, certified to by the attending physician within forty-eight hours

from the beginning of the illness; and (c) emergencies caused by extraordinary circumstances, when excused in advance by the student's dean.

The Central Office of Records will furnish to the student upon request and for the information of his instructors a record of days he has been excused.

Any student who is absent from a quiz or an examination at the appointed time without excuse as defined above will not be permitted to make up this quiz or examination. Any department may impose a fee not exceeding one dollar (\$1.00) upon the student having excuse for such absence for the privilege of taking a special quiz or examination or a make-up laboratory exercise.

No student, unless exempted by having attained the honor roll privileges of optional attendance, shall be given credit in the University for any course unless he has attended at least 75 per cent of the class meetings of the course during the quarter.

Departments may require students who have been absent, whether the absences are excused or not, to make up work covered during the periods of absence.

The grade of a student who quits a course without the permission of the dean of his college or school is recorded officially as F.

The grade of a student who drops or is dropped from a course in which he is failing at that time shall be recorded as F unless, in the judgment of his dean, his failure was caused by circumstances beyond his control.

Examinations

COMPREHENSIVE EXAMINATIONS

Only a student who is a candidate for honors is now required to take a comprehensive examination. This examination is in the field of the student's major.

QUIZZES

By action of the faculty, quizzes are not to be given during the last five days of any quarter.

SPECIAL EXAMINATIONS

Special examinations for the removal of conditions and for advanced standing will be given in 1951 as shown on page 121.

Friday, September 14

8:30 A.M.	11:00 A.M.
Economics	Education
Romance Languages	English
Zoology	German
2:00 P.M.	4:30 P.M.
Geology and Geography	Comparative Literature
Psychology	Greek
Art	Physics
Physical Education	Sociology

Saturday, September 15

8:30 A.M.	11:00 A.M.
Botany	Chemistry
Latin	Business Administration
Journalism	Philosophy
2:00 P.M.	Dramatic Art
Music	4:30 P.M.
History	Any examinations made necessary by conflicts.
Mathematics	
Political Science	

A special examination may be taken as scheduled above by a student who has received the condition grade (E). Provided he has no conflict with a course regularly taken by him in the quarter, such a student may take the examination with the class in the same subject at any regular quarter examination within a year after he has made the grade E. A senior who makes a grade of E in his last quarter of residence is allowed to take a special examination for removal of the E not earlier than three days after his last examination in that period of examinations. The grade E becomes F if the student fails to pass a re-examination within one year.

Examinations to remove the grade of E at other times than those specified in the preceding paragraph may be arranged between the instructor and the dean of the school involved.

Special examinations for students who have been officially excused from regular examinations on account of sickness or have been absent for some necessary cause and therefore excused may be held at suitable times fixed by a recorder in the Central Office of Records and the instructors concerned. Such examinations must be taken within twelve months of the date of absence.

To be entitled to take a special examination within a term, or at the September period, or at a regular quarter examination period, the student is required to file a written request with a recorder in the Central Office of Records at least one week before the time for the examination.

Papers handed in at a special examination by students who have been officially excused from the regular examination will be graded by the usual system; all others will be marked "passed" or "failed."

REGULAR FINAL EXAMINATIONS

Regular written examinations are required at the end of each quarter in all courses except those whose nature makes written examinations unnecessary. *Approval of such exceptions must be secured in advance from the Dean of the College of Arts and Sciences.*

Papers written in final examinations are not to be carried away from Chapel Hill to be graded.

Final examinations except in laboratory practice may not be held at any times other than those specified in the preceding regulations.

No examinations may be held later than 7:00 P.M.

All examinations must be held in Chapel Hill.

In exceptional cases arrangements can be made to take examinations *in absentia*. There is a fee of \$10.00 for each such examination. Applications for examinations *in absentia* should be directed to the dean of the school in which the student is registered.

Examinations should be limited to a period of three hours. In courses in which a considerable portion of the examination is of a practical nature the instructor may extend the time at his discretion.

The examination schedule at the end of each quarter having once been fixed cannot be changed, and the examination must be held at the time shown on the schedule.

No students other than the following may take the examination in any course: (1) regularly enrolled members of the class whose names have been reported from the Central Office of Records to the instructor as having registered in due form for the course; and (2) those whose names have been reported from the Central Office of Records as having the right to take special examinations in that course.

Any student absent from an examination without an official excuse, from the University Physician or his dean, or present and failing to submit examination papers is reported absent. This mark is equivalent in every respect to grade F or failure, and is so recorded in the Central Office of Records.

Each student is required to subscribe his name to the following pledge or its equivalent on every paper: "I hereby certify that during this examination I have neither given nor received aid." The instructor will not report a grade for any student whose examination paper lacks this pledge.

Schedules of examinations at the ends of the quarters and in the fall are to be so arranged that examinations set for the last day of the period shall be set for the first day of the next period.

Standing

After the close of each quarter, reports of the standing of all students in all their studies are sent to parents or guardians. The reports are based upon the following system of marking:

Grade A, Excellent.	Grade D, Barely passed.
Grade B, Good.	Grade E, Conditioned.
Grade C, Fair.	Grade F, Failed.
Grade I, Work incomplete.	

The grade I may be converted into one of the other grades by completing within a period of twelve months such additional assignments as may be required by the instructor in the course. A grade of I not so converted becomes F.

When a student has shown marked deficiency in the use of English in any course, his grade in that course may have attached a "composition condition" (cc). This condition, while not affecting a student's eligibility for continuance in the University, must be removed before final credit will be allowed. A student who receives such a condition must take a diagnostic test before the middle of the following quarter, and his registration for the next quarter following this quarter may not be completed until he has taken the test. If this test shows that the student needs to take a course or laboratory work to remove his condition, he must proceed actively and systematically toward the removal of his condition in the second quarter following that in which he receives it. The Secretary of the Committee on Conditions in English Composition will determine those who need remedial work.

A student must attain a grade of D to pass in any study. Grade E indicates that the student is conditioned but may remove the deficiency by special examination as explained above. A satisfactory re-

examination changes the grade E to D. Students receiving grade F must repeat the study to receive any credit for it.

Any student, after conference with the instructor concerned, may appeal from a "course grade," provided the appeal is presented in writing to the Chancellor within thirty regular college days after the grade has been reported. The Chancellor, after bringing the appeal to the attention of the chairman of the department concerned, will refer it for a final decision to the administrative board of the college or school in which the student is enrolled.

ELIGIBILITY FOR GRADUATION

To be eligible for graduation, a student enrolled before September, 1947, must secure a grade of C or higher on at least half of his work; a student first enrolled in or after September, 1947, must secure an over-all average of C.

Interpretation of this ruling:

(1) A student who completes the required courses but with grades which do not entitle him to his degree will be allowed to take additional *junior-senior courses* until he meets the requirement of the rule.

(2) A transfer student with advanced standing will come under this rule. In and after September, 1947, an over-all C average in the work presented is required for admission to advanced standing.

In the transfer of grades from another institution, work with the lowest passing mark is counted as work passed but not as hours credited toward graduation.

(3) To be eligible for graduation, a student must secure the grade of C or higher on at least thirty quarter hours of work in his major.

(4) Every candidate for a degree must present at least a C average (one quality point for each course undertaken). The result obtained by dividing the total number of quality points by the total number of courses undertaken must be 1.0 or higher. The quality points are given as follows:

A=3 quality points per whole course

B=2 quality points per whole course

C=1 quality point per whole course

D=no quality points

E=no quality points

F=no quality points

A half course (one carrying $2\frac{1}{2}$ or 3 quarter hours) yields half the quality points indicated in the table.

This applies only to the work taken at this University; grades transferred from another institution are not considered in computing the C average.

RANK BY CLASSES

A student to be ranked as a sophomore must have passed at least thirty-six quarter hours; to be ranked as a junior, at least seventy-eight quarter hours; to be ranked as a senior, at least one hundred thirty-six quarter hours.

ELIGIBILITY FOR CONTINUED RESIDENCE

An undergraduate student, in order to be eligible to continue in the University, must qualify according to the following requirements: A freshman must pass at least one full course each quarter and six full courses during his first three quarters. If he is in residence only two quarters, he must pass four full courses. After his third quarter a student must pass at least one full course each quarter and a total of seven full courses during the fourth, fifth, and sixth quarters. If he is in residence only two of these three quarters of the normal sophomore year, he must pass a total of five full courses. After the sophomore year, or first six quarters, the student to remain eligible must pass at least one full course each quarter, four full courses in any two consecutive quarters, and seven full courses in any three consecutive quarters. Ineligible persons are not to be considered members of the University. In case a student has been handicapped by circumstances beyond his control, he may appeal for readmission to the Committee of Deans by means of a written petition stating his case and sent to his dean. Deficiencies may be made up by correspondence work or in the summer quarter. An additional full course over the minimum number of courses required to remain in the University must be taken if the student is to make himself eligible by correspondence or summer work in this University. A student may not make himself eligible by taking work at another institution, unless approval by the Director of Admissions and his dean is secured in advance.

If a total load of two and one-half or more courses is taken during one summer quarter by a student in or after his sophomore year, the summer quarter is counted as a regular term, subject to the rules of eligibility stated here.

No student who fails to qualify under these regulations may be readmitted to any division of the University except by vote of the

Committee of Deans. The student must present written application for readmission to his dean before the opening of any term. Action upon such application is taken by the Committee of Deans.

Withdrawals

If a student wishes to withdraw at any time other than the end of a term, a formal withdrawal, which is prerequisite to honorable dismissal or re-entrance to this institution, must be approved by the dean. Such a withdrawal will be approved only after full investigation of the circumstances and after the lapse of twenty-four hours from the time the first application is filed with the dean. The withdrawal form after approval by the dean must be filed promptly with a recorder in room 302, South Building.

If a student withdraws after the middle of the quarter and is reported as below passing in two or more courses, that quarter will be counted as a quarter in residence in all computations of his requirements for readmission. If a student withdraws before the middle of the quarter, it will be left to the discretion of the dean as to whether or not that quarter is to be counted as a quarter in residence. The dean's verdict will be indicated specifically on the form used for withdrawal.

To a student withdrawing within the first eight weeks of a quarter, refund on a pro-rata basis of the amount paid for *tuition* is made.

Fraternities

Students may join fraternities after registration at the opening of any quarter, provided they are eligible under the special regulations of the faculty as announced by the Standing Committee on Fraternities.

Transcripts of Record

Honorable dismissal has reference to conduct and character only. It will not be granted unless the student's standing as to conduct and character is such as to entitle him to continue in this University. Furthermore, in every statement of honorable dismissal full mention will be made of any probation, suspension, or other temporary restriction imposed for unsatisfactory conduct which is still in force when the papers of dismissal are issued.

Statement of record has reference to the recorded results of a student's work in the classroom. It will in every instance contain all the important facts pertaining to the student's admission, classification,

and scholarship. In particular, no partial or incomplete scholastic record (for example, with failures omitted) will be given without clear evidence that it is partial or incomplete. If the student's scholarship has been such as to prevent his continuance in this University or to render him subject to any probation, suspension, or other temporary restriction which is still in force at the date of the record, a plain statement of any and all such facts will be included. Such information will be given as will make clear the system of grades employed, the number of exercises a week devoted to each course, etc.

Transcripts of record, except the first, which is furnished without cost, will be made upon payment of one dollar (\$1.00) for each copy desired.

Intercollegiate Athletics

The University is a member of the Southern Conference, and its rules necessarily conform to the rules of the Conference.

Regulations Governing Dramatic, Musical, Debating, and Other Leading Activities of the Student

1. No student will be allowed to take part in dramatic, musical, debating, oratorical, or similar events entailing absence from the University if his parents (or guardian) object to such participation.

2. Any student who was in attendance at the University during a previous quarter must have passed, during his last quarter of attendance, satisfactory examinations upon at least five hours, or their equivalent, before he will be allowed to represent the University in any dramatic, musical, debating, oratorical, or similar event of a public nature, or in any other leading activity.

3. Any student reported during the course of any quarter as deficient in a majority of his classes may be prohibited by the dean of his school from participating in any dramatic, musical, debating, oratorical, or similar event, or any other leading activity, until such deficiency is removed.

4. There shall be a scholastic requirement of thirty-five quarter hours, half C grade or better, during the preceding three quarters of residence, or forty quarter hours, half C grade or better, if summer school or correspondence work is necessary in addition to three regular terms.

5. No team or club will be allowed to be absent from the University more than seven lecture days in any quarter.

Part Three

THE COLLEGES AND SCHOOLS



THE GENERAL COLLEGE

GORDON GRAY, A.B., LL.B., LL.D., *President of the University of North Carolina*

ROBERT BURTON HOUSE, A.M., LL.D., *Chancellor of the University at Chapel Hill and Vice-President of the University of North Carolina*

CORYDON PERRY SPRUILL, A.B., B.Litt. (Oxon.), *Dean*

*†The Administrative Board

OLIVER KELLY CORNWELL, M.A., Ed.D., *Professor of Physical Education and Director of Physical Education* (1951)

ALLAN WILSON HOBBS, Ph.D., *Professor of Applied Mathematics* (1951)

EDWIN CARLYLE MARKHAM, Ph.D., *Professor of Chemistry* (1951)

‡DUDLEY DEWITT CARROLL, *Professor of Economics and Dean Emeritus of the School of Commerce* (1952)

STURGIS ELLENO LEAVITT, Ph.D., Litt.D., *Kenan Professor of Spanish* (1952)

ARTHUR MELVILLE JORDAN, Ph.D., *Professor of Educational Psychology* (1953)

HENRY ROLAND TOTTEN, Ph.D., *Professor of Botany* (1953)

SAMUEL THOMAS EMORY, Ph.D., *Professor of Geography* (1954)

GUY BERRYMAN PHILLIPS, M.A., *Professor of Education and Dean of the School of Education* (1954)

WILLIAM SMITH WELLS, Ph.D., *Professor of English and Dean of the College of Arts and Sciences* (1954)

THOMAS HENRY CARROLL, D.C.S., *Professor of Business Administration and Dean of the School of Business Administration* (1955)

CLIFFORD PIERSON LYONS, Ph.D., *Professor of English* (1955)

STERLING AUBREY STOUDEMIRE, Ph.D., *Professor of Spanish* (1955)

The Committee of Advisers in the General College

§MICHAEL ARENDELL HILL, JR., FREDERICK CARLYLE SHEPARD,
A.M. *Associate Dean* Ph.D.

§CECIL JOHNSON, Ph.D., ‡CORNELIUS OLIVER CATHEY, Ph.D.
Associate Dean JACQUES HARDRÉ, Ph.D.

FLOYD HARRIS EDMISTER, Ph.D. GERALD ALAN BARRETT,

CLYDE CASS CARTER, Ph.D. A.B., LL.B.

CLAIBORNE STRIBLING JONES, Ph.D.

*The Chancellor, the Director of Admissions, and the Dean of Students are ex officio members of the Board.

†Dates indicate expiration of terms.

‡Absent on leave, 1950-1951.

§Representatives of the Advisers on the Administrative Board.

General Statement

During his freshman and sophomore years in the University at Chapel Hill every student is a member of the General College unless he enters the School of Pharmacy. The studies in the General College are intended: (1) to offer experience in a sufficient variety of basic and liberal subjects to constitute the foundations of that general education which is regarded as essential to balanced development and intelligent citizenship, (2) to supply opportunities for the discovery of intellectual interests and occupational aptitudes, and (3) to provide preparation for later collegiate or professional training. These studies are, specifically, English composition and literature, a foreign language, natural science, social sciences, mathematics or Latin or Greek, and hygiene. The options within these requirements appear below in the summaries of the several programs. The student thus takes certain courses basic to all programs of study and in addition chooses other courses in anticipation of advanced work in special fields or on the basis of other personal considerations. If he knows what his later program of study is to be, he can in nearly all cases choose a subject in that field as part of his work in the General College. If he does not know what his program is to be, he may take the general program leading to a degree in arts and sciences or in business administration with the assurance that he can reach a decision during his undergraduate career and make necessary changes with minimum loss of time.

The members of the General College are of four distinguishable but overlapping types: (1) those who will proceed to the usual academic degrees at the end of four years, (2) those who will enter professional schools after three or four years, (3) those who are preparing for teaching or scientific investigation, or both, and (4) those who will take less than a complete academic program. Through the advisers the General College attempts to assist each student in appraising his qualifications and objectives and, within the limits set by its standards and resources, undertakes to adapt its offerings to his interests and needs. Thus a deficiency in a foreign language may be overcome by taking the elementary courses. In the converse case of mastery in preparatory school or otherwise of work offered in college, the student is encouraged to meet the collegiate requirement by examination. Those who have responsibilities which limit the time available for studies are allowed to take less than the normal academic program. Those who attain distinction in the normal registration are permitted to take additional courses so as to enable them to enrich their programs or to

graduate at an earlier date. By such means the College encourages each student to start with the work which he is prepared to do and to go forward with it in the way that is most appropriate in his individual case.

Upon satisfactory completion of the work of the General College, the student will normally enter one of the divisions of the University which administer the curricula of the junior and senior years. The College of Arts and Sciences offers curricula in (1) the usual liberal arts subjects, (2) mathematics, (3) chemistry, geology, physics, medicine, and bacteriology (each with its special Bachelor of Science degree), (4) pre-law, pre-medical, and pre-dental programs, with and without the A.B. degree, (5) medical technology, (6) public health, (7) public health nursing, and (8) industrial relations. The School of Business Administration presents curricula preparatory for the various careers in (1) business, (2) foreign trade and the consular service, (3) other government services, and (4) law. The School of Education offers curricula leading to careers in teaching, administration, and supervision. The newly established School of Journalism provides training for newspaper work and related careers.

Naval R. O. T. C.

All of the courses offered by the Department of Naval Science count toward graduation. The academic courses offered by the department are credited as follows:

- (1) In programs of study leading to the degrees of Bachelor of Arts, Bachelor of Arts in Journalism, and Bachelor of Arts in Education, naval science may be substituted for freshman social science and for two courses of required natural science. The other naval science courses may count as non-divisional subjects in the junior and senior years.
- (2) For the degree of Bachelor of Science in Business Administration, the naval science courses may be substituted for one year of required natural science. In the junior and senior years, naval science courses count as non-divisional subjects and for one additional course to be approved by the Dean of the School.
- (3) In the other curricula leading to the degree of Bachelor of Science, naval science courses may be substituted for freshman social science and for electives. In addition, the Dean and the Administrative Board are authorized to substitute these courses for required subjects after consideration of the circumstances of each case.

- (4) All naval science students are required to take freshman and sophomore English, Mathematics 7, 8, and Physics 24-25. It is recommended that they take Mathematics 31, 32, 33.

Air Force R. O. T. C.

The courses offered by the Department of Air Science and Tactics are included as part of the courses required for the several bachelors' degrees.

For students in the School of Business Administration, the R. O. T. C. courses are substituted for two of the required courses in laboratory science in the freshman and sophomore years. In the junior and senior years they count as five non-divisional elective courses.

In the College of Arts and Sciences, the School of Journalism, and in the School of Education, the freshman and sophomore R. O. T. C. courses are substituted for two required courses. This substitution may be for Social Science 1-2, for two courses of required laboratory science, or for one course of social science and one course of laboratory science. In the junior and senior years the R. O. T. C. work counts as five courses. These five courses may be either non-divisional electives or allied courses at the discretion of the dean.

Students who participate in the Air Force R. O. T. C. program enter it with the understanding that they must continue throughout the first two years at least. At the end of two years they may elect to continue in the program or to withdraw from it. Those who elect to take the third year's work enter upon it with the understanding that normally they must take both the third and fourth years.

Credit by Examination

Provision is made for students who present proper credits to take substantiating examinations for advanced standing in whatever subjects the Dean of the General College may deem advisable. This opportunity is open to those who have taken, in high or preparatory school, work which is approximately equivalent to some of the studies in the General College. The passing of such examinations will enable the student to take during his first year the next course in the subject on which he is examined or to take other subjects not ordinarily pursued by freshmen. Formal application for examinations of this sort should be made to the Dean of the General College sufficiently far in advance of the date of registration to enable him to arrange for the examinations. For this purpose, fifteen days' notice suffices. No

charge is made for these examinations. There is a charge, however, for credits obtained by examination.

If a student by a placement test or by some other criterion is placed in advanced work and if he completes the advanced work (one or more courses where the courses are in sequence) with an average of C or better, he will be given credit for the omitted freshman work with the grades that he makes on the advanced work; if he completes the advanced work with less than a C average, he will be relieved of the requirement of the freshman work omitted but will not receive hour credit for the omitted work.

Guidance of Students in the University

The University conceives education to be directed toward the best development of each individual and accordingly seeks to study each student in terms of his background of experience and his potentialities of interest, ability, and cultural needs. Each student is the special charge of a faculty adviser.

Before admission of the student the University obtains from him and his school principal information concerning the applicant's personal history. This information is made the basis of a cumulative personal record of each student. To it are added placement test scores, results of physical examination, grades on courses, record of activities, etc. This record is in the hands of the General College adviser from the time the applicant is accepted until he completes the sophomore year. Then it is available to the departmental adviser in the major field of study chosen and to the vocational adviser.

In this way the University tries to deal with each student from admission to graduation as an individual personality about whom a responsible adviser has the needed information. In using this information the personal interest and experience of the adviser may be supplemented in case of special need by members of the general administration competent in such special fields as health, financial aid, vocational guidance, and religious and moral problems.

Programs of Study

With a view to the most effective preparation of those who will proceed to degrees through any of the regular curricula, the General College offers programs of study as follows:

Bachelor of Arts

FRESHMAN YEAR

Required:	{ English 1-2 Social Science 1-2 Hygiene 11 Physical Education 1, 2, 3	Choose two courses:	{ Astronomy 31, 32 Chemistry 1-2-3 or 1-2-31 Geology 1, Geography 38 Geology 41, 42 Physics 20, 24, 25 Botany 1, Zoology 1
Choose two courses:	{ †French 3-4 †German 3-4 †Greek 3-4 †Latin 3-4 †Spanish 3-4		

SOPHOMORE YEAR

Humanities: Four courses to be selected by choosing A, or B, or C below:

A. English and fine arts, two courses:

English 3, required.

One of the following: English 4 or 5 or 6; Art 41 or 42 or 43; Music 41; Religion 28.

Classical language and literature, two courses.

B. English and fine arts, two courses as indicated in A, above.

French or German or Spanish, two courses.

C. Classical language or literature in the original or in translation, two courses from:

Greek 1-2; 3-4; 21-22; 21-82; 61.

Latin 1-2; 3-4; 21-22; 62.

French or German or Spanish, two courses.

Social Sciences: Two courses. Choice may be made from the following:

Anthropology 41

Economics 31-32

Education 41 and an additional course to be approved by the School of Education.

History 21, 22

History 41, 42

History 44, 45

Philosophy 21, 22, 41, 42

Political Science 41, 42

Sociology 51, 52

Natural Science and Mathematics as follows:

Two courses in natural science, or one course in natural science and one course in mathematics. These with the freshman courses in science must include one course in a physical science (astronomy, chemistry, physics, geology, geography) and at least one course in a biological science (botany, zoology, psychology). Selections may be made from the following courses:

Astronomy 31, 32

Botany 41, 42, 43

Chemistry 1-2-3 or 1-2-31; 41, 42

*Students who choose Greek or Latin in this group must choose a modern foreign language to meet the requirement in foreign language. Courses 1-2 may be taken by students who did not have classics in high school.

†Students placed in foreign language course number 1 may meet the requirement with courses 1-2, 3-4, provided they have no entrance deficiency in foreign language.

- Geology 1, Geography 38
- Geology 41, 42
- Mathematics 31, 32, 33, 34, 35, 36
- Physics 20, 24-25, 34, 35
- Psychology 24, 25
- Zoology 41, 42

Physical Education 4, 5, 6

Bachelor of Arts in Education (Secondary)

FRESHMAN YEAR

- Required: { English 1-2
Social Science 1-2
Hygiene 11
Physical Education 1, 2, 3
- Choose one sequence: { Chemistry 1-2-3 or 1-2-31
Physics 24-25
- OR
- Any two courses of these: { †Botany 1
Geography 38
Geology 1, 41, 42
Physics 20
†Zoology 1
- Choose one sequence: { Mathematics 7-8 or R-7X-8
*Greek 3-4 (or 1-2)
*Latin 3-4 (or 1-2)
- Choose one sequence: { †French 3-4
†German 3-4
†Greek 3-4
†Latin 3-4
†Spanish 3-4

SOPHOMORE YEAR

- Required: { English 3
Foreign language 21-22 (or 3-4 of language taken in freshman year)
Psychology 24 or 25 or equivalent
Physical Education 4, 5, 6
- Choose: Economics 31-32
- OR
- Any two courses of these:§ { Anthropology 41
History 21, 22, 41, 42, 44, 45, 48, 49
Philosophy 21, 22, 41, 42
Political Science 41, 42
Sociology 51
- Choose two courses:|| { Astronomy 31, 32
Botany 41, 42
Chemistry 31 or 41 or 42
Geography 38
Geology 1, 41, 42
Physics 20
Zoology 41, 42
Mathematics 31, 34
- Choose one: { English 4 or 5 or 6
Art 41 or 42 or 43
Music 41
Religion 28

*Students who choose Greek or Latin in this group must choose a modern foreign language to meet the requirement in foreign language. Courses 1-2 may be taken by students who did not take one of these languages in high school.

†Students who wish to take further work in botany and zoology should choose as their first courses in these areas Botany 41 and Zoology 41 instead of Botany 1 and Zoology 1.

‡Students who present credit for two units of high school work in foreign language but who are placed in course number 1 of that foreign language may meet the requirement with courses 1-2, 3-4.

§It is recommended that students choose sequence courses from this area; as History 21-22 or Anthropology 41 and Sociology 51. Students who desire to teach in the field of social science in high school should choose History 21-22 or History 71-72. If their schedules will permit they should also choose Political Science 41.

||Students who choose the Botany-Zoology 1 sequence in the freshman year must choose one of the physical sciences (astronomy, chemistry, physics, geology, geography, mathematics) from this group.

Bachelor of Arts in Education (Elementary)

FRESHMAN YEAR

Required:	{ English 1-2 Social Science 1-2 Hygiene 11 Physical Education 1, 2, 3	Choose one	{ Mathematics 7-8 or R-7X-8 *Greek 3-4 (or 1-2) *Latin 3-4 (or 1-2)
Choose:	Chemistry 1-2-3 or 1-2-31	Choose one	{ †French 3-4 †German 3-4 †Greek 3-4 †Latin 3-4 †Spanish 3-4
OR			
Any two of these:	{ Botany 1 Geology 1 Zoology 1	sequence:	

SOPHOMORE YEAR

Required:	{ English 3 Foreign language 21-22 (or 3-4 of language taken in freshman year) Geography 38 History 21-22 Music 41 Psychology 24 or 25 or equivalent Physical Education 4, 5, 6	Choose one:	{ Astronomy 31 Physics 20

Bachelor of Science in Science Teaching (Secondary)

FRESHMAN YEAR (Same as for Bachelor of Arts in Education)

SOPHOMORE YEAR

Required:	{ English 3 Foreign language 21-22 (or 3-4 of foreign language taken in freshman year) Psychology 24 or 25 or equivalent Physical Education 4, 5, 6	Choose:	Economics 31-32
Choose one:	{ English 4 or 5 or 6 Art 41 or 42 or 43 Music 41 Religion 28	Any two courses of these: †	{ Anthropology 41 History 21, 22, 41, 42, 44, 45, 48, 49 Political Science 41, 42 Philosophy 21, 22, 41, 42 Sociology 51
Choose one sequence:	{ Astronomy 31-32 Botany 41 and Zoology 41 Botany 41-42 Zoology 41-42 Chemistry 1-2-3 or 1-2-31 or 31 and 41 or 31 and 42 Geology 1 or 41 and Geography 38 Geology 41-42 Physics 24-25 or 34-35		

*Students who choose Greek or Latin in this group must choose a modern foreign language to meet the requirement in foreign language. Courses 1-2 may be taken by students who did not take one of these languages in high school.

†Students who present credit for two units of high school work in foreign language but who are placed in course number 1 of that foreign language may meet the requirement with courses 1-2, 3-4.

‡It is recommended that students choose sequence courses from this area; as History 21-22 or Anthropology 41 and Sociology 51.

Bachelor of Arts in Journalism

The freshman and sophomore requirements are the same as those stated for the degree of Bachelor of Arts.

Pre-journalism students are advised, but not required, to elect History 21, 22 or two courses in political science in the sophomore year.

Bachelor of Science in Business Administration

FRESHMAN YEAR

Required:	{	Botany 1 or Zoology 1, Geography 38	Choose	one:	{	*French 3-4
		English 1-2				*German 3-4
		Social Science 1-2				*Spanish 3-4
		Mathematics 7, 9, or R, 7X, 9				
		Hygiene 11				
		Physical Education 1, 2, 3				

SOPHOMORE YEAR

Required:	{	English 3 and 4 or 5 or 6 or fine arts	Choose	three:	{	Astronomy 31, 32
		or Religion 28				Botany 41, 42, 43
		Economics 31-32, 41				Chemistry 1-2-3
		Physical Education 4, 5, 6				or 1-2-31
						Geology 1, 41, 42
			Choose	two	}	Physics 20, 24-25
			courses:			Zoology 41, 42
						Mathematics 31, 32

Bachelor of Science in Chemistry

FRESHMAN YEAR

Chemistry 1-2-31 or 1-2-3	Mathematics 7, 8 or R, 7X, 8
English 1-2	Hygiene 11
†German 3-4	Physical Education 1, 2, 3

SOPHOMORE YEAR

English 3 and 4 or 5 or 6 or	Mathematics 31, 32, 33
Fine Arts or Religion 28	Physics 24-25 or 34-35
†German 21, 22	Physical Education 4, 5, 6
Chemistry 31, if not taken previously,	
51, 42, 41	

*Business administration students must pass a test of reading knowledge, or make a grade of A or B in course 4, or continue with courses 21 and 22.

†Students placed in French 1, German 1, or Spanish 1 may complete the requirement with courses 1-2, 3-4, provided they have no entrance deficiency in foreign language.

Bachelor of Science in Geology

FRESHMAN YEAR

Required:	Geology 41-42	Choose one:	*French 3-4
	English 1-2		*German 3-4
	Mathematics 7, 8 or R, 7X, 8		*Spanish 3-4
	Social Science 1-2		
	Hygiene 11		
	Physical Education 1, 2, 3		

SOPHOMORE YEAR

Required:	English 3 and 4 or 5 or 6 or Fine Arts or Religion 28	Choose one:	*French 21-22
	Chemistry 1-2-3		*German 21, 22
	Geography 38		*Spanish 21-22
	Physical Education 4, 5, 6		

Bachelor of Science in Mathematics

FRESHMAN YEAR

Mathematics 7, 8, 31	*French 3-4 or *German 3-4
Social Science 1, 2	Hygiene 11
English 1, 2	Physical Education 1, 2, 3

SOPHOMORE YEAR

Mathematics 34, 35, 36; or 32, 33, 171	the first year
English 3, and 4 or 5 or 6, or elective in fine arts, or Religion 28, or two courses in classical language or literature	Physics 24-25; or 34-35; or Chem- istry 1-2, 3, (or 1-2, 31), if the two physics courses are elected in the junior or senior year
French or German, two courses, continuing the language begun in	Physical Education 4, 5, 6

Bachelor of Science in Physics

FRESHMAN YEAR

Required:	English 1-2	Choose one:	*German 3-4
	Mathematics 7, 8 or R, 7X, 8		or
	Social Science 1-2		*French 3-4
	Hygiene 11		
	Physical Education 1, 2, 3		

SOPHOMORE YEAR

Physics 34-35 (or 24-25), 52 or 54	Mathematics 31, 32, 33
Humanities: Four courses to be selected as shown under Bachelor of Arts, above, except that the foreign language must be German or French	Physical Education 4, 5, 6

*Students placed in French 1, German 1, or Spanish 1 may complete the requirement with courses 1-2, 3-4, provided they have no entrance deficiency in foreign language.

Bachelor of Science in Medicine**FRESHMAN YEAR**

Required:	{	English 1, 2	Choose one: {	*French 3-4
		Chemistry 1-2-3 or 1-2-31		*German 3-4
		Mathematics 7, 8 or R, 7X, 8		*Spanish 3-4
		Social Science 1-2		
		Hygiene 11		
		Physical Education 1, 2, 3		

SOPHOMORE YEAR

English 3 and 4 or 5 or 6 or Fine Arts or Religion 28	Elective, 1 course (2 courses if Chemistry 31 is taken in the first year)
*French 21-22	Chemistry 31 (if not taken in the first year) and Chemistry 42
or	Botany 41 and Zoology 41, 42
*German 21, 22	or
or	Botany 41 and Physics 24-25
*Spanish 21-22	Physical Education 4, 5, 6

NOTE: A third year of undergraduate work is necessary before admission to the School of Medicine. The requirements are Psychology 24, Chemistry 61 and 62, Zoology 41-42, or Physics 24-25, and three elective courses.

Bachelor of Science in Medical Technology

The requirements for the first two years are the same as in the curriculum leading to the degree of Bachelor of Science in Medicine, except that the first courses in chemistry should be 1-2-31.

Bachelor of Science in Public Health

(See page 154.)

Bachelor of Science in Industrial Relations

(See page 152.)

Bachelor of Science in Public Health Nursing

(See page 155.)

Bachelor of Science in Bacteriology**FRESHMAN YEAR**

Required:	{	Chemistry 1-2-3 or 1-2-31	Choose one: {	*French 3-4
		English 1-2		*German 3-4
		Mathematics 7, 8 or R, 7X, 8		
		Social Science 1-2		
		Hygiene 11		
		Physical Education 1, 2, 3		

*Students placed in course number 1 may meet the requirement with courses 1-2, 3-4, provided they have no entrance deficiency in foreign language. Pre-medical students are advised to choose French or German.

SOPHOMORE YEAR

Humanities: Four courses to be selected by choosing A, or B, or C below:

A. English and fine arts, two courses:

English 3, required.

One of the following: English 4 or 5 or 6; Art 41 or 42 or 43; Music 41;
Religion 28.

Classical language and literature, two courses.

B. English and fine arts, two courses as indicated in A, above.

French or German or Spanish, two courses.

C. Classical language or literature in the original or in translation,
two courses from:

Greek 1-2; 3-4; 21-22; 61.

Latin 1-2; 3-4; 21-22; 62.

French or German or Spanish, two courses.

Required:

Chemistry 31 (unless taken in the freshman year), 42

Botany 41

Zoology 41, 42

Bacteriology 51

Physical Education 4, 5, 6

THE COLLEGE OF ARTS AND SCIENCES

GORDON GRAY, A.B., LL.B., LL.D., *President of the University of North Carolina*

ROBERT BURTON HOUSE, A.M., LL.D., *Chancellor of the University at Chapel Hill and Vice-President of the University of North Carolina*

WILLIAM SMITH WELLS, Ph.D., *Dean*

GERALDINE ALMA FOSTER, A.M., *Assistant Dean*

ALBERT IRVING SUSKIN, Ph.D., *Adviser*

*†The Administrative Board

MILLARD SHERIDAN BRECKENRIDGE, LL.B., *Professor of Law* (1951)

WILLIAM DOUGALD MACMILLAN, Ph.D., *Professor of English* (1951)

WESLEY CRITZ GEORGE, Ph.D., *Professor of Histology and Embryology* (1952)

EDWIN CARLYLE MARKHAM, Ph.D., *Professor of Chemistry* (1952)

CORYDON PERRY SPRUILL, JR., B.Litt. (Oxon.), *Professor of Economics* (1952)

HOWARD RUSSELL HUSE, Ph.D., *Professor of Romance Languages* (1953)

RICHARD JENTE, Ph.D., *Professor of Germanic Languages* (1953)

LEE MARSHALL BROOKS, Ph.D., *Professor of Sociology* (1954)

CLAIBORNE STRIBLING JONES, Ph.D., *Associate Professor of Zoology* (1954)

WILLIAM HOWARD PLEMMONS, Ph.D., *Professor of Education* (1954)

SAMUEL SELDEN, A.B., *Professor of Dramatic Art* (1955)

WILLIAM M. WHYBURN, Ph.D., *Kenan Professor of Mathematics* (1955)

General Statement

Students in the College of Arts and Sciences have completed the first two years of college work in this or some other institution of comparable standards. Therefore only the junior and senior years are offered. The work of the College of Arts and Sciences is distributed among three divisions known as the Division of the Humanities, the Division of the Natural Sciences, and the Division of the Social Sciences. At the beginning of the junior year a student expecting to enter the College of Arts and Sciences must choose one of the divisions for his major work. He will then be under the direction of the head of the division and an adviser from the department of his major sub-

*The Chancellor, the Director of Admissions, and the Dean of Students are ex officio members of the Board.

†Dates indicate expiration of terms.

ject. Those who plan to teach in secondary schools should seek admission to the School of Education. The only students not so placed in divisions will be candidates for the A.B.-LL.B., the S.B. in Medicine, and the S.B. in Dentistry degrees and special students not candidates for any degree. Such students will be directly under the guidance of the Dean of the College.

It is the general understanding that during the junior and senior years a student in a division will take about one-third of his work in one department, one-third in allied departments in the division of his major, and one-third as free electives outside the division. Because of special circumstances, there are variations among the divisions from the numerical aspects of this rule. *It is also understood that a student shall have the right to submit a program of his own, which may be at variance with the regular divisional arrangement, to the head of a division, and, if it is approved by the Advisory Board of the division and the Administrative Board of the College, he may follow it toward the appropriate degree.* The several requirements of the divisions are explained below in the description of the divisions. To be eligible for graduation, a student must secure the grade of C or higher on 30 quarter hours of work in his major. This rule applies to students who began their major after September, 1942. Grades lower than C will not be acceptable in the major for students transferring from other colleges. For a transfer student, the number of hours taken here in the major must carry C's or better in the same ratio as the number 30 is to the total required in the major. It is to be understood that for the student enrolled in the University before September, 1947, one-half of the hours of his academic work must be of grade C or better; for the student entering the University in or after September, 1947, his over-all average grade must be at least C. For method of computing C average see page 124, section on Eligibility for Graduation.

Preparation for the Study of Law

Students preparing for the study of law may do so in one of the following ways: (1) they may take the regular four-year course leading to the A.B. degree, choosing subjects proper to their purpose; (2) they may take the special courses leading to the A.B.-LL.B.; (3) they may take three years of academic work without the bachelor's degree in view, but with careful regard to meeting the exact requirements.

Preparation for the Study of Medicine or of Dentistry

Students preparing for the study of medicine or dentistry should spend as much time in securing a well-rounded cultural education as their age and financial resources permit. If possible they should take the regular four-year course leading to the bachelor's degree. If this is not practicable they may take the special course leading to the S.B. in Medicine or the S.B. in Dentistry (see page 153), or they may take three years of academic work without the bachelor's degree in view, but with careful regard to meeting the specific requirements for admission to the medical or dental schools. In general it seems desirable for students who are *preparing for medicine* by taking courses leading to the bachelor's degree to select either chemistry or zoology as the major field of study, but the completion of a major in another department may still provide adequate preparation. In order to do this he should take courses in the premedical sciences in the first two years in the General College, namely, Chemistry 1-2-3 or 1-2-31; Physics 24-25 or Botany 41 and Zoology 41. In the College of Arts and Sciences he could then follow whatever his interests may direct and still complete adequate and necessary work in biology, chemistry, and physics prerequisite to the medical curriculum.

Because of the widening social and economic interests of the medical and dental professions, students preparing to enter either should take, in addition to the requirements in the sciences, as many courses as possible in history, literature, economics, philosophy, and psychology.

Because there is not sufficient space in the medical and dental schools to admit all students who meet the quantitative standards, and because more than average intelligence and aptitude are required for the satisfactory completion of the medical or dental curriculum, the quality of the student's work is of the greatest importance. All students interested in the study of medicine or dentistry should attempt to stand in the highest third of their academic classes.

Admission and General Regulations

For regulations governing admission to the College of Arts and Sciences, see page 81.

In exceptional cases provision will be made for students who cannot meet the exact requirements, either to take the needed work here in the General College or to take examinations to prove that they are able to carry the work in the College of Arts and Sciences. In

no case, however, will a degree be conferred without the completion of the full entrance requirements of this University either by examination or by certificate and the completion of the full course as required for the degree concerned.

A student transferring from another accredited college to the College of Arts and Sciences of this University must meet the requirements of the first two years here, unless he presents a superior record from the other college.

If required freshman courses are taken after the student begins his junior year, or if required sophomore courses are taken after he begins his senior year, only half credit is allowed. This does not apply to transfer students, provided they make up their deficiencies as soon as possible.

There is a requirement that the full work of the last year shall be done in residence at this University.

Curriculum Leading to the Bachelor of Arts

To secure the degree of Bachelor of Arts the student must complete fully the requirements set up in the General College for the first two years and follow this by meeting in full the requirements in one of the divisions for the junior and senior years. The requirements for a major in any department will be found with the descriptions of courses offered by that department.

A minimum of thirty-six full courses excluding the requirement in hygiene and physical education is required for the degree; the least number of quarter hours for graduation is 186, including six hours in hygiene and physical education. A student may accumulate the minimum number of courses or hours for graduation but still not have satisfied those requirements in his division that must be met regardless of the total number of courses taken.

The Divisions

The faculty of the College is divided into three divisions, the Division of the Humanities, the Division of the Social Sciences, and the Division of the Natural Sciences. The work of some departments will be found in more than one division, and, for convenience, that of others may from time to time be shifted from one to another or be placed in more than one; courses in departments listed in more than one division, however, cannot be counted both as allied to the major and as extra-divisional work. A course that is listed in the major department and another department must count toward the major.

By the end of his freshman year, if possible, the student should decide upon his major subject. In his sophomore year he should take whatever work he can directly prerequisite to his major. In his junior year he enters one of the divisions, and his work is directed by the requirements of the division and by any special needs he may have in conference with the head of the division, or by a person designated for this purpose. Students taking the A.B.-LL.B. course or the S.B. in Medicine curriculum do not fall in any division but are under the direct charge of the Dean of the College of Arts and Sciences.

Allied courses are those which are offered by the departments of instruction which appear in the same division as the department of major interest. Non-divisional courses are those which are offered by the departments of instruction outside the division which lists the department of major interest.

For the requirements of the undergraduate major in any department, see the Description of Courses for the department concerned.

The Division of the Humanities

GLEN HAYDON, Ph.D., *Chairman*

LYMAN COTTEN, Ph.D., *Secretary*

The departments of instruction included in the Division of the Humanities are as follows:

Art	History
The Classics	Journalism
Dramatic Art	Music
English	Philosophy
General and Comparative Literature	Radio
Germanic Languages	Religion
	Romance Languages

GENERAL STATEMENT

After a student has selected his department of major interest, that department must require of him a minimum of six whole quarter courses, or the equivalent in whole and half courses, and may require a maximum of eight such courses. In the allied departments of the division the student must take at least four such quarter courses and may take eight, distributed between at least two departments; not more than four of these divisional courses may be taken within one department. It is required that the student take from departments in the other divisions at least four and not more than seven whole

quarter courses, in all a sufficient number of courses to make a total of at least eighteen whole quarter courses over and above the full requirements of the General College. Special programs may be submitted by students.

PROGRAM FOR HONORS WORK

A student in one of the departments in the Division of the Humanities may, as the result of distinguished work, be awarded a degree with *Honors* or *Highest Honors*.

I. APPLICATION. At the end of the sophomore year or the beginning of the junior year the student with a good record for courses in the General College may become a candidate for honors by applying to the head of his major department, or to the chairman of the departmental committee on honors, with whom he will confer on a unified program of work. The student who fails to register for honors before the third quarter of his junior year may be admitted to candidacy only upon application to the Advisory Board of the Division.

II. REQUIREMENTS. The candidate for honors is expected to give evidence of ability to do work which in quality and quantity can be judged as outstanding. In addition to a good general knowledge of his major subject he must secure an intensive understanding of that special field which will form the background of his essay. To this end he should do, in term and in vacation, a large amount of reading additional to that assigned in his regular courses. (For reading courses see below, Part IV.) A grade average of B in the major subject will normally be considered as a minimum. The following are the formal requirements for a degree with honors in the Division:

1. *Written comprehensive examination.*
2. *Essay.* This essay, which need not be a piece of original research, must be submitted in typed form by May first of the senior year.
3. *Oral examination.* This examination, one hour in length, will be limited to the student's special field.

All of the honors work must come up to a standard of excellence to be determined by the departmental committee, which shall have charge of the administration of the requirements, and shall have the power to demand that a student return to his regular status. The candidate showing a superlative degree of ability and industry will be awarded *Highest Honors*.

III. ADVISER. To guide him in his reading and in the preparation of his essay a member of the staff of his major department will be assigned the candidate for honors as a special adviser.

IV. EXEMPTION FROM CLASSROOM COURSES. The candidate for honors may receive credit for as many as three reading courses. Such courses, with the exemption from class attendance and the requirements of regular courses, should usually be taken during the first and second quarters of his senior year, though the departmental committee, on the recommendation of the special adviser, will have power to modify such a procedure. Only one of the three reading courses may be taken during the junior year, not more than two of them may be taken during a single quarter, and all three of them must be counted as belonging to the major subject. The candidate who, upon his own initiative or the decision of the departmental committee, abandons working for honors, or who fails to satisfy all the formal requirements for a degree with honors, may receive, with the consent of the departmental committee, credit for the reading courses which he has completed.

The Division of the Social Sciences

HARRY DEMERLE WOLF, Ph.D., *Chairman*

LEE MARSHALL BROOKS, Ph.D., *Secretary*

This division includes the following departments of instruction:

Economics	Philosophy	Psychology
Education	Physical Education	Sociology
History	Political Science	

Psychology 24-25 may be counted only as natural science.

Courses in business administration carry no course or hour credit toward a degree offered by the College of Arts and Sciences, except in programs of majors in economics, psychology, and industrial relations.

GENERAL STATEMENT

This division requires the student to complete a minimum of six whole quarter courses or the equivalent in whole and half courses in his chosen department of major interest. If, however, essential foundation courses in the major department have not been completed in the General College, a maximum of eight such courses may be required in that department. From five to seven courses in allied departments within the Division of the Social Sciences are required, and from departments in the other divisions at least five and not more than seven whole quarter courses, in all a sufficient number of courses to make a total of at least eighteen whole courses over and above the full requirements of the General College.

PROGRAM FOR HONORS WORK

The program for honors work in the Division of the Social Sciences is substantially the same as that in the Division of the Humanities, above, with the important difference that in the Division of the Social Sciences the candidate for honors may receive credit for only two reading courses.

The Division of the Natural Sciences

JOHN WAYNE LASLEY, JR., Ph.D., *Chairman*

ARTHUR ROE, Ph.D., *Secretary*

The following departments of instruction are included in the Division:

Astronomy	Geology	Physics
Bacteriology	Mathematics	Psychology
Botany	Philosophy	Zoology
Chemistry		

GENERAL STATEMENT

The general requirements in this division are as follows: from six to eight courses, or the equivalent, in the department of major interest; from five to seven courses in allied departments of the Division; and from five to seven courses in departments in other divisions, not to exceed a total of eighteen courses. The dean is authorized to make such adjustments as are necessary in order that a student with a major in science shall not have to take more than the standard number of hours for graduation.

Academic Curriculum for A.B.-LL.B.

Students who intend to matriculate in the School of Law may plan their courses in such a way as to secure the A.B. and LL.B. degrees in six years instead of the seven years required for the two separately. For the A.B. they must complete, *before matriculation in the School of Law*, the courses outlined below in the General College and the College of Arts and Sciences, with an average of C or better, and, in addition, the first year of law to the satisfaction of the School of Law. The LL.B. degree is then secured by completing the remaining two years of law.

Students pursuing the academic subjects listed in the combined A.B.-LL.B. and B.S.-LL.B. programs are hereby notified that the completion of the required academic courses does not necessarily mean

admission to the Law School. To the extent that limitation of enrollment is necessary, preference will be given to applicants with superior records, considering both the quality and amount of pre-law work.

*English 1, 2, 3, 4

Social Science 1-2

†Mathematics 7-8

Hygiene 11

Physical Education 1, 2, 3, 4, 5, 6

‡Foreign language, four courses

History 71 and 72 or 44 and 45

Economics 31-32

Political Science 41, and one other course in
political science

Psychology 24, 25

§Two courses in natural science

English 44, and one other English course,
preferably 52

Four elective courses

Curricula for the Degree of Bachelor of Science

For those students whose interest is in the applied sciences and who wish to enter seriously upon the pursuit of the specialized knowledge and techniques of the sciences, the University offers several curricula leading to the degree of Bachelor of Science. Each of these provides for specialization in a particular science (or in the work of the Medical School or the Dental School), accompanied by the necessary instruction in related fields of science and a minimal requirement of work in English, foreign language, and other non-scientific fields. These curricula, which are designed to furnish the fundamental instruction for some of the technical professions, are eleven in number.

Bachelor of Science in Bacteriology

Bachelor of Science in Chemistry

Bachelor of Science in Dentistry

Bachelor of Science in Geology

Bachelor of Science in Industrial Relations

Bachelor of Science in Mathematics

*English 5 or 6, or a music or art elective, may be substituted for English 4.

†Two courses in Latin or Greek may replace the mathematics requirement, provided the student meets by another language the regular requirement in foreign language.

‡Six courses of a foreign language are required if the student has a language deficiency upon his entrance in the University.

§At least one of these two courses must be chosen from the physical sciences or mathematics.

- Bachelor of Science in Medical Technology
- Bachelor of Science in Medicine
- Bachelor of Science in Physics
- Bachelor of Science in Public Health
- Bachelor of Science in Public Health Nursing

Requirements for the degrees of Bachelor of Science in Bacteriology, Chemistry, Geology, Mathematics, and Physics are given in the headnotes to the Description of Courses of the departments concerned; and for the degrees in Industrial Relations, Dentistry, Medicine, Medical Technology, Public Health, and Public Health Nursing, immediately below.

Bachelor of Science in Industrial Relations

After two years in the General College, the student electing the curriculum in industrial relations in the College of Arts and Sciences takes a "core" of eight courses in business administration, economics, psychology, history, and sociology, a major of five courses in education, history, political science, psychology, or sociology, and six elective courses. (In addition to this curriculum detailed below, another program with special emphasis upon economics and business administration is offered by the School of Business Administration.)

FIRST AND SECOND YEARS

- English 1, 2; 3, 4 (or 3 and equivalent of 4 in English or fine arts)
- Mathematics 7-8, or 7-9
- Natural science: Psychology 24, 25 and two other courses of which at least one must be physical science or mathematics
- Modern foreign language: four courses
- Social science: Social Science 1-2; Economics 31-32; Political Science 41; Sociology 51 (of these, one or two may be postponed to the junior or senior year.)
- Hygiene 11
- Physical Education 1, 2, 3; 21, 22 23

THIRD AND FOURTH YEARS

- Business Administration 51, 71, 155
- Economics 191, and 192 or 193
- Psychology 133
- History 168 or Economics 135
- One course in statistics (economics, psychology, or sociology)
- Five courses in one of the following: education, history, political science, psychology, sociology
- Six courses of electives in natural science or the humanities (history is to be counted among the humanities, unless the five courses are taken in history)

Bachelor of Science in Medicine or Bachelor of Science in Dentistry

The University recommends that each applicant for admission to its School of Medicine or to its School of Dentistry prepare himself as fully as his age and resources permit. If possible, he should secure a bachelor's degree before beginning his professional study. If this is impracticable, he may secure excellent preparation by completing the academic curriculum outlined below leading to the degree of Bachelor of Science in Medicine and Bachelor of Science in Dentistry. Each degree is conferred upon the satisfactory completion of the first year of work offered in the School of Medicine or the School of Dentistry.

NOTE: Students pursuing the academic subjects listed below are hereby notified that the completion of these courses does not necessarily mean admission to the School of Medicine or of Dentistry. From the rather long list of applicants are chosen those who are deemed the most promising material for admission to the schools. No arrangement exists for granting the degree of S.B. in Medicine or S.B. in Dentistry for work in any schools other than these. Therefore, in order to secure the S.B. in Medicine or S.B. in Dentistry, the student must complete the first year of work offered in the School of Medicine or of Dentistry, and in no other such school. To be eligible for either degree at least the last year of academic work must have been done in this institution.

FIRST YEAR

Chemistry 1-2-3 or 1-2-31	French or German, 2 five-hour courses
English 1-2	Hygiene 11
Mathematics 7-8 or R, 7X-8	Physical Education 1, 2, 3
Social Science 1-2	

SECOND YEAR

Chemistry 31 (if not taken in first year), 42	Botany 41, Zoology 41, 42; or Botany 41, Physics 24-25
*English 3, 4	Elective, 1 course; or 2 courses, if Chemistry 31 was taken during first year
French or German, 2 five-hour courses following those of first year	

THIRD YEAR

Psychology 24	Zoology 41, 42; or
Chemistry 61, 62	Physics 24-25
	Elective, 3 courses

Bachelor of Science in Medical Technology

The following courses constitute the program for the degree of Bachelor of Science in Medical Technology:

†English (4 courses)	20 hours
‡French, German, or Spanish (4 courses)	20 hours
Freshman social science (2 courses)	10 hours
Hygiene and physical education	6 hours

*English 5 or 6, or an art or music elective, may be substituted for English 4.

†An art or music elective may be substituted for the fourth course of English.

‡Lacking adequate credits in foreign language from high school, the student must take six courses in foreign language.

Freshman mathematics	10 hours
Physics 24-25	12 hours
Chemistry 1-2-31; 42, 61; 146 or 41 or 62.....	31 (or 34) hours
Botany 41	6 hours
Zoology 41, 42, 105.....	18 hours
Zoology 110 or Public Health 135 (Parasitology)	5 or 3½ hours
Bacteriology 101	8 hours
Pathology 52	4 hours
Elective (not science).....	20 hours
Elective (free)	18 to 20 hours

At least 30 quarter hours of C or higher are required from the following: chemistry courses numbered above 31, zoology courses numbered above 42, bacteriology and pathology courses.

NOTE: After the completion of this program, a year of practical experience and training in a hospital will be necessary before the student can qualify for the examinations offered by the American Society of Medical Technology.

Bachelor of Science in Public Health

The curriculum leading to the Bachelor of Science in Public Health has as its objective the broad training of students in the biological and physical sciences which are fundamental for public health workers. The first three years are largely devoted to basic courses in chemistry, physics, mathematics, and biology. In the fourth year the work becomes more specialized and is designed for two groups.

1. *Alternative a: Biology and Public Health.* This curriculum consists largely of biological courses and their application to public health sanitation. Some specialization in sanitary chemistry, bacteriology, parasitology, and malariology is possible. For those who wish to continue on into graduate work this curriculum serves as foundation for graduate work leading toward a Master of Science in Public Health.

2. *Alternative b: Physical Sciences and Public Health.* This curriculum is arranged for those who wish to specialize in industrial hygiene or public health engineering. To a background of fundamental work in surveying, strength of materials, and hydraulics are added courses including those in sanitation, sanitary chemistry, and bacteriology. This program of study is basic for those who wish to prepare for public health engineering work, for a Master of Science in Sanitary Engineering, or for a Master of Science in Public Health.

FIRST YEAR

Alternative a or b: Mathematics 7, 8, 41; Chemistry 1-2-3; English 1, 2; *foreign language, 2 five-quarter-hour courses; Social Science 1-2; Physical Education 1, 2, 3; Hygiene 11.

SECOND YEAR

Alternative a: †English 3, 4; foreign language, 2 five-quarter-hour courses, following those taken in the first year; Physics 24-25; Zoology 41, 42; Botany 41; Mathematics 31, 42.

*If the student enters the University with a foreign language deficiency, he must take two courses in language before he receives credit on language courses required for graduation.

†English 5 or 6, or an art or music elective, may be substituted for English 4.

Alternative b: *English 3, 4; Physics 24-25; Mathematics 31, 32, 33; foreign language, 2 courses, following those taken in the first year, and Botany 1, Zoology 1; or, in place of the foreign language and the freshman courses in botany and zoology, Botany 41, Geology 41, and Zoology 41.

THIRD YEAR

Alternative a: Chemistry 31 and 42; Mathematics 51; Zoology 109; Economics 61; English 59; Geology 41; Zoology 112; †Elective.

Alternative b: Chemistry 31 and 42; Mathematics 51; Mathematics 121; Mathematics 123; Mathematics 124; Mathematics 42; Economics 61; English 59; †Elective, two courses.

FOURTH YEAR

Alternative a: P. H. 111 P. H. Administration; Zoology 106-107-108; P. H. 131 Bacteriology; P. H. 161 Sanitation; P. H. 163, 164 Sanitary Chemistry; P. H. 135 Parasitology; P. H. 133 Malariology; P. H. 134 Medical Entomology; †Elective.

Alternative b: P. H. 111 P. H. Administration; P. H. 161 Sanitation; P. H. 131 Bacteriology; P. H. 121 P. H. Statistics; P. H. 162 Sanitary Chemistry; P. H. 135 Parasitology; †Math. 125; †Math. 126; Math. 61; †Elective (Min. 6 hrs., max. 11 hours are to be taken in School of Public Health.)

Bachelor of Science in Public Health Nursing

Candidates for this degree must fulfill the following requirements:

1. Satisfactory completion of 90 quarter hours in an accredited college or university. The amount of credit not exceeding 90 quarter hours extended for work in other colleges will be determined by the Committee on Admissions.

(a) *Required:*

24 quarter hours in the natural sciences, selected from zoology, botany, chemistry, physics, psychology.

20 quarter hours in English.

10 quarter hours in the social sciences, selected from sociology, upper division psychology, history.

(b) *Electives:*

The departmental adviser will assist the student in the selection of the remaining courses (36 quarter hours) with reference to her individual needs.

2. Graduation from an approved school of nursing, with credit to be determined by the Committee on Admissions.

3. Satisfactory completion of the curriculum in Public Health Nursing in the School of Public Health at the University of North Carolina.

*English 5 or 6, or an art or music elective, may be substituted for English 4.

†It is suggested that some of the elective courses be taken from the following: English 44, Zoology 41 and 109, Political Science 41, 42, and 101, Chemistry 61, 62, 63, Physics 120, Mathematics 125, 126.

‡Elective courses may be substituted for the courses in structures; if this substitution is made, the courses in structures must be taken in the graduate year by candidates for the Master of Science in Sanitary Engineering.

THE SCHOOL OF EDUCATION

GORDON GRAY, A.B., LL.B., LL.D., *President of the University of North Carolina*

ROBERT BURTON HOUSE, A.M., LL.D., *Chancellor of the University at Chapel Hill and Vice-President of the University of North Carolina*

GUY BERRYMAN PHILLIPS, A.B., M.A., *Dean*

*†The Administrative Board

MICHAEL ARENDELL HILL, JR., A.M., *Professor of Mathematics* (1951)

WILL CARSON RYAN, Ph.D., Ed.D., LL.D., *Kenan Professor of Education* (1951)

OLIVER KELLY CORNWELL, M.A., Ed.D., *Professor of Physical Education and Director of Physical Education* (1952)

HARRY KITSUN RUSSELL, Ph.D., *Professor of English* (1952)

WILLIAM HOWARD PLEMMONS, Ph.D., *Professor of Education* (1953)

JOSEPH CARLYLE SITTERSON, Ph.D., *Professor of History* (1953)

GORDON WILLIAMS BLACKWELL, Ph.D., *Professor of Sociology and Director of the Institute for Research in Social Science* (1954)

H. ARNOLD PERRY, Ed.D., *Professor of Education* (1954)

RICHARD ELMER JAMERSON, Ed.D., *Professor of Physical Education* (1955)

DOROTHY C. ADKINS, Ph.D., *Professor of Psychology* (1955)

General Statement

The following outline will serve as a guide for students enrolled in the School of Education.

Undergraduate students who desire to prepare for teaching in the elementary school or in the secondary school will be admitted to the School of Education in accordance with the admission procedure outlined in the bulletin of the School of Education.

Each student will follow the program of courses in education outlined for the elementary certificate and the secondary certificate. In addition he will select courses in his major field of concentration to meet the requirements for graduation from the University and general certification requirements.

Certification may be secured in the fields of art, elementary education, Bible and religion, English, French, Latin, library science, mathe-

*The Chancellor, the Director of Admissions, and the Dean of Students are ex officio members of the Board.

†Dates indicate expiration of terms.

matics, music, natural science, physical education, Spanish, social science. With the advice of the department concerned (or division in the cases of natural science and social science) the student follows one of the programs for a major. Students are advised to select a second or minor program in one of the fields listed above, or in dramatic art, and especially to make such combinations of major and minor as will best prepare them for the integrated high school programs that are developing in North Carolina and other states.

Students are urged to consult the Dean of the School of Education or his representative about questions involving the preparation of teachers for the public schools.

Bachelor of Arts in Education (Secondary)

FRESHMAN YEAR

- | | | | | | |
|-------------------------|---|---|-------------------------|---|---|
| Required: | { | English 1-2
Social Science 1-2
Hygiene 11
Physical Education 1, 2, 3 | Choose one
sequence: | { | Mathematics 7-8 or R, 7X, 8
*Greek 3-4 (or 1-2)
*Latin 3-4 (or 1-2) |
| Choose one
sequence: | { | Chemistry 1-2-3 or 1-2-31
Physics 24-25 | Choose one
sequence: | { | †French 3-4
†German 3-4
†Greek 3-4
†Latin 3-4
†Spanish 3-4 |
| OR | | | | | |
| Any two of
these: | { | †Botany 1
Geography 38
Geology 1, 41, 42
Physics 20
†Zoology 1 | | | |

SOPHOMORE YEAR

- | | | | | | |
|-----------------------|---|---|----------------|---|--|
| Required: | { | English 3
Foreign language 21-22 (or 3-4) of
language taken in freshman year
Psychology 24 or 25 or equivalent
Physical Education 4, 5, 6 | Choose one: | { | English 4 or 5 or 6
Art 41 or 42 or 43
Music 41
Religion 23 |
| Choose: | | Economics 31-32 | | | |
| OR | | | | | |
| Any two of
these:§ | { | Anthropology 41
History 21, 22, 41, 42, 44, 45,
48, 49
Philosophy 21, 22, 41, 42
Sociology 51
Political Science 41, 42 | Choose
one: | { | Astronomy 31, 32
Botany 41, 42
Chemistry 31 or 41 or 42
Geography 38
Geology 1, 41, 42
Physics 20
Zoology 41, 42
Mathematics 31, 34 |

*Students who choose Greek or Latin in this group must choose a modern foreign language to meet the requirement in foreign language. Courses 1-2 may be taken by students who did not take one of these languages in high school.

†Students who wish to take further work in botany and zoology should choose as their first courses in these areas Botany 41 and Zoology 41 instead of Botany 1 and Zoology 1.

‡Students who present credit for two units of high school work in foreign language but who are placed in course number 1 of that foreign language may meet the requirement with courses 1-2, 3-4.

§It is recommended that students choose sequence courses from this area; as History 21-22 or Anthropology 41 and Sociology 51. Students who desire to teach in the field of social science in high school should choose History 21-22 or History 71-72. If their schedules will permit they should also choose Political Science 41.

||Students who choose the Botany 1—Zoology 1 sequence in the freshman year must choose one of the physical sciences (astronomy, chemistry, physics, geology, geography, mathematics) from this group.

Bachelor of Science in Science Teaching (Secondary)**FRESHMAN YEAR**

(Same as for Bachelor of Arts in Education)

SOPHOMORE YEAR

Required:	{ English 3 Foreign language 21-22 (or 3-4) of foreign language taken in freshman year Psychology 24 or 25 or equivalent Physical Education 4, 5, 6	Choose one:	{ English 4 or 5 or 6 Art 41 or 42 or 43 Music 41
Any two of these:*	{ Anthropology 41 History 21, 22, 41, 42, 44, 45, 48, 49 Political Science 41, 42 Philosophy 21, 22, 41, 42 Sociology 51	Choose one:	{ Astronomy 31-32 Botany 41 and Zoology 41 Botany 41-42 Zoology 41-42 Chemistry 1-2-3 or 1-2-31 or 31 and 41 or 31 and 42 Geology 1 or 41 and Geography 38 Geology 41-42 Physics 24-25 or 34-35

Bachelor of Arts in Education (Elementary)**FRESHMAN YEAR**

Required:	{ English 1-2 Social Science 1-2 Hygiene 11 Physical Education 1, 2, 3	Choose one sequence:	{ Mathematics 7-8 or R, 7X, 9 †Greek 3-4 (or 1-2) †Latin 3-4 (or 1-2)
Any two of these:	{ Botany 1 Geology 1-41-42 Zoology 1	Choose one sequence:	{ †French 3-4 †German 3-4 †Greek 3-4 †Latin 3-4 †Spanish 3-4

SOPHOMORE YEAR

Required:	{ English 3 Foreign language 21-22 (or 3-4) of language taken in freshman year Geography 38 History 21-22 Music 41 Psychology 24 or 25 or equivalent Physical Education 4, 5, 6	Choose one:	{ Astronomy 31 Physics 20

*It is recommended that students choose sequence courses from this area; as History 21-22 or Anthropology 41 and Sociology 51.

†Students who choose Greek or Latin in this group must choose a modern foreign language to meet the requirement in foreign language. Courses 1-2 may be taken by students who did not take one of these languages in high school.

‡Students who present credit for two units of high school work in foreign language but who are placed in course number 1 of that foreign language may meet the requirement with courses 1-2, 3-4.

Professional Program

The professional program designed to meet the certification requirements has been organized around three areas of study—*The School*, *The Pupil*, and *Teaching (The Practicum)*. The content of the courses, which of necessity cuts across these areas, has been organized to eliminate unnecessary duplication. The materials used and the activities engaged in through these courses offer a variety of individual and collective experiences. Schools are visited, classrooms are used for observation of student growth, teachers are interviewed for professional development, community activities are observed.

The professional courses are listed in the catalogue for credit toward graduation as follows:

41. INTRODUCTION TO THE STUDY OF EDUCATION (5). (*The School*, *The Pupil*, and *Teaching*). (This course or its equivalent is required of all prospective teachers.) This is an orientation course designed to help develop an understanding of the philosophy and procedures of public education.

71. CHILD GROWTH AND DEVELOPMENT (5). (*The Pupil*). (Required of all prospective teachers.) A course designed to acquaint the student with significant aspects of child growth and development as they relate to the educational process. Functional understanding of individual differences, growth, personality, and factors influencing learning is stressed.

74ab. THE ELEMENTARY SCHOOL. (3 or 5). (*The School*). This course is designed to give the student an understanding of the purposes and organization of the elementary school. The work of the school is studied in relationship to the various community agencies concerned with the education of the child.

99. THE SECONDARY SCHOOL. (5). (*The School*). A course designed to assist the prospective teacher in developing an understanding of the functions and organization of the American secondary school. Examination is made of the relationship between the school and each of the other social institutions concerned with the education of the adolescent. Actual and projected school practices are evaluated.

61, 63, 75, 76, 77, 81, 83a, 83b, 85, 87, 89, 91. METHODS AND MATERIALS IN TEACHING IN: ELEMENTARY GRADES, HEALTH AND PHYSICAL EDUCATION, INSTRUMENTAL MUSIC, CHORAL MUSIC, ART, ENGLISH, FRENCH, SPANISH, SOCIAL STUDIES, LATIN, MATHEMATICS, SCIENCE. (5). (*Teaching*). Emphasis is placed upon the teacher's function in classroom learning situations and in the operation of the public school. The course is concerned with the study of problems common to all teachers, as well as those peculiar to teaching in the subject areas.

62, 64, 78, 79, 80, 82, 84a, 84b, 86, 88, 90, 92. STUDENT TEACHING IN: ELEMENTARY GRADES, HEALTH AND PHYSICAL EDUCATION, INSTRUMENTAL MUSIC, CHORAL MUSIC, ART, ENGLISH, FRENCH, SPANISH, SOCIAL STUDIES, LATIN, MATHEMATICS, SCIENCE. (15). (*School*, *Pupil*, *Teaching*). Student teaching is conducted on a full-time basis which enables the student to participate in all aspects of public school life. It is designed to emphasize learnings in the three areas of *The Child*, *The School*, and *Teaching*, following the plan of preceding professional courses. Student teaching is carried out under University supervision in cooperating public schools in the state.

Subject Matter Program (Secondary)

ART

Students who choose to teach art will complete an art major reduced by one studio course and one Art History course.

Pre-major work in General College: (choose three) studio half-courses 44, 45, 46, 48, 49, 80, 81, 84, 110; (choose two) Art History 41, 42, 43.

Students who choose a second teaching field in art will take two Art History courses (including 41 or 42 or 43), and the following studio half-courses: 44, 45, 46, 49, 50, 55, and two electives.

BIBLE AND RELIGION

Students who choose a major program in religion will take:

- Religion 28 (if not taken in the General College)
- Religion 30
- Religion 31
- Religion 80
- Religion 81
- Religion 92
- Religion 103
- Religion 45 or 195

Students who choose a minor program in religion will take:

- Religion 28 (if not taken in the General College)
- Religion 30
- Religion 80
- Religion 81
- Religion 103

DRAMATIC ART

Students who choose a second teaching field in dramatic art will take the following courses:

- Dramatic Art 63
 - Dramatic Art 64
 - Two of the following: 155, 161, 162
- Dramatic art is not a major teaching field.

ENGLISH

Students who choose a major program in English will take:

- (a) *English 50 (or 115ab)
- (b) *English 96 (or 170ab)
- (c) *English 81 or 82
- (d) English 40 or 41 or 44 (or specially designed course)
- (e) One of the following: English 70 (or 103ab), 75, 83, 91, 93
- (f) One of the following: English 84, 88, or 89, 94 (or 104ab), 97, 98
- (g) One elective in English

To complete their programs students preparing to teach English have three alternatives:

- (a) To take a minor in another certification field, such as social studies, modern or classical languages, mathematics, music, natural science, or art;
- (b) To take courses preparing them to assist with other professional and extra-curricular responsibilities, such as dramatics, school newspaper, audio-visual aids, guidance, or library supervision;
- (c) To take grouped courses designed to improve the student's proficiency as an English teacher.

To assist the student in carrying out choices (b) and (c), the following programs are suggested:

- (a) Dramatic Art: Dramatic Art 63, 64; two of the following: 155, 161, 162.
- (b) Library Science: Library Science 94 and 95 as half-courses; Library Science 122, 123, 143.
- (c) Journalism: Journalism 53, 54, 57; two courses from the following: Journalism 56, 58, 60, 61.
- (d) Radio: Radio 75; three of the following: Radio 71, 72, 74, 80, 81, 83.
- (e) Audio-Visual Aids: Education 135, Art 50; two radio courses listed above.
- (f) Psychology: Four courses in psychology chosen from Psychology 30, 40, 122, 126, 133, 144.

*Courses required by the state of North Carolina for certification in English.

(g) Following are illustrative grouped courses related to an English major which might serve to prepare for extra-curricular activities, and to improve classroom teaching preparation, depending upon the need, ability, or interest of the student. It is suggested that the following course groupings be considered with the approval of the student's adviser.

Library Science 122; Journalism 53; Radio 70; Reading Techniques at the Secondary level.

Folklore 104, 167, or 185; American History 72; Sociology 52, 62, 154, 161.

Sociology 62 or Religion 62; Sociology 101, 102 or 181; Education 175.

Journalism 53; Radio 72; English 53; Art 48 or 50.

Students who choose a minor teaching field in English will take the following courses or their equivalent:

(a) English 50

(b) English 96

(c) English 81 or 82

(d) One from English 83, 84, 88, 89, or by permission an elective, provided the student has had English literature in the General College.

FRENCH

Students who wish to prepare to teach French will take the following courses:

French 50

French 51

French 52

French 71

French 72

French 126

French 145

Those who choose French as a minor teaching field will take the following courses:

French 50 (when required), 51, 71, 72, and 145.

HEALTH AND PHYSICAL EDUCATION

Students who wish to prepare to teach in health and physical education will take the following courses: Physical Education 75, 76, 77, 78, 79, 86, 87.

Men who choose a major program should take the following courses: Physical Education 65, 66, 67, 68, 69, and 70.

Women who choose a major program should take the following courses: Physical Education 54, 55, 56, 57, 58, and 59.

All those who take a minor program in physical education should take Physical Education 77, 78, 86, Education 63, and one from the following: Physical Education 65, 66, 67, 68, 69, or 70.

LATIN

Students who wish to prepare to teach Latin will take:

Latin 71

Latin 51 or 52; and four additional courses from the following:

Latin 62, 76, 101, 102, 103, 104, 105, 112.

Students who choose Latin as a second teaching field will take:

Latin 71, 51, or 52, and two additional courses.

LIBRARY SCIENCE

Students who choose a program in library science will take the following courses or their equivalent:

Library Science 94

Library Science 95

Library Science 96

Library Science 122

Library Science 123

Library Science 143

Students who choose library science as a second teaching field will take the following courses or their equivalent:

Library Science 94 and 95 (each as a three-quarter-hour course)

Library Science 122

Library Science 123

Library Science 143

MATHEMATICS

Students who wish to prepare to teach mathematics will take the following courses or their equivalent:

Mathematics 31

Mathematics 32

Mathematics 33

Mathematics 102

Mathematics 103

And one additional course in mathematics to make a total of thirty quarter hours.

Students who choose mathematics as a second teaching field will take twenty quarter hours from the courses listed above.

MUSIC

Students who wish to prepare to teach music will take the regular courses in the music major.

The student specializing in instrumental music should include, in addition to the major instrument, a study of all band instruments (Music E) or all orchestra instruments (Music D).

Students who choose music as a second teaching field will take the following: Music 1, 14, 47-48 (or any two from Music 54, 55, 56), and three quarter hours instruction in voice.

NATURAL SCIENCE

Students who wish to prepare to teach science will complete ten courses in science including three of the following sequences:*

Botany 41, 42, 43

Chemistry 1-2-3, or 1-2-31

Geology 41 and Geography 38 or Geology 41, 42

Physics 24-25

Zoology 41, 42

Any science courses taken while the student is in General College may count toward satisfying this requirement, but at least six of the courses must be passed with a grade of C or better. The courses used to satisfy these requirements plus those needed to complete a total of thirty-seven courses should be selected after consultation with the adviser in the School of Education and the department or departments of natural science concerned.

SOCIAL SCIENCE

Students who wish to teach in the Social Sciences must have the following courses or their equivalent: Social Science 1-2, History 71-72. In addition to these prerequisite courses, students must pursue one of the following plans:

(1) Complete a program in social science consisting of the following courses or their equivalents: Political Science 41, Sociology 51,

*Students planning to teach in North Carolina should plan to take at least two courses each in physics, chemistry, and biology and one in geography or geology.

Economics 61, either Sociology 52 or Sociology 181, two five-hour courses of junior-senior rank in history, and two five-hour elective courses in the Division of the Social Sciences; or

(2) Complete at least six courses in one of the following departments of the Division of Social Sciences as prescribed by that department: Economics, History, Political Science, Sociology and Anthropology, or Geography; and complete two additional courses not in the field selected from the following: Political Science 41, Sociology 51, and Economics 61.*

Students who choose social studies as a second teaching field should complete the prerequisite courses indicated in the first paragraph of this section, and, in addition, choose either of the following plans:

(1) In preparation for certification in civics or problems of American democracy, complete at least six five-hour courses selected from among the departments of Economics, Political Science, Sociology and Anthropology, and Geography, including the following courses: Economics 51, Political Science 41, and Sociology 51.

(2) In preparation for certification in a single social studies subject, complete at least four five-hour courses in one of the following departments: Economics, Political Science, Sociology and Anthropology.

SPANISH

Students who wish to prepare to teach Spanish will take:

Spanish 50, 51, 52, 71, 72, 73, 145

Those who choose Spanish as a minor teaching field will take the following courses:

Spanish 50, 51, 71, 72, 145.

Subject Matter Program (Elementary)

Programs of study leading to a major in elementary education and to certification as an elementary school teacher in North Carolina and other states may be arranged by the student in consultation with his adviser. Completion of General College requirements (freshman and sophomore years) is a prerequisite to enrollment in the School of Education and to admission to courses in education designed to develop in the student the competencies needed for effective guidance and teaching of young children.

*Students who choose a program in history will find it necessary to complete this plan and an additional five-hour course in any other department in the Division of the Social Sciences in order to qualify for the Social Studies certificate.

Men students may enter the University as freshmen. Their General College program should include, where possible, two courses in American history, two courses in geography (principles and regional), an introductory course in political science, and a course in music appreciation or a course in art appreciation. These courses can usually be worked into the program of the student in meeting General College requirements.

Women students may enter the University as juniors and go directly into the School of Education provided General College requirements have been met. Women who are planning to transfer to the University after two years at some other institution should plan their freshman and sophomore programs to meet General College requirements and to include the courses in history, geography, political science, art, and music mentioned above. Women admitted to the University with marked deficiencies in these courses and in General College requirements will find it necessary to take an extra quarter to meet graduation requirements and to complete courses needed for teacher certification in a particular state. The summer sessions before the junior and senior years as well as the summer following the senior year may be used for this purpose. Students who plan their program properly may transfer to the University after two years in some other recognized institution and complete the work in the regular six quarters of two academic years.

Specific courses for the junior and senior years are selected in consultation with an adviser in elementary education. Not all students will have the same courses during the same quarters. Variations will occur because of differences in freshman and sophomore programs and because of individual needs of students. All students, however, must meet graduation requirements of the University and must include all courses required by the state of North Carolina for certification as a Class A teacher in the Primary or Grammar Grades.

Elementary certification requires the following subject-matter credits. Some of this should be completed during the first and second years of the college program.

SUBJECT	QUARTER HOURS
1. English	18
<i>Required:</i>	
a. Composition	9 q.h.
b. Children's Literature	3 q.h.
<i>Recommended:</i>	
a. Advanced Grammar }	6 q.h.
b. Speech }	

2. American History and Government.....	12
<i>Required:</i>	
a. American History.....	9 q.h.
b. Government	3 q.h.
3. Geography	9
<i>Required:</i>	
a. Principles	4½ q.h.
b. Regional	4½ q.h.
4. Fine and Industrial Arts.....	18
<i>Required:</i>	
a. Art	9 q.h.
b. Music	9 q.h.
5. Health and Physical Education.....	15
<i>Required:</i>	
a. Principles, Practices, and Procedures in Physical Education for Elementary Schools.....	3 q.h.
b. Principles, Practices, and Procedures in Health for Elementary Schools.....	3 q.h.
<i>Recommended:</i>	
a. Service courses.....	6 q.h.
b. Physical Education Elective.....	3 q.h.

THE SCHOOL OF JOURNALISM

GORDON GRAY, A.B., LL.B., LL.D., *President of the University of North Carolina*

ROBERT BURTON HOUSE, A.M., LL.D., *Chancellor of the University at Chapel Hill and Vice-President of the University of North Carolina*

OSCAR JACKSON COFFIN, A.B., *Dean*

***The Administrative Board**

CLARENCE HEER, Ph.D., *Kenan Professor of Economics*

HUGH TALMAGE LEFLER, Ph.D., *Professor of History*

LEON M. POLLANDER, *Lecturer in Journalism*

CHARLES PHILLIPS RUSSELL, A.B., *Professor of Journalism*

CHARLES BASKERVILL ROBSON, Ph.D., *Professor of Political Science*

HARRY KITSUN RUSSELL, Ph.D., *Professor of English*

WALTER SPEARMAN, A.M., *Professor of Journalism*

ALBERT IRVING SUSKIN, Ph.D., *Associate Professor of Latin*

EARL WYNN, M.S., *Professor of Radio and Communication and Director of the Communication Center*

General Statement

The executive committee of the Board of Trustees, in January of 1950, authorized the establishment of a School of Journalism, not so much as a replacement, but as a continuation of the Department of Journalism which was created in 1924. There is no change in the requirement of two years of General College work for admission; there is no addition of courses at the graduate level. Special students who are not candidates for a degree and undergraduates electing journalism courses will be admitted after consultation with members of the faculty. A minimum of six journalism courses is required for the Bachelor of Arts degree in Journalism, but this may be extended to a maximum of eight.

Within the past year there has been established the Journalism Foundation of the University of North Carolina for the purpose, as stated in its charter: ". . . to sponsor, promote, encourage, support and assist, financially and otherwise, the advancement of education in the field of journalism at or through the School of Journalism (or the Department of Journalism) of the University of North Carolina, Chapel Hill, North Carolina, by encouraging, promoting and assisting

*The Chancellor, the Director of Admissions, and the Dean of Students are ex officio members of the Board.

in making provision for the greatest possible educational opportunities and advantages for students of journalism; by promoting and making possible scholarships, fellowships, loans, and other means of financial assistance for worthy, qualified students of journalism; by promoting, creating and assisting in the creation of chairs of journalism for the teaching of any or all phases of journalism and in paying in full or in supplementing the salary or salaries of persons engaging in any phase of education in the field of journalism; by donating or otherwise providing all or any part of the buildings, equipment, materials, or facilities necessary, desirable, incidental to, or useful in such education in the field of journalism; by cooperating with individuals, corporations, associations and other institutions and organizations in promoting, sponsoring, supporting and assisting in the advancement and attainment of the objects and purposes herein set forth or any of them; by publishing and distributing literature and otherwise disseminating information in the furtherance of any or all of the purposes herein set forth."

We suggest that, for their sophomore social science, students take American history or political science. The only economics course required for the School of Journalism is Economics 61, which may be taken in the junior or senior years.

Journalism students interested in extra-curricular experience may work on the *Daily Tar Heel*, student newspaper, with encouragement from the School of Journalism in the form of credit hours toward a degree (see Description of Courses). Individual members of the school act in an unofficial capacity as advisers, but do not exercise control or censorship over student-managed publications.

Since no journalism papers are accepted unless they are typewritten, it is advisable that every student be able to type with reasonable skill.

THE SCHOOL OF BUSINESS ADMINISTRATION

GORDON GRAY, A.B., LL.B., LL.D., *President of the University of North Carolina*

ROBERT BURTON HOUSE, A.M., LL.D., *Chancellor of the University at Chapel Hill and Vice-President of the University of North Carolina*

THOMAS HENRY CARROLL, B.S., M.B.A., D.C.S., *Dean; Professor of Business Administration*

DUDLEY DEWITT CARROLL, M.A., *Dean Emeritus of the School of Commerce; Professor of Economics*

JOHN TETTEMER O'NEIL, B.S., M.B.A., Ph.D., *Assistant Dean; Associate Professor of Finance*

JOHN BROOKS WOOSLEY, Ph.D., *Chairman, Graduate Studies and Research; Kenan Professor of Finance*

REX SHELTON WINSLOW, Ph.D., *Director of Bureau of Business Services and Research; Professor of Economics*

*The Administrative Board

GORDON WILLIAMS BLACKWELL, Ph.D., *Professor of Sociology and Director of the Institute for Research in Social Science*

THOMAS HENRY CARROLL, D.C.S., *Professor of Business Administration and Dean of the School of Business Administration*

ROBERT WILLINGHAM CRUTCHFIELD, S.M., C.P.A., *Associate Professor of Accounting*

JAMES WILLIAM FESLER, Ph.D., *Professor of Political Science*

MICHAEL ARENDELL HILL, JR., A.M., *Professor of Mathematics*

CLEMENT SEARL LOGSDON, Ph.D., *Professor of Marketing*

CLIFFORD PIERSON LYONS, Ph.D., *Professor of English*

ARTHUR ROE, Ph.D., *Professor of Chemistry*

CORYDON PERRY SPRUILL, A.B., B.Litt. (Oxon.), *Professor of Economics and Dean of the General College*

HARRY DEMERLE WOLF, Ph.D., *Professor of Economics*

JOHN BROOKS WOOSLEY, Ph.D., *Kenan Professor of Finance*

General Statement

Though courses of instruction in economics and in certain business subjects had been offered for many years in the University of North Carolina, not until 1919 was there established a comprehensive, well-organized business curriculum. In that year the legislature, in con-

*The Chancellor, the Director of Admissions, and the Dean of Students are ex officio members of the Board. The Assistant Dean of the School serves as Secretary of the Board.

formity with the recommendations of the President and the Board of Trustees, enacted the legislation which resulted in the organization of the School of Commerce. The name of the School was changed in 1950 to the School of Business Administration. The School occupies a place in the University organization coordinate with other professional schools and the College of Arts and Sciences.

The undergraduate course of study, leading to the degree of Bachelor of Science in Business Administration, covers a period of four years and is designed to give a foundation of general education in science, the humanities, and the social sciences, as well as to supply a professional background to those who intend to engage in business administration.

For those desiring work at a more advanced level, the degree of Master of Science is offered through the Graduate School.

Purpose and Policy

The phenomenal industrial development of the South in recent years has produced an imperative need for trained businessmen. The School of Business Administration, in a large sense, is the expression of the University's desire to serve this need. Substantial support has been accorded the School by both the University and the state as a whole. The School, located in Bingham Hall, has been provided with a well-qualified instructional staff. New quarters, consisting of a quadrangle of three buildings, are now under construction.

The teaching policy of the School assumes that effective education for business responsibility should consist not only of development of understanding of the principles and methodology which govern the organization and administration of individual business enterprises, but also of an understanding of the problems and the larger relationships of the economy as a whole. In his attempt to master the more specialized aspects of business, the student is not permitted to lose sight of the social and the cultural. Whenever possible, therefore, the plan is followed of presenting the subject matter of the various courses from the point of view of the administrator, always bearing in mind that his field of interest includes the broad external relationships as well as the internal administration of his business. Adherence to this point of view enables the student to consider the problems and practices of business in a broad perspective.

Within the short space of time at his disposal, it is impossible for the student to study in detail the entire field of business. It is, there-

fore, the policy of the School to supplement the so-called "core subjects" which are required of every student with a more intensive study of that portion of the field which is of especial interest to him. To this end, there have been prepared for the student certain groupings of closely related courses. These majors include: (1) production, (2) marketing, (3) finance, (4) personnel management, (5) insurance, (6) accounting, and (7) statistics. Other feasible majors are described in the catalogue of the School of Business Administration.

Graduate Study

Professional education in business administration for college graduates with undergraduate majors other than business administration is offered as well as graduate work for students who have been awarded undergraduate degrees in business. A student's initiative and analytical and creative powers are developed and tested to a degree impossible of attainment in the undergraduate years. Courses have been developed exclusively for graduate students. Some which have been designed primarily for the encouragement and guidance of research activity are conducted informally and on a basis of close personal contact between professor and student.

The School of Business Administration offers through the Graduate School the graduate degree of Master of Science. The conferring of this degree assumes as a minimum the completion of eight full courses or their equivalent as approved by the Dean, a residence period of at least one academic year, and the completion of a thesis which embodies the results of research on the part of the student.

Candidates for the degree of Doctor of Philosophy may take a major in either business administration or economics and a minor in the other field.

Graduates of other institutions desiring to enter as candidates for advanced degrees should submit their records, together with application for admission, to the Dean of the Graduate School. For further details, see the catalogue of the Graduate School.

Air Force and Naval R. O. T. C.

Regularly organized units of the Air Force and Naval R. O. T. C. are maintained at the University. Among the programs of training provided is one in the Supply Corps leading to a commission as Ensign as well as to a degree of Bachelor of Science in Business Administration.

Special Students

There are many persons already in business who feel the need of additional special training but who are unable to spend a relatively long period at the University or who cannot provide proper entrance credits. The School of Business Administration will admit as special students certain applicants who are twenty-one years of age or over. All special students are admitted on probation. These students are not candidates for degrees, but they must supply satisfactory evidence of their ability to profit from the courses to be undertaken. Such evidence would ordinarily include a statement from the employer or former employers certifying to the term, nature, and quality of their work. A personal interview with the Dean is also recommended. Veterans of World War II who apply for admission as special students must be approved by the Veterans' Administration.

Library Facilities

In addition to the splendid facilities afforded by the general library of the University, the School of Business Administration is equipped with its own collection of more than 40,000 volumes. Noteworthy is the collection of periodical publications; most of the important periodicals in several fields of business are included. The School is a regular subscriber to 120 scholarly and trade journals and receives gift subscriptions to nearly four hundred additional publications. Moreover, approximately thirty special services are subscribed to, including those of the Bureau of National Affairs, Standard and Poors Corporation, Moody's, Fitch's and Commerce Clearing House. A sizable annual appropriation assures that the collection will be well maintained and kept up-to-date.

A full-time librarian is in charge of the Business Administration Library and is prepared to aid students in the collection of such materials for research work as may not be currently available in the University. Special library privileges consisting of access to the stack rooms and private desk space are accorded graduate students.

Lectures, Observation Trips, and Clinics

Students are expected to take advantage of the opportunities to attend lectures offered by prominent businessmen who are invited to the University for this purpose.

In addition to formal lectures, the School from time to time arranges for business leaders to come to the University for informal

discussion of current business problems in their respective fields in order to provide the student with a clearer understanding of actual business practice.

From time to time the classes in business administration visit neighboring factories and other types of business firms for the purpose of making first-hand studies of organization and administration.

The Bureau of Business Services and Research

The Bureau of Business Services and Research is an agency of the School which cooperates with the University Extension Division, the Institute of Industrial Relations, private business firms, foundations, and trade associations in organizing and extending the services and facilities of the School of Business Administration beyond the boundary of the campus.

The Bureau acts as a general clearinghouse for requests from North Carolina business and industry seeking assistance in the solution of business problems. It administers adult educational projects such as short courses, institutes, and workshops for business executives both on the campus in Chapel Hill and in towns and cities throughout the state. The Bureau acts as consultant for business firms and associations seeking to establish research and training programs requiring university-grade educational services. It organizes consultant services and schedules speakers from the staff of the School. The Bureau also cooperates with the Placement Office in helping to fill the needs of business and industry for University-trained men and women.

The section of this catalogue devoted to the Extension Division provides more detailed information on adult education projects conducted by the School.

Endowments

In July, 1946, the Business Foundation of North Carolina, Inc., was established. Its 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. . . ." The substantial funds of the Business Foundation are a source of great potential strength for the School of Business Administration since grants to the School may enable it to command important additions to the staff and provide facilities for effective business research in the region.

An endowment was received by the School in May, 1947, through the Business Foundation, when Mr. Ralph C. Price and Mrs. Kathleen Price Bryan established the Julian Price Professorship of Insurance as a memorial to their father. It is the purpose of the Julian Price Endowment to provide funds for "instruction in any or all phases of life insurance." Provision was made, moreover, that any excess income "shall be applied to expenses of research in said School . . . or toward scholarships." The first holder of the Price professorship was named in 1948, and at the present time the insurance program is rapidly growing in importance as its contributions to the training of leaders in the insurance field proves its worth.

Stenography

No credit toward the degree is given for stenography, but every student is urged to acquire facility in the use of it before graduation.

Standards of Work

The School was admitted to membership in the American Association of Collegiate Schools of Business in 1923. This is an organization formed for the promotion of high standards in education for business. Membership is based on the number and training of the faculty, the thoroughness of the academic program offered, the length and breadth of the curriculum, the financial support of the school, and the physical facilities provided for carrying on the work.

Fellowships and Assistantships

Two teaching fellowships, each of a value of \$900 plus free tuition for the academic year in the Graduate School, are awarded annually in the School of Business Administration. The recipients may be called on to do teaching or other duties in the department not exceeding one-third of their time. Applications should be made prior to March 1.

The Ernest H. Abernethy Fellowship in Southern Industry, of an annual value of \$750 plus free tuition, was established in 1944. The holder is required to do research in an industry of importance to the South and to prepare a thesis as a result of the study.

A number of graduate and undergraduate assistantships are awarded each year. The recipients are expected to perform such tasks as grading papers, conducting laboratories, and constructing charts.

Beta Gamma Sigma

Beta Gamma Sigma, recognized by the American Association of Collegiate Schools of Business as the national scholarship society in Commerce and Business, maintains a chapter, Alpha of North Carolina, at the University. Those students who rank scholastically in the highest 10 per cent of the senior class and the highest 3 per cent of the junior class may be considered for membership in this organization. The number selected is generally less than might be selected under the provisions referred to above.

Admission

For requirements for admission to the School of Business Administration, see page 81. For the curriculum offered in the first two years while the student is formally enrolled in the General College, see page 139.

Courses and Curricula Leading to the Degree of Bachelor of Science in Business Administration

A description of courses offered by the School of Business Administration begins on page 253 of this catalogue. The several curricula which lead to the degree of Bachelor of Science in Business Administration are described in detail in a separate bulletin of the School of Business Administration, which may be obtained by addressing a request to the Dean.

THE GRADUATE SCHOOL

GORDON GRAY, A.B., LL.B., LL.D., *President of the University of North Carolina*

ROBERT BURTON HOUSE, A.M., LL.D., *Chancellor of the University at Chapel Hill and Vice-President of the University of North Carolina*

WILLIAM WHATLEY PIERSON, Ph.D., Litt.D., LL.D., *Dean*

*ARNOLD KIMSEY KING, A.M., *Associate Dean*

†‡The Administrative Board

EDGAR WALLACE KNIGHT, Ph.D., *Kenan Professor of Education* (1951)

BERTHOLD LOUIS ULLMAN, Ph.D., *Kenan Professor of Classical Languages and Literatures* (1951)

HAROLD HOTELLING, Ph.D., *Professor of Mathematical Statistics* (1952)

GEORGE SHERMAN LANE, Ph.D., *Kenan Professor of Germanic and Comparative Linguistics* (1952)

CLIFFORD PIERSON LYONS, Ph.D., *Professor of English* (1953)

DONALD PAUL COSTELLO, Ph.D., *Kenan Professor of Zoology* (1953)

URBAN TIGNER HOLMES, JR., Ph.D., Litt.D., *Kenan Professor of Romance Philology* (1954)

GORDON WILLIAMS BLACKWELL, Ph.D., *Professor of Sociology and Director of the Institute for Research in Social Science* (1954)

RALPH WALTON BOST, Ph.D., *Kenan Professor of Chemistry* (1954)

CLARENCE HEER, Ph.D., *Kenan Professor of Economics* (1955)

JOHN EDGAR LARSH, JR., Sc.D., *Professor of Parasitology* (1955)

CHARLES BASKERVILL ROBSON, Ph.D., *Professor of Political Science* (1955)

General Statement

The Graduate School finds its province in supplying opportunity for further and advanced study by those who have already completed a college course, in the fostering of research, in training students to become investigators and teachers in special fields of learning, and in the application of research methods to the problems of society, government, and industry. The University of North Carolina has been interested in research for more than a century and has made contributions in science, the social sciences, and the languages. Through its research clubs and learned journals, as well as through publications and other contributions to learning made by members of its faculty,

* Absent on leave, spring quarter, 1951.

† The Chancellor is an ex officio member of the Board.

‡ Dates indicate expiration of terms.

the University has acquired the authority to give advanced instruction. For this it is competent from the standpoint both of the personnel of its faculty and of the material equipment in libraries and laboratories.

Instruction leading to the master's degree was offered at this institution prior to the American Civil War, and such higher degrees were granted in course. Formal action with high standards in requirements was taken in 1876 to establish a system of graduate, as distinct from undergraduate, instruction. The first doctor's degree was awarded in 1883. A Graduate Bulletin, issued in 1885, showed that nearly all departments offered advanced courses. The number of students during those years was small, but the work accomplished in both the humanities and the sciences was of distinguished quality. Given distinct status in 1903 and the leadership of a dean, the Graduate School has experienced steady and, since 1920, rapid growth.

The institution is a member of the Association of American Universities. The Graduate School annually publishes a bulletin, entitled *Research in Progress*, which records analytically the scholarly contributions of the faculty and graduate students. The School operates an Appointments Bureau, which supplies facilities for placement.

Work for advanced degrees is under the supervision of the graduate faculty. Under authority delegated by the graduate faculty, the immediate direction of the Graduate School is in charge of an Administrative Board, of which the Dean is chairman. Special requirements and regulations made by this board are outlined in the catalogue of the Graduate School, which is published annually and is recognized as the official publication of the Graduate School.

Curricula and Degrees

The degrees under the supervision of the graduate faculty are the Master of Arts (A.M.), Master of Science (S.M.), and Doctor of Philosophy. Degrees of Master of Arts or Master of Science are offered in the fields of anatomy, anthropology, art, bacteriology and immunology, biological chemistry, botany, chemistry, classics, comparative literature, dramatic art, economics and business administration, education and physical education, English, geology and geography, Germanic languages, history, mathematical statistics, mathematics, music, pharmacology, pharmacy, philosophy, physics, physiology, political science, psychology, Romance languages, social work, sociology and rural sociology, and zoology, and in the special curricula in comparative linguistics, folklore, industrial relations, and personnel admini-

stration. The degree of Doctor of Philosophy is offered in the fields of anatomy, biological chemistry, botany, chemistry, classics, comparative literature, economics and business administration, education, English, geology and geography, Germanic languages, history, mathematical statistics, mathematics, music, pharmacy, philosophy, physics, physiology, political science, psychology, public health, Romance languages, sociology, and zoology, and in the curricula in comparative linguistics and industrial relations. Minor programs for the doctorate may be obtained in anthropology and in the curricula in folklore and personnel administration.

Professional graduate degrees are offered in art (A.M. in Creative Art), education *(A.M. in Education), †library science (Master of School Librarianship), music (Master of Music), public health (Master of Science in Public Health, Master of Public Health, Master of Science in Sanitary Engineering, and Doctor of Public Health), regional planning (Master of Regional Planning), and social work (Master of Social Work).

The Curriculum in Comparative Linguistics

The Administrative Committee: The Dean, *Chairman*; Professor Lane, *Secretary*; Professors Eliason, Holmes

In this curriculum the facilities available within the University for the study of comparative linguistics and philology are organized. It is possible for students to submit programs of study in this subject leading to the degrees of Master of Arts and Doctor of Philosophy. It is also possible for those with majors in language to secure a minor in comparative linguistics.

Social Work

For the degree of Master of Social Work a minimum of six quarters is required. At least nine courses must be chosen from those approved by the Graduate School for the degree of Master of Arts. The selection of these courses must conform to the general rules of the Graduate School as to major and minor grouping. The same principle shall be applied, in so far as practicable, to the selection of other courses.

*Beginning with the session 1951-1952, this degree will not be granted, except to students already admitted to candidacy, and in its place the Graduate School will offer the degree Master of Education.

†Beginning with the session 1951-1952, the Graduate School will also offer the degree Master of Science in Library Science.

Application for admission should be made as far as possible in advance of the academic year. Since field work placements are limited in number and must be arranged in advance of the student's arrival, early application for admission is desirable. Application should be directed to the Dean of the School of Social Work.

The applicant for admission to pursue studies leading to the degree of Master of Social Work must have received a bachelor's degree from a college or university of recognized standing with eighteen semester hours in anthropology, economics, history, political science, psychology, and sociology, at least six semester hours of which must have been in advanced courses in one of these fields. The student deficient in these requirements may be admitted to courses, but must remove the deficiencies before being eligible for admission to candidacy for a degree.

The applicant is requested to consult the special catalogue of the School of Social Work, which is available upon request.

The Curriculum in Folklore

Administrative Committee: The Dean, *Chairman*; Professor Hudson, *Secretary*; Professors Holmes, Jente.

The facilities of the University available in such departments as English, Germanic Languages, Music, Romance Languages, and Sociology have been mobilized in the interest of students who desire to undertake a major or a minor in folklore. A candidate for the A.M. degree may secure a major and a candidate for the Ph.D. degree may secure a minor in that subject.

Public Health

This curriculum, leading to both master's and doctor's degrees, has been authorized by the Administrative Board of the Graduate School. For information consult the catalogue of the Graduate School and the special bulletin of the School of Public Health.

The Curriculum in Industrial Relations

Administrative Committee: The Dean, *Chairman*; Professor Wolf, *Director*; Professors Calhoun, Dashiell, Herring, King, and Wager.

This curriculum is based on the concept of industrial relations as an area in itself. It is selected from the course offerings of the School of Law and the School of Business Administration, and from the departments of Economics, Sociology, Political Science, Psychology, and

Education. The graduate major leading to the degrees of Master of Science in Industrial Relations and Doctor of Philosophy is in the area of industrial relations rather than in a single department. Definite areas of specialization within the several departments, however, may be selected for concentrated study. When pertinent to the individual graduate program, the minor may be selected from more than one department. In all instances a common content of essential courses selected from the offerings of the several departments is required.

The Curriculum in Personnel Administration

Administrative Committee: The Dean, *Chairman*; Professor Wager, *Secretary*; Professors Wolf, Dashiell, Ellis, Jocher, King.

This curriculum mobilizes the instructional resources having relation to personnel administration which have developed in the departments of Economics and Business Administration, Education, Political Science, Psychology, Social Work, and Sociology. Opportunities are afforded qualified students to select programs of study which cut across departmental lines. Students may also choose definite areas of specialization within the respective departments which provide programs of concentrated study.

Summary of the Requirements for Higher Degrees

MASTER'S DEGREES

1. A bachelor's degree from a recognized institution.
2. A minimum period of three quarters of resident study.
3. A reading knowledge of one modern foreign language. (But see the catalogue of the Graduate School.)
4. Nine graduate courses, six of which must be in the department of the major.
5. A written examination in the field of the major.
6. An oral examination covering the entire field of study.
7. A thesis.

DOCTOR OF PHILOSOPHY

1. Admission is the same as for the master's degree.
2. A minimum of three years of graduate study, at least one of which must be at the University of North Carolina.
3. A reading knowledge of French and German. (But see catalogue of the Graduate School.)

4. A major covering adequately the field of major interest and at least six courses in a minor, which may under special circumstances be in the same department.
5. A preliminary oral examination.
6. A written examination in the field of major interest.
7. An oral examination covering the entire field of study.
8. A dissertation.

Catalogue of the Graduate School

For information concerning the graduate faculty, fields of research, fellowships and other aids, expenses and tuition, and for regulations governing courses of study, credits, admissions, examinations, and higher degrees, reference must be made to the special catalogue of the Graduate School.

THE SCHOOL OF LAW

GORDON GRAY, A.B., LL.B., LL.D., *President of the University of North Carolina*

ROBERT BURTON HOUSE, A.M., LL.D., *Chancellor of the University at Chapel Hill and Vice-President of the University of North Carolina*

HENRY P. BRANDIS, JR., A.B., LL.B., *Dean*

The Administrative Board

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FREDERICK BAYS MCCALL, A.B., LL.B., *Professor of Law*

MAURICE TAYLOR VAN HECKE, Ph.B., J.D., *Professor of Law*

ROBERT HASLEY WETTACH, M.A., LL.B., S.J.D., *Professor of Law*

General Statement

The School of Law, now in its one hundred and sixth year and with a regular faculty of ten, offers a three-year course leading toward the degrees of LL.B. and J.D. It is on the approved lists of the North Carolina Board of Law Examiners, of the Regents of the State of New York, and the American Bar Association. It is a member of the Association of American Law Schools and is one of thirty-eight of the leading law schools of the country in which a chapter of the honorary society of the Order of the Coif has been established.

While greater emphasis is placed upon North Carolina decisions, statutes, and practices than upon those of other states, legal materials are studied as a part of the Anglo-American common-law system. Thus the school prepares its students for practice in North Carolina and in other states.

Candidates for admission to the School of Law must have completed, with a C average, a minimum of three years of work acceptable toward a baccalaureate degree at an approved college or university. If this work has followed the combined degree program offered by

the College of Arts and Sciences or by the School of Business Administration of this University, the student may receive the bachelor's degree in Arts or in Business Administration, as the case may be, upon the satisfactory completion of the first year in law. Though, as indicated above, students may be admitted to the School of Law on the completion of a minimum of three years of college work, the School recommends completion of the work for a degree before entering upon the study of law.

Normally, beginning students are admitted only once a year, at the opening of the fall semester. In view of the existing military situation, beginning students will be admitted at the summer session of 1951. Decision as to whether this practice will be continued in 1952 has not been made and will only be made in the light of future developments.

The curriculum covers a period of three annual sessions, but this time may be shortened by attendance during summer sessions.

The School of Law is located in Manning Hall. The Law Library, in charge of two trained law librarians and a staff of assistants, now numbers approximately 68,000 volumes.

The students of the School of Law are regularly enrolled in the University, enjoy all the privileges of University students, and are amenable to all general University regulations and to the special regulations of the School.

The summer session of the School of Law offers opportunities for students to supplement the work of the regular year by additional courses, some of which are not otherwise available, or to shorten the period of study for the law degree. The summer faculty normally includes as visiting professors distinguished law teachers from other universities.

Opportunities for individual work are afforded to especially qualified students through membership upon the student editorial staff of the *North Carolina Law Review*, as faculty research assistants, and as library assistants.

For further information, please write to the Dean of the School of Law for the separate bulletin of that school.

THE SCHOOL OF MEDICINE

GORDON GRAY, A.B., LL.B. LL.D., *President of the University of North Carolina*

ROBERT BURTON HOUSE, A.M., LL.D., *Chancellor of the University at Chapel Hill and Vice-President of the University of North Carolina*

WALTER REECE BERRYHILL, A.B., M.D., *Dean*

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WALTER REECE BERRYHILL, A.B., M.D., *Professor of Clinical Medicine and Dean of the School of Medicine*

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JOHN HOWARD FERGUSON, M.A., M.D., *Professor of Physiology*

JAMES CLARENCE ANDREWS, Ph.D., *Professor of Biological Chemistry and Nutrition*

KENNETH MERLE BRINKHOUS, A.B., M.D., *Professor of Pathology*

CHARLES WRIGHT HOOKER, Ph.D., *Professor of Anatomy*

THOMAS CULLOM BUTLER, A.B., M.D., *Professor of Pharmacology*

ROBERT RANDALL CADMUS, A.B., M.D., *Director of the University Hospital*

WESLEY CRITZ GEORGE, Ph.D., *Professor of Histology and Embryology and Chairman of the Library Committee*

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GEORGE DIAL PENICK, B.S., M.D.

JAMES CLARENCE ANDREWS, Ph.D. CHARLES DURWARD VAN CLEAVE, Ph.D.
FRED WILSON ELLIS, Ph.D.

Committee on the Library

WESLEY CRITZ GEORGE, Ph.D., *Chairman*

OLAN VICTOR COOK, A.B., A.B. in L.S. HAROLD JOSEPH MAGNUSON, A.B., M.D., M.P.H.

MARVIN LEROY GRANSTROM, M.S.S.E. ANNIE PICKARD, A.B., A.B. in L.S.
WILLIAM RINGGOLD STRAUGHN,

ELIZABETH LOUANNA KEMBLE, M.S. ROGER EDWARD STURDEVANT, D.D.S.
R.N., B.S., M.A., Ed.D.

General Statement

The School of Medicine was established in 1879 under the direction of Dr. Thomas W. Harris. A course in theoretical and practical medicine was offered under the preceptorial system, but the plan was found impracticable and was abandoned in 1886. In 1890, a more orderly and logical arrangement of the subjects in the medical course having developed, it became possible for an institution without clinical facilities to offer instruction in the pre-clinical subjects, and the school was reopened with Dr. Richard H. Whitehead as Dean and Professor of Anatomy. Under his guidance it soon won recognition for thoroughness of instruction and excellence in scholarship and has since continued without interruption to its growth. At first the course covered only one year, but in 1896, the medical course having been extended in the better class of schools to four years, a two-year course was inaugurated. In 1900 the School of Medicine was incorporated as an integral part of the University and was reorganized to meet the requirements of the first two years of the full four-year course leading to the degree of Doctor of Medicine. In 1902 it was expanded into a four-year school, and the clinical subjects of the third and fourth years were offered in Raleigh under the direction of Dr. Hubert A. Royster as Dean. After a few years of successful operation, this plan had to be abandoned for lack of financial support, and the clinical years were discontinued.

The School has been a member of the Association of American Medical Colleges since 1908 and is on the approved list of schools of basic medical sciences as published by the Council on Medical Education and Hospitals of the American Medical Association.

The curriculum is similar to that in the first two years of the better four-year medical schools in the country. It covers all the pre-clinical or laboratory subjects of the four-year course in medicine, as well as introductory clinical courses in the last two quarters of the second year. These courses in medicine, physical diagnosis, clinical pathology, surgery, and obstetrics serve to lessen the abruptness of the change from the laboratory situation to the clinical.

The School has an arrangement with Watts Hospital in Durham and Rex Hospital in Raleigh whereby the ward and dispensary patients are available for teaching purposes in the clinical courses. The clinical material at the State Hospitals in Raleigh and Butner, and the State Tubercular Sanatorium at McCain, are available for teaching purposes.

Students who have successfully completed the two-year course in this school are given full credit for all of their work and are transferred into the third year of American medical colleges of the highest rank, from which they receive the degree of Doctor of Medicine. During the past ten years students who have completed their two years in this school have been transferred to thirty different four-year medical colleges from McGill in the North to Tulane in the South, and from Harvard in the East to the University of California in the West.

Approximately 25 per cent of the physicians now in active practice in North Carolina received the first two years of their medical training here.

Preparation and Requirements for Medicine

Students preparing for the study of medicine should spend as much time securing a well-rounded cultural education as their age and financial resources permit. If possible they should complete the regular four-year course leading to the A.B. or S.B. degree. If this is impracticable they may take the special course leading to the S.B. in Medicine, or they may take three years of academic work without the bachelor's degree in view, but with careful regard to meeting the specific requirements for admission to the School of Medicine. This last method of preparation is not recommended.

Three years of accredited college work (96 semester hours) are required for admission. This period of study should include: eight or more semester hours of inorganic chemistry (qualitative and quantitative analysis); eight semester hours of organic chemistry; eight semester hours of biology; eight semester hours of physics (which must have required trigonometry as a prerequisite); English—such knowledge as is ordinarily required of candidates for a degree in an approved college (usually the courses required of freshmen and sophomores); four to six courses in a modern foreign language (French, German, or Spanish), depending upon credits presented for entrance to college. In addition, courses in volumetric quantitative analysis, comparative anatomy, vertebrate embryology, modern physics, and physical chemistry are strongly recommended.

Rarely are students admitted who have completed only the minimal requirements unless their academic records are of outstanding excellence. It is especially advised that all students present more work in chemistry and zoology than the minimal requirements outlined above.

Because of the widening social and economic interests of the medical profession, students preparing to enter it should take in addition to the requirements in the sciences as many courses as possible in history, literature, economics, philosophy, and psychology.

There is not sufficient space in the medical schools to admit all students who meet the quantitative standards. For this reason, and because it requires more than average intelligence and aptitude to complete satisfactorily the medical curriculum, the quality of the student's undergraduate work is of the greatest importance. All students interested in the study of medicine should attempt to stand in the upper third of their academic classes.

While a high grade of scholarship is probably the best criterion for predicting achievement in medical school, the personal qualifications of applicants are of the highest importance. Moral character is the most important prerequisite for entering the medical profession. No school wishes to train prospective physicians who lack either ethical standards or a sense of social responsibility.

All admissions are decided by a special committee on admissions, after approval of credentials by the Director of Admissions. The maximal number admitted to the first-year class is fifty-six. The special committee reserves the right to select from the entire list of approved applicants those who in their judgment are best qualified for the study of medicine.

Candidates for admission to the second year of the medical curriculum must present certificates from an accredited medical school stating that they have had the required fifteen units, at least three years of college work as indicated above, and have completed the subjects of the first year of the medical course as outlined.

The Medical Curriculum

The medical curriculum covers two years divided into six periods, or quarters, of approximately equal length. It is organized into six departments: Anatomy, Bacteriology and Immunology, Biological Chemistry and Nutrition, Pathology, Pharmacology, and Physiology, with additional courses in medicine, physical diagnosis, principles of surgery, and obstetrics, and an affiliated School of Public Health. For description of the courses and other details see the catalogue of the School of Medicine.

The Expansion of the Medical School

The General Assembly of 1947 provided funds for the construction of a four-hundred-bed teaching hospital, nurses' home and training school, and intern and resident quarters, and authorized the expansion of the two-year school into a four-year school as a part of a general state-wide program for better hospitalization and medical care in North Carolina.

The contract for the University Hospital was let in September, 1949, and it is anticipated that construction will be completed by the fall of 1951. Other buildings in the expansion program, including a one-hundred-bed tuberculosis hospital, should be ready for occupancy and operation on that date. More definite announcements will be made later in regard to the date instruction will begin for the first junior class.

THE SCHOOL OF PHARMACY

GORDON GRAY, A.B., LL.B., LL.D., *President of the University of North Carolina*

ROBERT BURTON HOUSE, A.M., LL.D., *Chancellor of the University at Chapel Hill and Vice-President of the University of North Carolina*

WILLIAM WHATLEY PIERSON, Ph.D., Litt.D., *Dean of the Graduate School*

EDWARD ARMOND BRECHT, Ph.D., *Dean*

Executive Board of the Division of Health Affairs

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ROBERT ERVIN COKER, Ph.D., *Kenan Professor of Zoology*

ELIZABETH LOUANNA KEMBLE, R.N., B.S., M.A., Ed.D., *Dean of the School of Nursing*

EDWARD GRAFTON MCGAVRAN, A.B., M.D., M.P.H., *Dean of the School of Public Health*

General Statement

Instruction in pharmacy was offered at the University in the School of Medicine and Pharmacy from 1880 to 1886 and 1890 to 1894, but not more than a half-dozen students elected the course. Finally, in March, 1897, in response to urgent requests made by the pharmacists of the state, the present school was established, and Edward Vernon Howell was appointed Professor of Pharmacy and Dean.

The School in 1925 obtained exclusive use of its present building, Howell Hall of Pharmacy. This building contains 35 rooms and 22,000 square feet of floor space.

The minimal offerings of the School are based on four years of study which lead to the degree of Bachelor of Science in Pharmacy (S.B. in Phar.).

The School, fully accredited by the American Council on Pharmaceutical Education, was admitted to membership in the American Association of Colleges of Pharmacy in 1917. This organization was formed for the promotion of thorough scientific work in the profession of pharmacy. It maintains high standards for membership based on the number and training of the faculty, the thoroughness of the work offered, the quality of the curriculum, the number of students, the financial support of the school, and the facilities for carrying on the work.

The School is fully accredited by all state examining boards.

Freshmen are admitted by certificate from accredited schools or by examination. Candidates for admission as transfer students must have credit for the academic courses in the first-year curriculum in the School of Pharmacy. Each application for admission must be approved by the Director of Admissions of the University before the application can be considered by the Committee on Admissions of the School of Pharmacy. Applicants should appear at the School of Pharmacy for interviews with the Dean and two members of the faculty. Applications should be filed as early as possible, preferably in the period between February 1 and May 15. The fall quarter in September is the only period for which beginning and transfer students are accepted.

The School of Pharmacy is compelled by its physical facilities to limit the number of beginning and transfer students.

The School of Pharmacy recognizes that its graduates may elect to pursue one or another of related but definitely different forms of pharmaceutical practice and has provided such specialized training.

Graduate degrees offered by the School of Pharmacy are administered by the Graduate School of the University of North Carolina. These degrees are Master of Science (S.M. in Phar.) and Doctor of Philosophy (Ph.D.). The three majors available are pharmacy, pharmaceutical chemistry, and pharmacognosy.

A student who has completed one or more years of accredited work in a recognized school of pharmacy and submits satisfactory evidence of having completed the entrance requirements and courses equivalent to those prescribed in the curriculum required for the degree of S.B. in Pharmacy may be admitted with advanced standing and proceed for this degree. The minimum requirement of residence for a degree is a period of three quarters within the period of twelve months. A full year's work comprising at least forty-five quarter hours must be

completed by a transferring student. Beginning January 1, 1938, the American Association of Colleges of Pharmacy has required of its member colleges that students transferring from a non-pharmaceutical college must spend a minimum of three years in a standard college of pharmacy in order to be graduated with a degree of S.B. in Pharmacy.

For further information, please write to the Dean of the School of Pharmacy for the special catalogue of that school.

THE SCHOOL OF PUBLIC HEALTH

GORDON GRAY, A.B., LL.B., LL.D., *President of the University of North Carolina*

ROBERT BURTON HOUSE, A.M., LL.D., *Chancellor of the University at Chapel Hill and Vice-President of the University of North Carolina*

WILLIAM WHATLEY PIERSON, Ph.D., Litt.D., *Dean of the Graduate School*

EDWARD GRAFTON MCGAVRAN, A.B., M.D., M.P.H., *Dean of the School of Public Health*

Executive Board of the Division of Health Affairs

HENRY TOOLE CLARK, JR., A.B., M.D., *Administrator of the Division of Health Affairs*

EDWARD GRAFTON MCGAVRAN, A.B., M.D., M.P.H., *Dean of the School of Public Health*

WALTER REECE BERRYHILL, A.B., M.D., *Dean of the School of Medicine*

JOHN CHARLES BRAUER, A.B., M.Sc., D.D.S., *Dean of the School of Dentistry*

EDWARD ARMOND BRECHT, Ph.D., *Dean of the School of Pharmacy*

ROBERT ERVIN COKER, Ph.D., *Kenan Professor of Zoology*

ELIZABETH LOUANNA KEMBLE, R.N., B.S., M.A., Ed.D., *Dean of the School of Nursing*

ROBERT RANDALL CADMUS, A.B., M.D., *Director of the University Hospital*

General Statement

The field of public health, in comparison with its better-known parents—clinical medicine, clinical dentistry, and bedside nursing—is concerned with the health problems of the group rather than with those of the individual. In public health the usual goals of individual health are broadened to include the group diagnosis and treatment of the population for its disease, the prevention of disease, and the conservation of community health. In our complex social order, achievement of these goals requires a team of professional workers who, beyond their basic professional skills, have acquired the knowledge and disciplines which will enable them to diagnose and treat the diseases of the group and to bring about their prevention. The newer knowledges of health science which are necessary to accomplish these aims are to be found for the most part in the disciplines of biostatistics,

epidemiology, public administration, health education, public health nursing, sanitary engineering, maternal and child health, parasitology, and community nutrition.

The objective of the School of Public Health is to prepare its students, who already have acquired professional status in such fields as medicine, education, and engineering, in the specific disciplines and subject areas that are basic to public health. While stress is laid on those techniques of the physical, biological, and social sciences which are applicable to this field, the final goal of instruction is the integration of these techniques in terms of the relationship of the group to its physical and social environment and of the total effect of environment on the physical and mental well-being of mankind. To attain its objective the School of Public Health is organized into eleven departments. The departments of the School are: Biostatistics, Epidemiology, Experimental Medicine, Field Training, Health Education, Maternal and Child Health, Parasitology, Public Health Administration, Public Health Nursing, Public Health Nutrition, and Sanitary Engineering.

At the present time plans are under way for developing a Department of Mental Health.

The School of Public Health is one of five schools which, together with the University Hospital, have been grouped to form the Division of Health Affairs of the University. This grouping of Medicine, Pharmacy, Public Health, Dentistry, and Nursing into a complete medical center will be the focal training and service point for an integrated state-wide health program and will offer a new opportunity for the student to broaden his vision and concept of health services.

For the benefit of its students the School of Public Health maintains a number of affiliations with state and local agencies. It enjoys the active cooperation of the State Department of Health at Raleigh. Members of this staff give lectures and exercises in their special fields, and the students have an opportunity to observe the practice and to study at first hand the methods and materials of an efficient state health organization. The School also uses the local health departments at Durham and Chapel Hill. Members of the staff lecture and give practical demonstrations which permit the student to see the health work of a city and county government. Here, together with the facilities at Raleigh, opportunity is offered for the observation and investigation of health problems at the city, county, and state level.

Cooperation is maintained with the Institute of Statistics at North Carolina State College in Raleigh and with Duke University and

Duke Hospital, Watts Hospital, and the Rapid Treatment Center in Durham. Similarly, the School calls upon the staffs of the United States Public Health Service, the Children's Bureau, and other federal health agencies to participate in its teaching program through lectures, discussions, consultations, and research.

For county and city health work, field demonstration units have been established in twenty city, county, and district health departments in North Carolina and nine other states in the Southeastern region.

The School has the distinction of being one of the ten Schools of Public Health in North America which are accredited by the American Public Health Association. Graduate degrees offered by the School are Master of Science (S.M.), Doctor of Philosophy (Ph.D.), and the following professional graduate degrees: Master of Science in Public Health (M.S.P.H.), Master of Public Health (M.P.H.), Doctor of Public Health (Dr.P.H.), and Master of Science in Sanitary Engineering (M.S.S.E.).

All requirements concerning these degrees are administered by the faculty of the School of Public Health with the approval of the Administrative Board of the Graduate School.

An undergraduate degree, Bachelor of Science in Public Health Nursing, is awarded to graduate nurses who comply with all requirements of the public health nursing course and who have had the required years and courses in college. In addition there is a four-year program leading to the degree of Bachelor of Science in Public Health. Both of these degrees are administered by the College of Arts and Sciences.

The Certificate in Public Health (C.P.H.) and Certificate in Public Health Nursing (C.P.H.N.) are not considered graduate degrees.

For more detailed information concerning preparation and admission requirements and proposed curricula leading to degrees, see the special catalogue of the School of Public Health.

THE SCHOOL OF DENTISTRY

GORDON GRAY, A.B., LL.B., LL.D., *President of the University of North Carolina*

ROBERT BURTON HOUSE, A.M., LL.D., *Chancellor of the University at Chapel Hill and Vice-President of the University of North Carolina*

JOHN CHARLES BRAUER, A.B., D.D.S., M.Sc., *Dean*

Executive Board of the Division of Health Affairs

WALTER REECE BERRYHILL, A.B., M.D., *Dean of the School of Medicine*

JOHN CHARLES BRAUER, A.B., D.D.S., M.Sc., *Dean of the School of Dentistry*

EDWARD ARMOND BRECHT, Ph.D., *Dean of the School of Pharmacy*

ROBERT RANDALL CADMUS, A.B., M.D., *Director of the University Hospital*

HENRY TOOLE CLARK, JR., A.B., M.D., *Administrator of the Division of Health Affairs*

ROBERT ERVIN COKER, Ph.D., *Kenan Professor of Zoology*

ELIZABETH LOUANNA KEMBLE, R.N., B.S., M.A., Ed.D., *Dean of the School of Nursing*

EDWARD GRAFTON MCGAVRAN, A.B., M.D., M.P.H., *Dean of the School of Public Health*

Executive Committee of the School of Dentistry

JAMES CLARENCE ANDREWS, Ph.D., *Professor of Biological Chemistry and Nutrition*

CLAUDE ROWE BAKER, A.B., D.D.S., M.S., *Professor of Fixed Partial Dentures, Secretary*

JOHN CHARLES BRAUER, A.B., D.D.S., M.Sc., *Professor of Pedodontics and Dean of the School of Dentistry, Chairman*

KENNETH MERLE BRINKHOU, A.B., M.D., *Professor of Pathology*

THOMAS CULLOM BUTLER, A.B., M.D., *Professor of Pharmacology*

JOHN HOWARD FERGUSON, M.A., M.D., *Professor of Physiology*

CHARLES WRIGHT HOOKER, Ph.D., *Professor of Anatomy*

DANIEL ALLAN MACPHERSON, Ph.D., *Professor of Bacteriology*

ROGER EDWARD STURDEVANT, D.D.S., *Professor of Operative Dentistry*

Committee on Admissions and Aptitude Testing

ROGER EDWARD STURDEVANT, D.D.S., *Chairman*

MICHAEL KALEN BERKUT, B.S.

CORNELIUS TIMPSON KAYLOR, Ph.D.

General Statement

While considerable thought had been given by the North Carolina Dental Society to the organization of a School of Dentistry, even as early as 1921 in the appointment of the first Dental College Committee, it was not until 1947 that a basic dental survey of North Carolina was authorized by the Society. The General Assembly of 1949, having studied the findings and recommendations of the survey, appropriated funds for the establishment of a School of Dentistry.

The new building of the School of Dentistry is an integral part of the total building program of the Division of Health Affairs. Construction also is under way for the four-hundred-bed teaching hospital, nurses' dormitories, School of Nursing, and the intern and resident quarters.

Dentistry in North Carolina has been given a signal opportunity to make a contribution to the health sciences in its close working relationship with medicine, the University Hospital, and the other schools of the Division. Students of dentistry and medicine will attend comparable basic science courses, and they will be required to meet equally high academic standards in all areas. Accordingly, students of dentistry will be selected on a basis of having the same minimum entrance requirements as those for medicine.

The first class in the School of Dentistry began in the fall of 1950. The total number of students to be selected in the first two years will be limited to forty for each class. Until the new dental building is completed, which should be accomplished early in 1952, the pre-clinical technical instruction will be done in temporary quarters, and most of the instruction in the pre-clinical basic science subjects will be provided in the facilities and departments of the School of Medicine. Following the completion of the building, a maximum of fifty students will be selected each year, consistent with the requirements for dentists in North Carolina. Priority in selection of students will be given to residents of North Carolina and, secondly, to residents of the Southeastern states.

Preparation for Study of Dentistry and Requirements for Admission

Students preparing for the study of dentistry should spend as much time securing a well-rounded cultural education as their age and financial resources permit. If possible they should complete the regular four-year course leading to the A.B. or S.B. degree. If this is impracticable they may take the special course leading to the S.B. in Dentistry, or they may take three years of academic work without the

bachelor's degree in view, but with careful regard to meeting the specific requirements for admission to the School of Dentistry.

Requirements for Admission

Three years of accredited college work (96 semester hours) are required for admission. This period of study should include eight or more semester hours of inorganic chemistry (qualitative and quantitative analysis); eight semester hours of organic chemistry; eight semester hours of biology; eight semester hours of physics (which must have required trigonometry as a prerequisite); English—such knowledge as is ordinarily required of candidates for a degree in an approved college (usually the courses required of freshmen and sophomores); four to six courses in a modern foreign language (French, German, or Spanish), depending upon credits presented for entrance to college. In addition, courses in volumetric quantitative analysis, comparative anatomy, vertebrate embryology, modern physics, and physical chemistry are strongly recommended.

Because of the widening social and economic interests of the dental profession, students preparing to enter it should take, in addition to the requirements in the sciences, as many courses as possible in social science, history, literature, economics, philosophy, and psychology.

There is not sufficient space in the dental schools to admit all students who meet the quantitative standards. For this reason, and because it requires more than average intelligence and aptitude to complete satisfactorily the dental curriculum, the quality of the student's undergraduate work is of the greatest importance. All students interested in the study of dentistry should attempt to stand in the upper third of their academic classes.

National Aptitude Test

All prospective students must complete the National Aptitude Test, given by the Council on Dental Education of the American Dental Association, before they will be considered for admission to the School of Dentistry. This test will be given in Chapel Hill and at centers in other states at designated intervals. Additional information regarding the test may be secured when application for admission to the School of Dentistry has been completed.

Personal Qualifications

While a high grade of scholarship and digital dexterity are probably the best criteria for predicting achievement in dental school the

personal qualifications of applicants are of the highest importance. Moral character is the most important prerequisite for entering the dental profession. No school wishes to train prospective dentists who lack either ethical standards or a sense of social responsibility.

Dental Curriculum

The course in dentistry embodies a four-year curriculum following admission to the School of Dentistry. The catalogue of the School of Dentistry provides a description of the courses and other details pertaining to the study of dentistry.

THE SCHOOL OF NURSING

GORDON GRAY, A.B., LL.B., LL.D., *President of the University of North Carolina*

ROBERT BURTON HOUSE, A.M., LL.D., *Chancellor of the University at Chapel Hill and Vice-President of the University of North Carolina*

ELIZABETH LOUANNA KEMBLE, R.N., B.S., M.A., Ed.D., *Dean*

Executive Board of the Division of Health Affairs

WALTER REECE BERRYHILL, A.B., M.D., *Dean of the School of Medicine*

JOHN CHARLES BRAUER, A.B., D.D.S., M.Sc., *Dean of the School of Dentistry*

EDWARD ARMOND BRECHT, Ph.D., *Dean of the School of Pharmacy*

ROBERT RANDALL CADMUS, A.B., M.D., *Director of the University Hospital*

HENRY TOOLE CLARK, JR., A.B., M.D., *Administrator of the Division of Health Affairs*

ROBERT ERVIN COKER, Ph.D., *Kenan Professor of Zoology*

ELIZABETH LOUANNA KEMBLE, R.N., B.S., M.A., Ed.D., *Dean of the School of Nursing*

EDWARD GRAFTON MCGAVRAN, A.B., M.D., M.P.H., *Dean of the School of Public Health*

General Statement

The School of Nursing offers a four-year integrated curriculum leading to the degree Bachelor of Science in Nursing. The first class will be admitted in the fall quarter of 1951.

The aim of the school is to provide well-organized learning experiences leading to the graduation of students who have acquired the necessary knowledge, skills, and appreciations to function effectively in any first-level position in nursing.

The curriculum covers approximately four years and is based upon a broad general education in science and liberal arts subjects. Nursing courses begin with understandings essential to the maintenance of health and the prevention of disease and progressively include courses in the nursing care of the sick. Students will have experience in the clinical areas of the hospital and in a variety of institutions and agencies concerned with the maintenance of health. Social, public health, mental hygiene, and nutrition components are among the areas integrated throughout the program to prepare the graduate to function as a member of the health team.

Requirements for Admission

Students must be acceptable to the Admissions Office of the University of North Carolina, and final decision relative to admission rests with the Admissions Committee of the School of Nursing.

Students entering the nursing curriculum must meet the requirements for admission to the General College of the University and, in addition, present secondary school credits in the following:

<i>Subjects</i>	<i>Units</i>
English	4
Algebra	1½
Foreign Language	2 (one language)
Plane Geometry	1
Social Science	2 (one unit to be History of the United States)
Natural Science	1 (Chemistry including laboratory work)
Physics, Biology, or General Science	1
Electives	2½

Deficiencies will be considered on an individual basis.

Age—Admission to the School of Nursing is restricted to students who are between the ages of 17 and 25.

Students who have had one year or more of college work may transfer to the School of Nursing provided they meet the requirements of the University and the School of Nursing. Such students enter the School of Nursing at the beginning of the second year in the program of studies. Arrangements can be made with the Dean of the School of Nursing for taking course work during the summer session prior to admission in order to take nursing courses scheduled for the first year. This will permit the college student to start the second year without deficiencies.

Personal Qualifications

Students seeking admission to the School of Nursing are required to present evidence of satisfactory academic qualifications, physical and emotional fitness for nursing, and liking for and ability to get along with people. Nursing requires intelligence, alertness, and a sense of responsibility. Nursing offers many personal and professional satisfactions in a life of service for others.

Further information may be obtained by writing to the Dean of the School of Nursing.

THE SCHOOL OF SOCIAL WORK

GORDON GRAY, A.B., LL.B., LL.D., *President of the University of North Carolina*

ROBERT BURTON HOUSE, A.M., LL.D., *Chancellor of the University at Chapel Hill and Vice-President of the University of North Carolina*

WILLIAM WHATLEY PIERSON, Ph.D., Litt.D., *Dean of the Graduate School*

ARTHUR EMIL FINK, Ph.D., M.S.W., *Dean*

*Administrative Board

DOROTHY C. ADKINS, Ph.D., *Professor of Psychology*

GORDON WILLIAMS BLACKWELL, Ph.D., *Professor of Sociology and Director of the Institute for Research in Social Science*

HENRY PARKER BRANDIS, JR., A.B., LL.B., *Dean of the School of Law*

HENRY TOOLE CLARK, JR., M.D., *Administrator of the Division of Health Affairs*

JAMES WILLIAM FESLER, Ph.D., *Professor of Political Science and Research Professor in the Institute for Research in Social Science*

PAUL NEWMAN GUTHRIE, Ph.D., *Professor of Economics*

KATHARINE JOCHER, Ph.D., *Professor of Sociology and Assistant Director of the Institute for Research in Social Science*

ARNOLD KIMSEY KING, A.M., *Associate Dean of the Graduate School*

JOHN JOSEPH WRIGHT, A.B., M.D., M.P.H., *Research Professor of Epidemiology, School of Public Health*

General Statement

The School of Social Work has developed from an earlier School of Public Welfare which was established in 1920 in accordance with the University's policy of meeting the varying needs of the state and the Southern region. In 1931 the School of Public Administration enlarged and extended the program for the training of qualified persons for public positions. An essential division within that school was the Division of Public Welfare and Social Work. In 1936 the Division of Public Welfare and Social Work became a Division of the Graduate School and in 1950, by action of the Board of Trustees, it was named the School of Social Work. The School of Social Work is an accredited member of the American Association of Social Work-

*The Chancellor, the Director of Admissions, and the Dean of Students are ex officio members of the Board.

ers. Its program for the training of psychiatric social workers is approved by the American Association of Psychiatric Social Workers.

The School of Social Work consistently has emphasized sound training for the operation of the social services, whether those services are under public or private auspices. However, by reason of the nature of many of the problems in non-urban areas, there has been special reference to the unique opportunities for training workers for services in those areas.

The work offered leads to the degree Master of Social Work. The applicant must have received a bachelor's degree from a college or university of recognized standing, with eighteen semester hours in the social sciences, including anthropology, economics, history, political science, psychology, and sociology, at least six semester hours of which must be in advanced courses in one of these fields.

The master's degree is based upon a seven quarter program, of which four quarters are on the campus and three quarters are in field work instruction in an approved welfare agency. The first year consists of the first quarter on the campus, the second quarter in field work agency, the third quarter on the campus. Admission to the first year is in June and September. The second-year program begins with the summer quarter on the campus, the fall and winter quarters in field work agency, and the fourth (spring) on the campus.

The School of Social Work is located in Alumni Building.

The students in the School of Social Work are regularly enrolled in the University and are amenable to all general University regulations and to the special regulations of the School.

For further information, please write to the Dean of the School of Social Work for the separate bulletin of that School.

THE SCHOOL OF LIBRARY SCIENCE

GORDON GRAY, A.B., LL.B., LL.D., *President of the University of North Carolina*

ROBERT BURTON HOUSE, A.M., LL.D., *Chancellor of the University at Chapel Hill and Vice-President of the University of North Carolina*

WILLIAM WHATLEY PIERSON, Ph.D., Litt.D., *Dean of the Graduate School*

*SUSAN GREY AKERS, Ph.D., *Dean*

LUCILE KELLING, A.B., B.L.S., *Acting Dean*

†The Administrative Board

SUSAN GREY AKERS, Ph.D., *Professor of Library Science and Dean of the School of Library Science*

EDWARD ALEXANDER CAMERON, Ph.D., *Professor of Mathematics*

LUCILE KELLING, A.B., B.L.S., *Professor of Library Science and Acting Dean*

STURGIS ELLENO LEAVITT, Ph.D., Litt.D., *Kenan Professor of Spanish*

GUY BERRYMAN PHILLIPS, M.A., *Professor of Education and Dean of the School of Education*

CHARLES EVERETT RUSH, A.B., A.M., B.L.S., *Director of Libraries and Professor of Library Science*

HARRY KITSUN RUSSELL, Ph.D., *Professor of English*

LOUIS ROUND WILSON, Ph.D., Litt.D., L.H.D., *Professor of Library Science*

General Statement

The School of Library Science opened in September, 1931, as a unit of the University of North Carolina. Made possible by a grant from the Carnegie Corporation, it is the culmination of a series of library science courses offered in the summer and regular terms since 1904. The School is accredited by the American Library Association and the Southern Association of Colleges and Secondary Schools.

The curricula of the School offer a basic program preparing the student for beginning positions and masters' programs.

Permanent quarters for the School, comprising laboratory and classrooms for the students and offices for the faculty, are in the University Library.

*Absent on leave, August 25, 1950—April 15, 1951.

†The Chancellor, the Director of Admissions, and the Dean of Students are ex officio members of the Board.

The town school system maintains a high school library and an elementary school library available for observation. Within driving distance of from thirty minutes to two hours are the State Library; the Library Commission headquarters; the school and public library systems of Durham, Raleigh, and Greensboro; and the libraries of Duke University, the North Carolina State College of Agriculture and Engineering, and the Woman's College of the University of North Carolina.

The principal requirement for admission is a bachelor's degree from an accredited college or university.

Applicants are expected to have received a grade of B (90 per cent or better) in at least 50 per cent of their undergraduate work. An applicant's college degree may not be approved if his course included an undue proportion of vocational or professional subjects such as library science, education, home economics, or agriculture. For certain library positions thorough training in one of these or in some other field is essential, but it should be in addition to rather than as part of his undergraduate preparation.

Applicants must show evidence of ability to do library work and must have had a well-balanced selection of courses leading to the required bachelor's degree. A reading knowledge of modern languages is essential to satisfactory work in many types of libraries and very desirable in others. Latin is important as a basis for other languages. The class will be chosen on a basis of individual promise of success.

For definite recommendations on the content of the preparatory work see the special catalogue of the School of Library Science.

Those over thirty-five years of age are advised not to apply for admission to the School unless they have been continuously engaged in professional library work in a well-organized library or in some similar pursuit.

It is required that applicants be interviewed by a member of the faculty of the School or a librarian designated by the School.

Certain courses are open to advanced undergraduates in the College of Arts and Sciences. They are listed under Department of Library Science in this catalogue on page 297.

Applicants should plan their entrance into the School at the beginning of the fall quarter or summer session. Many courses have prerequisite work which cannot be taken unless the curriculum is begun at one of these times.

The courses of the regular session are repeated in the summer session. The same requirements apply as in the regular session.

Forty-five quarter hours must be satisfactorily completed in residence in the University of North Carolina for a degree in library science. Students who are admitted with advanced standing in library science must complete in the School or in another division of this institution an equivalent number of courses approved by the Dean.

The residence requirement for a degree is three academic quarters. This requirement must be completed within six years.

On the completion of a curriculum in the School of Library Science, the University will grant the degree of Bachelor of Science in Library Science, Master of School Librarianship, or Master of Science in Library Science.

The present demand for professional librarians is unusually great. Requests are received almost daily from various types of libraries in this country and overseas for recommendations for all sorts of positions. Although the School cannot guarantee positions for its graduates, it assists them not only in securing their first positions, but in advancing to other positions later.

Application for admission to the School for either the regular session or the summer session should be made as far in advance as possible of the session to be attended. Application should be made on forms which are secured from the *Dean, School of Library Science, The University of North Carolina, Chapel Hill, N. C.*

For detailed information see the special catalogue of the School.

Part Four

ACADEMIC DEPARTMENTS

DESCRIPTION OF COURSES

In this section are listed and described all courses offered in the regular sessions of the University except those in the professional schools of Law, Medicine, Dentistry, Nursing, Pharmacy, Public Health, Library Science, and Social Work. For courses in these schools see the special bulletins.

The requirements for majors are shown, after the faculty lists, in connection with the materials concerning the various departments.

The work of the University, except in the School of Law, is arranged and offered on the quarter system, the regular session being divided into three approximately equal parts called the fall, winter, and spring quarters. The summer session is divided into two terms.

Work is valued and credited toward degrees by quarter hours, one such hour being allowed for each class meeting a week for a quarter, laboratory or field work counting one hour for each two hours of work in laboratory or field, and work in studio (art) counting one hour for each three hours. In the following announcements of courses the numbers in parentheses following the descriptive titles show the credits allowed in quarter hours. Except in the case of courses meeting regularly five times a week, the number of actual hours a course meets will be found in the description of the course. The meetings of a few advanced courses, however, are arranged by the professor in charge.

In the event that required freshman subjects are taken after a student begins his junior year or required sophomore subjects after he begins his senior year, such subjects carry half credit only.

Courses numbered from 1 through 99 are for undergraduates only; those numbered from 100 through 199 are for advanced undergraduates and graduates; those numbered from 200 to 400 are for graduates only. Courses in chemistry for undergraduates are grouped by decades under the headings inorganic, analytical, organic, etc. Undergraduates may not take courses numbered above 200 except by special permission of the instructor in the course and the chairman of the department. Permission must also be secured from the Dean of the Graduate School and the dean of the college involved. Courses numbered from 1 to 100 carry no credit toward any advanced degree.

DEPARTMENT OF AIR SCIENCE AND TACTICS

Professor: J. J. MOORHEAD, *Lieutenant Colonel, USAF*

Assistant Professors: NOEL CARPENTER, *Captain, USAF*; J. R. WALKER, *Captain, USAF*; E. D. ROBERTSON, *Captain, USAF*

Instructor: C. H. RIGDON, *M/Sgt., USAF*

Administrative: LEROY T. EURE, *1st/Sgt., USAF*; MICHAEL PENNELLA, *M/Sgt., USAF*

Supply: R. F. CONDIT, *T/Sgt., USAF*

General Information

The Air Force ROTC unit constitutes a regular department of instruction within the University. It is known as the Department of Air Science and Tactics. Academic credits toward degrees are allowed, as in other departments.

AIR FORCE COMMISSIONS

Opportunity will be given outstanding students to request commissions in the regular Air Force if they so desire. Others may request extended active duty as reserve officers for periods of from one to three years and receive flying training during such active duty periods.

EMOLUMENTS

Advanced students (3rd and 4th year) are allowed a monetary allowance in lieu of rations which amounts to a total of approximately \$525.00. This is in addition to uniforms, books, and training equipment, all of which are furnished the students at government expense. For attendance at summer camp students receive approximately \$105.00 additional.

Course of Instruction

Air Force ROTC training is divided into two parts, the basic course during the freshman and sophomore years and the advanced course during the junior and senior years. Training in the basic course is primarily in basic military subjects which are common to all branches of the Service. In the advanced course, subjects are mainly of a specific nature with emphasis on Air Comptrollership and Public Information, and graduates will be designated as Air Comptrollers or Public Information Officers.

BASIC COURSE

Male students in the freshman class who are physically qualified, American citizens, and not yet 23 years of age, may take the basic

courses in military science as a requirement toward graduation. Students who are graduates of the Junior Division (High School) ROTC may be granted credit for a portion of the basic course. Credit also will be allowed equivalent to the first year of the basic course for six months or more of honorable service in World War II in the Army, Navy, Marine Corps, or Coast Guard.

ADVANCED COURSE

The advanced course consists of two years of instruction and a summer camp. The camp, at present, is of six weeks duration. The summer camp will normally come between the first and second years of the advanced course, i.e., between the junior and senior years. A student must have completed the basic course, or have had twelve months or more of honorable active service in World War II in the Army, Navy, Marine Corps, or Coast Guard to be eligible for enrollment in the advanced course and must:

- a. not have reached 25 years of age at the time of initial enrollment;
- b. be physically fit as evidenced by a rigid physical examination;
- c. if exempted from the basic course by reason of previous military service, pass a special screening test;
- d. have at least six academic quarters to complete before graduation;
- e. be pursuing a course with the intention of securing a degree;
- f. sign an agreement (contract) in writing to complete the course.

Academic Credits

BASIC

For successful completion of the basic program covered during the freshman and sophomore years, the student receives a total of 16 quarter hours credit. During these two years he has attended Air Force ROTC four out of a possible six quarters. The drill period is continuous for the entire six quarters.

Credits earned in the basic course may be substituted for the following General College requirements:

- a. For students entering the School of Business Administration, successful completion of the AFROTC Basic Course may be substituted for two of the required laboratory sciences.
- b. For students entering the College of Arts and Sciences, successful completion of the AFROTC Basic Course may be substituted for two of the required laboratory sciences, two of the

required freshman social sciences, or for one of the required laboratory sciences and one of the required social sciences.

ADVANCED

The advanced program requires attendance for the six quarters involved during the junior and senior years. A six-week training period (summer camp) is required between the junior and senior years. For the successful completion of the advanced program, credit for a total of five courses is granted.

Credits earned in the advanced course may be substituted for the following required courses:

- a. School of Business Administration. Successful completion of the Advanced AFROTC Course may be substituted for five non-divisional electives or four non-divisional electives and one divisional elective.
- b. College of Arts and Sciences. Successful completion of the Advanced AFROTC Course may be substituted for five non-divisional elective or allied courses at the discretion of the dean.

Grading System

The status of each student in the Air Force ROTC is that of an officer candidate. Evaluation of his abilities is not based entirely on the grade he is awarded for classroom recitations, oral or written, but includes his attitude and ability as a leader during practical drill periods. A student's potential value as a leader is demonstrated to an important degree by his response to the entire scope of military instruction and military procedure as portrayed by his interest, conduct, alertness, orderliness, classroom and drill attendance, neatness, care of his uniform and equipment, and similar related matters.

The student's final grade is based on an evaluation of these attributes combined with his academic standing.

Distinguished Military Graduates

Upon completion of the advanced course, students who have outstanding records in military science as well as other academic subjects will be classed as Distinguished Military Graduates and be eligible to apply for Regular United States Air Force commissions.

Texts and Equipment

The federal government provides all necessary texts and equipment to carry out the Air Force ROTC program.

Uniforms

Uniforms for all enrollees are furnished by the government. The uniform is similar to that prescribed for officers in the regular service and consists of both summer khaki and winter wool, including coats, shoes, and all accessories.

Uniforms must be worn at all drill periods and may be worn at other classes and exercises.

Enrollment and Continuance Requirements

The general requirements for enrollment and continuance in the Air Force ROTC are that the student be a citizen of the United States, be physically qualified as prescribed by the Department of the Air Force, be accepted by the institution as a regularly enrolled student, be under 23 years of age at the time of enrollment, except for veterans of World War II enrolling at college before January 1, 1950, and that he successfully complete such general survey or screening tests as are given to determine eligibility for admittance to the basic and advanced courses. Enrollees in the advanced course must agree to complete the course of instruction offered unless relieved by the Department of the Air Force.

Deferment

A quota for deferment from induction into the armed services is assigned each year to the Air Force ROTC at this University. These deferments are allotted to individual enrollees of the program in accordance with their relative standing. Such deferred students are exempt from service in the armed forces while pursuing the Air Force ROTC program and, in general, until graduation from the University.

Summer Camp

The advanced camp consists of a six-week period of intensive applicatory training in general and specialized military and Air Force fields, and normally is attended by the advanced course student during the summer—between the two academic years of the course. Attendance at summer camp will be considered an integral part of the AFROTC course of instruction offered the first quarter of the senior year. Any student who does not attend summer camp after his junior year will receive an "incomplete" grade on Air Science 401. This "incomplete" will have to be removed before the student can complete

the requirements for graduation. This can be done by the student's attending summer camp after his senior year; at which time, the requirements for a degree and commission will be satisfied.

Curriculum

AS 101-102 (8).

Basic Air Science.

**Three lecture and two laboratory hours a week, 101, fall quarter; 102, winter quarter.*

AS 201 (4). Prerequisite, AS 101-102.

Basic Air Science.

**Three lecture and two laboratory hours a week, fall quarter.*

AS 202 (4). Prerequisites, AS 101-102, 201.

Basic Air Science.

**Three lecture and two laboratory hours a week, winter quarter.*

AS 301-302-303 (12). Prerequisite, completion of basic course or equivalent. Advanced Air Science, Air Comptrollership.

Four lectures and one laboratory hour a week, 301, fall quarter; 302, winter quarter; 303, spring quarter.

AS 304 (4). Prerequisite, completion of basic course or equivalent.

Advanced Air Science, Supply and Administration (Public Information).

Four lectures and one laboratory hour a week, fall quarter.

†AS 305-306. Prerequisite, AS 304.

Advanced Air Science, Supply and Administration (Public Information).

Students in Public Information Course must elect two of the following courses as approved by the Professor of Air Science and Tactics to fulfill the requirements of AS 305-306: Journalism 53, Journalism 80, English 44, Art 50, Physics 45, Psychology 24 or 25.

AS 401-402 (10). Prerequisite, AS 301-302-303.

Advanced Air Science, Air Comptrollership.

Five lectures and one laboratory hour a week, 401, fall quarter; 402, winter quarter.

AS 403 (4). Prerequisites, AS 401-402 or 404, 405.

Advanced Air Science, General.

Four lectures and one laboratory hour a week, spring quarter.

AS 404 (5). Prerequisites, AS 304, 305-306.

Advanced Air Science, Supply and Administration (Public Information).

Five lectures and one laboratory hour a week, fall quarter.

AS 405. Prerequisites, AS 304, 305-306, 404.

Advanced Air Science, Supply and Administration (Public Information).

Students in Public Information Course must register for Radio 75S to fulfill the requirements of AS 405.

Winter quarter.

* A two-hour laboratory drill period weekly will be required during spring quarter.

† A two-hour a week drill laboratory will be required.

DEPARTMENT OF ANATOMY

Professors: C. W. HOOKER, W. C. GEORGE

Associate Professors: C. D. VAN CLEAVE, C. T. KAYLOR

Instructors: J. A. GREEN, H. F. PARKS, H. C. PATTERSON, JR.

Lecturers: W. W. VAUGHAN, ALEXANDER WEBB, JR.

Teaching Assistants: H. J. BRYSON, JR., R. I. WALKER

Technicians: JANE WINSTEAD, DOROTHY B. JONES, MRS. HELEN RANDOLPH, L. B. COLIE

The courses include gross and microscopic anatomy, embryology, the topography of the body, the application and relation of anatomy to medicine and surgery, and the anatomy of the central nervous system and the organs of special sense. Before registering for any of these courses the non-medical student must secure the permission of his dean and the head of the department.

101. CENTRAL NERVOUS SYSTEM AND ORGANS OF SPECIAL SENSE (6).

Three lecture and six laboratory hours a week, winter quarter. Laboratory fee for non-medical students, \$5.00. Messrs. Hooker, Parks, Walker.

102. GENERAL HISTOLOGY AND ORGANOLGY (10).

Five lecture and ten laboratory hours a week, fall quarter. Laboratory fee for non-medical students, \$5.00. Messrs. Hooker, George, Parks, Walker.

103. EMBRYOLOGY (4).

One lecture and two laboratory hours a week, fall and winter quarters. Laboratory fee for non-medical students, \$5.00. Messrs. George and Green.

104. CYTOLOGY AND HISTOGENESIS (6). Prerequisites, Anatomy 102, Anatomy 103.

Three lecture and six laboratory hours a week, spring quarter. Laboratory fee for non-medical students, \$5.00. Mr. George.

107ab. GROSS ANATOMY (20).

Five lecture and twelve laboratory hours a week, fall and winter quarters. Laboratory fee for non-medical students, \$15.00. Messrs. Van Cleave, Kaylor, Patterson, Bryson, Vaughan, Webb.

ANTHROPOLOGY

(See Sociology and Anthropology)

ARCHAEOLOGY

(See Classics)

DEPARTMENT OF ART

Professors: J. V. ALLCOTT, KENNETH NESS, CLEMENS SOMMER

Lecturer: *W. M. PRINCE

Visiting Sculptor: ROBERT HOWARD

Assistant Professor: GEORGE KACHERGIS

Instructor: REBEKAH HUGGINS WALSTON

Curator: LYNETTE WARREN

Assistant: BETTIE MEADE CREIGHTON

Courses in art are for art majors and for general students in the University. Courses for art majors are planned to give the student a basic art training in studio work and art history within the liberal arts program, and also to lay the foundations for graduate work. Courses for general students provide an opportunity to study art for its broadening value in the liberal arts program. The study of art at the University is facilitated by books and photographs in Person Hall Art Library and by exhibitions in Person Hall Art Gallery and in the Morehead Building.

Course leading to the A.B. degree with art as a major. In the first two years the regular General College program is modified to make possible the taking of basic art courses as follows: In the freshman year, Art 44, 45, 46; in the sophomore year, Art 48, 49, 84, and choose two from Art 41, 42, 43. Non-art courses normally taken in the freshman and sophomore years: English 1, 2, 3; four courses in laboratory science; Mathematics 7 and 8 (or Greek or Latin); four courses in a foreign language. Other courses in the regular General College program are taken at a later time. The undergraduate major in art in the junior and senior years permits concentration in art history, art education, painting, sculpture, or graphic design.

For graduate programs in art history, creative work, or art education, see the Graduate School catalogue.

The Department of Art reserves the privilege of keeping examples of the work of any student. Persons not regularly enrolled in the University who desire instruction in studio work may obtain special instruction by members of the art department. For courses in ancient art see the courses listed under the Department of Classics.

As a part in the program of the study of art are student group trips to art galleries. The cost for these trips is \$20 to \$30.

*Absent on leave.

Courses for Undergraduates

The following three courses are introductions to the history and interpretation of art, tracing the three arts throughout Western civilization. For general students in the University. Each course may be taken separately.

41. HISTORY AND INTERPRETATION OF ARCHITECTURE (5).
Fall quarter. Mr. Sommer.

42. HISTORY AND INTERPRETATION OF SCULPTURE (5).
Winter quarter. Mr. Sommer.

43. HISTORY AND INTERPRETATION OF PAINTING (5).
Spring quarter. Mr. Sommer.

The following three courses are planned for the general student desiring an approach to art through doing work in the studio. Each course introduces the student to pen and ink, pencil, water color, and other art materials.

44. BEGINNING DRAWING (3).
Figure, landscape, and still life.
Nine studio hours a week, fall quarter. Laboratory fee, \$7.50. Mr. Kachergis.

45. BEGINNING COLOR (3).
Figure, landscape, still life, and creative problems.
Nine studio hours a week, winter quarter. Laboratory fee, \$7.50. Mr. Kachergis.

46. BEGINNING DESIGN (3).
Study of color, form, and movement, as they relate to two- and three-dimensional design.
Nine studio hours a week, winter and spring quarters, 1951; spring quarter, 1952. Laboratory fee, \$7.50. Mr. Howard.

48. LETTERING AND LAYOUT (3).
Fundamentals of lettering. Newspaper and magazine layout with emphasis on studio methods and techniques. Open to students in advertising, journalism, and other fields.
Nine studio hours a week, fall quarter. Laboratory fee, \$7.50. Mr. Ness.

49. DESIGN (3).
An introduction to studio methods in design with color, form, movement. Problems in textiles, furniture, display, etc.
Nine studio hours a week, spring quarter. Laboratory fee, \$7.50. Mr. Kachergis.

50. PICTORIAL CONTINUITY (3).
Visualization and planning of film strips, exhibitions, picture books, and articles. For students of Public Health, Education, Sociology, and other departments. Students who do not sketch will work in teams with those who do.
Eight studio hours a week, winter quarter. Laboratory fee, \$7.50. Mr. Allcott.

51. MEDIEVAL ARCHITECTURE (5).
An illustrated lecture course on the great cathedrals in France, Germany, and England during the Romanesque and Gothic periods.
Mr. Sommer.

52. RENAISSANCE ARCHITECTURE (5).

A study of architecture in Italy from the fourteenth to the sixteenth century with emphasis on the revival of classic principles and form.

Mr. Sommer.

53. MODERN ARCHITECTURE (5).

An illustrated lecture course. Architecture from the eighteenth to the twentieth century, with attention to Frank Lloyd Wright, Corbusier, Gropius, and other architects concerned with domestic architecture. Field trips.

Fall quarter. Mr. Allcott.

54. ADVERTISING DESIGN (3). Prerequisites, Art 44, 45, 48.

Design of magazine page, poster, book jacket, packaging, direct mail, and other forms of advertising. Problems from spot designs to comprehensive rendering of larger projects.

Nine studio hours a week, spring quarter, 1951. Laboratory fee, \$10.00. Mr. Ness.

55. ARTS AND CRAFTS (3).

Sketching and painting; clay modeling and paper sculpture; block printing; textile designs. The planning of art projects with regard to local resources; methods of presenting projects.

One lecture and six studio hours a week, fall quarter. Laboratory fee, \$7.50. Mr. Kachergis, Mrs. Walston.

61. MEDIEVAL SCULPTURE.

A study of medieval sculpture during the Romanesque and Gothic periods, with emphasis on the sculptural decorations of the French cathedrals.

Mr. Sommer.

62. RENAISSANCE SCULPTURE (5).

Beginning with the classic revival in the thirteenth century, this course will trace the Renaissance idea in sculpture from the Pisanos to Michelangelo.

Mr. Sommer.

70. AMERICAN ART (5).

From colonial times to the present.

Winter quarter, 1951. Mr. Allcott.

71. ITALIAN RENAISSANCE PAINTING (5).

A study of painting in Italy during the fifteenth and sixteenth centuries and of its significance for the cultural development.

Mr. Sommer.

74. BAROQUE PAINTING IN THE NETHERLANDS (FLANDERS AND HOLLAND) (5).

This course will be centered on the two great masters, Rubens and Rembrandt, with special stress on their different interpretations of the Baroque idea.

Mr. Sommer.

75. CONTEMPORARY ART (5).

An illustrated lecture course. Recent painting, sculpture, and architecture; expressionism, cubism, surrealism, and other schools; the artistic development of certain artists such as Matisse and Picasso will be traced.

Spring quarter. Mr. Allcott.

Education 77. MATERIALS AND METHODS FOR THE TEACHING OF ART (5).

Winter quarter. Laboratory fee, \$7.50. Mr. Kachergis.

77. FUNDAMENTALS OF APPLIED DESIGN (3).

A study of shapes and volumes, surfaces and textures, space and motion, as applied to problems in papier-mâché, wire sculpture, textile design. For students of recreation leadership, education, and art.

Eight studio hours a week, winter quarter. Laboratory fee, \$7.50. Mr. Kachergis.

Education 78. PRACTICE TEACHING OF ART (5 or 10).

Spring quarter. Mr. Kachergis.

80. DRAWING (3). Prerequisites, Art 44, 45, 46 or equivalent.

Charcoal, pen and ink, water color, and gouache. Still life, landscape, and figure with emphasis on line, tone, and design.

Nine studio hours a week, fall quarter. Laboratory fee, \$7.50. Mr. Ness.

81. COMPOSITION (3). Prerequisites, Art 44, 45, 46.

Emphasis on form, structure, and representation.

Nine studio hours a week, winter quarter. Laboratory fee, \$7.50. Mr. Ness.

82. PAINTING: LANDSCAPE AND FIGURE IN VARIOUS MEDIUMS (3).

Prerequisites, Art 44, 45, 46.

Special consideration for color, tone, and form.

Nine studio hours a week, spring quarter. Laboratory fee, \$12.00. Mr. Ness.

83. ART ANATOMY (3).

Eight studio hours a week. Laboratory fee, \$7.50. Mr. Howard.

84. SCULPTURE (3).

Experiments in the three-dimensional language of form, planes, and lines in space. Work in clay, wood, plastics, paper, papier-mâché, cloth, wire, and other materials.

Nine studio hours a week, winter quarter. Laboratory fee, \$7.50. Mr. Howard.

85. ADVERTISING ART (3). Prerequisites, Art 49, 54.

Finished layout and rendering techniques for illustrations, charts, three-dimensional display, exhibition, and other materials. Black and white, color; experimental work in various mediums.

Nine studio hours a week, spring quarter, 1952. Laboratory fee, \$10.00. Mr. Ness.

86. SCULPTURAL DESIGN (3).

Elements of sculpture, with form in nature taken as the point of departure. Problems in the relationships of solids and their surrounding spaces.

Eight studio hours a week, winter quarter. Laboratory fee, \$7.50. Mr. Howard.

87. LIFE SCULPTURE (3).

Work from the living model. Consideration of anatomy, structure, and the possibilities of figure composition.

Eight studio hours a week, spring quarter. Laboratory fee, \$7.50. Mr. Howard.

93abc. ART COMMUNICATION (3; 1 each quarter).

The presentation of art ideas to the public through exhibitions, printed accounts, gallery and radio talks, and other activities.

Three laboratory hours a week. Laboratory fee, \$2.50 each quarter. Mr. Kachergis.

Courses for Graduates and Advanced Undergraduates

104. ADVANCED DRAWING AND PAINTING (3). Prerequisites, Art 80, 81, 82.

Water color, gouache, and oil. Consideration of line, tone, and form in representative works and abstract design.

Nine studio hours a week, spring quarter. Laboratory fee, \$15.00. Mr. Ness.

105. ADVANCED PAINTING AND PAINTING PROCESSES (3). Prerequisites, Art 80, 81, 82.

Water color, tempera, and oils. Preparation of canvas, gesso, and fresco panels. *Nine studio hours a week, fall quarter. Laboratory fee, \$15.00.* Mr. Ness.

106. ADVANCED COMPOSITION, LINE DESIGN, FLAT PATTERN AND SPACE COMPOSITION (3). Prerequisites, Art 80, 81, 82.

Consideration of structure and form in abstracts from figure and landscape. Emphasis on development of personal methods.

Nine studio hours a week, winter quarter. Laboratory fee, \$15.00. Mr. Ness.

108. ILLUSTRATION (3).

Laboratory fee, \$10.00.

109. COSTUMED FIGURE (3).

Laboratory fee, \$7.50.

110. LIFE DRAWING (3). Prerequisite, consent of the instructor.

Work from the living model: pencil, chalk, crayon, ink. Consideration of anatomy and composition. May be taken three times for credit.

Nine studio hours a week, spring quarter, 1951, 1952; winter quarter, 1952. Laboratory fee, \$7.50. Mr. Kachergis.

111. SCULPTURAL DESIGN (3).

Winter quarter. Laboratory fee, \$10.00. Mr. Howard.

112. LIFE SCULPTURE (3).

Laboratory fee, \$10.00. Mr. Howard.

113. MATERIALS OF SCULPTURE (3).

Spring quarter. Laboratory fee, \$10.00. Mr. Howard.

120. ETCHING (3).

Laboratory fee, \$20.00. Mr. Kachergis.

121. LITHOGRAPHY (3).

Laboratory fee, \$20.00. Messrs. Kachergis, Ness.

122. SERIGRAPHY (3).

Laboratory fee, \$20.00. Messrs. Kachergis, Ness.

170. MODERN PAINTING (5).

An illustrated lecture course, painting in Western Europe and the United States, with accent on Impressionism and Post Impressionism.

Winter quarter, 1952. Mr. Allcott.

171. FLORENTINE PAINTING (5). Prerequisite, Art 43.

This course will deal with the development of Renaissance painting in Florence from the late thirteenth century to the beginning of the sixteenth century.

Winter and fall quarters, 1951. Mr. Sommer.

174. FIFTEENTH CENTURY PAINTING IN NORTHERN EUROPE (5). Prerequisite, Art 43.

After a brief discussion of the roots of naturalism in Flemish painting, the early masters from the Van Eycks to Breughel will be discussed.

(1950-1951 and alternate years.) *Fall quarter.* Mr. Sommer.

177. ORIGINS OF EUROPEAN ENGRAVING AND WOODCUT (5). Prerequisite, Art 42.

After tracing the origins and technique of engraving and woodcut, their interrelations with painting and sculpture will be discussed, with emphasis on the development in Germany.

Spring quarter, 1952. Mr. Sommer.

Courses for Graduates

240abc. PAINTING (6 each).

Laboratory fee, \$20.00. Messrs. Kachergis, Ness.

241abc. SCULPTURE (6 each).

Laboratory fee, \$20.00. Mr. Howard.

242abc. GRAPHIC ARTS (6 each).

Laboratory fee, \$20.00. Messrs. Kachergis, Ness.

243abc. GRAPHIC DESIGN (6 each).

Laboratory fee, \$20.00. Messrs. Allcott, Ness.

253. MODERN ARCHITECTURE (5).

Laboratory fee, \$20.00. Mr. Allcott.

261. LATE GOTHIC SCULPTURE (5). Prerequisites, Art 42 and 61.

Sculpture in Germany, the Netherlands, France, and Scandinavia in the fifteenth and sixteenth centuries. The relation between sculpture and contemporaneous painting and graphic art will be discussed.

Mr. Sommer.

270. STUDIES IN MODERN PAINTING (5).

Fall quarter, 1950. Mr. Allcott.

271. VENETIAN PAINTING (5). Prerequisites, Art 43 and 71.

The course will be concerned principally with Renaissance painting (from Bellini to Tintoretto) and will conclude with a discussion of eighteenth century masters (Tiepolo and Guardi).

(1951-1952 and alternate years.) *Spring quarter.* Mr. Sommer.

272. NORTHERN PAINTING (5). Prerequisites, Art 43 and 71.

After an introductory discussion of medieval painting, the course will trace the beginning of the new painting in the Netherlands and its spread over the North-European countries.

(1951-1952 and alternate years.) *Winter quarter.* Mr. Sommer.

274. BAROQUE PAINTING IN ITALY AND FRANCE (5). Prerequisites, Art 43 and 71.

After a discussion of Mannerism, the Baroque idea will be traced through the French Classicists and the Italian Naturalists to the eighteenth-century masters, Watteau and Fragonard, Tiepolo and Guardi.

Spring quarter, 1951. Mr. Sommer.

301. SEMINAR COURSE (5).

A research course in a special field under the direction of a member of the department.

DEPARTMENT OF ASTRONOMY

Professor: *ROY K. MARSHALL
 Assistant Professor: DOUGLAS DUKE
 Instructor: W. D. BULLOCH
 Technician: ANTHONY F. JENZANO

In addition to those listed below, courses in such advanced astronomical fields as Astrophysics, Practical Astronomy, and Celestial Mechanics will be made available to students prepared for and interested in doing further work in astronomy.

In all courses use is made of the Morehead Planetarium and the fifteen-inch reflecting telescope.

31. DESCRIPTIVE ASTRONOMY (5).

An introductory, non-mathematical course to acquaint the student with the apparent face of the sky; the planets, stars, and other forms of material within the physical universe; and the appearance of these objects in the telescope.

Four lecture and two laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, \$3.00. Laboratory, usually at night, to be arranged. Messrs. Duke and Bulloch.

32. GENERAL ASTRONOMY (5). Prerequisite, Astronomy 31.

A further, more detailed study of the facts of astronomy with attention to the problems of obtaining data and attaining solutions to outstanding astronomical problems.

Four lecture and two laboratory hours a week, winter and spring quarters. Laboratory fee, \$3.00. Laboratory, usually at night, to be arranged. Messrs. Duke and Bulloch.

DEPARTMENT OF BACTERIOLOGY AND IMMUNOLOGY

Professor: D. A. MACPHERSON
 Assistant Professors: W. R. STRAUGHN, G. P. MANIRE
 Instructor: M. HUPPERT
 Technicians: DORIS P. BASON, LOIS P. TILLMAN, BRUNHILDE FERGUSON
 Graduate Assistant: HENRY PHELPS

For the S.B. degree with major in bacteriology, six courses (or thirty quarter hours) in bacteriology are required. One course in parasitology may be substituted for one of the required courses in bacteriology. In addition, six courses in allied sciences and three courses outside the Division of Natural Sciences are required. A suggested program of study follows:

*Resigned, March 1, 1951.

FIRST YEAR

Chemistry 1-2-3 or 1-2-31	French or German 3-4 (or 1-2 if student lacks adequate preparation)
English 1, 2	Hygiene 11
Mathematics 7, 8, or R, 7x, 8	Physical Education 1, 2, 3
Social Science 1-2	

SECOND YEAR

English 3 and 4 or 5 or 6	Zoology 41, 42
French or German 21-22	Bacteriology 51
Chemistry 42	Physical Education 4, 5, 6
Botany 41	

THIRD YEAR

Chemistry 61, 62	Bacteriology 101, 104, 107
Physics 24-25	Elective, 2 courses

FOURTH YEAR

Bacteriology 112, 115 (Other courses in bacteriology or one in parasitology may be substituted with the consent of the department.)
 Elective, 6 full quarter courses, of which 3 must be outside the Division of Natural Sciences.

Course for Undergraduates

51. ELEMENTARY BACTERIOLOGY (6). Prerequisites, Chemistry 1-2-3 or 1-2-31 and one course in botany or zoology.

Three lecture and six laboratory hours a week, spring quarter. Laboratory fee, \$4.00. Mr. Straughn.

Courses for Graduates and Advanced Undergraduates

101. PATHOGENIC BACTERIOLOGY (8). Prerequisites, Bacteriology 51, Chemistry 1-2, 31, 42, and two courses in botany, physics, or zoology.

This course includes a study of the important bacterial, rickettsial and virus diseases of man. Practical application of bacteriology to the diagnosis of disease is stressed.

Three lecture and nine laboratory hours a week, fall quarter. Laboratory fee for non-medical students, \$10.00. Messrs. MacPherson, Straughn, Manire, Huppert.

104. IMMUNOLOGY (5). Prerequisite, Bacteriology 101.

Theories of infection and resistance; preparation and use of vaccines and immune sera; and the practical applications of serology to the diagnosis of disease.

Three lecture and five laboratory hours a week, winter quarter. Laboratory fee for non-medical students, \$10.00. Messrs. MacPherson, Manire, Huppert.

106. MEDICAL MYCOLOGY (5). Prerequisites, Bacteriology 101 and 104 or equivalent; Botany 102 is advisable.

A course of lectures and laboratory work covering the higher fungi pathogenic for man. A detailed study is made of each of these pathogenic fungi, and correlated with the symptomatology, immunology, and laboratory diagnosis of the human mycotic diseases.

Two lecture and six laboratory hours a week, winter quarter. Laboratory fee, \$10.00. Mr. Huppert.

107. BACTERIOLOGY OF WATER AND FOODS (5). Prerequisite, Bacteriology 51.

The bacteriological examination of water and foods and the relation of bacteria, yeasts, and molds to the preservation and spoilage of foods are studied.

Two lecture and six laboratory hours a week, winter quarter. Laboratory fee, \$6.00. Messrs. MacPherson, Straughn.

112. BACTERIAL PHYSIOLOGY (6). Prerequisites, Bacteriology 51, Chemistry 31, 42, 61, 62, and preferably Biochemistry 101, 102.

This course is concerned with a study of the growth, respiration, nutrition, enzyme reactions, and effects of physical and chemical agents on bacteria.

Three lecture and six laboratory hours a week, spring quarter. Laboratory fee, \$6.00. Messrs. Straughn, Manire.

115, 116, 117. ADVANCED BACTERIOLOGY OR IMMUNOLOGY (5½ each quarter). Prerequisites, Bacteriology 101 and 104 or equivalent.

A course designed to introduce the student to research methods. Minor investigative problems are conducted by the student with advice and guidance of the staff.

One conference and nine laboratory hours a week, fall, winter, or spring quarters. Laboratory fee, \$10.00. Messrs. MacPherson, Manire.

120. VIROLOGY (6). Prerequisites, Bacteriology 101 and 104.

The nature of viruses and rickettsiae are studied; laboratory exercises include practical diagnostic methods and emphasize procedures for the examination and propagation of these agents.

Two lecture, one conference, and six laboratory hours a week, spring quarter. Laboratory fee, \$12.00. Mr. Manire.

151. GENERAL BACTERIOLOGY (6). Prerequisite, Botany 41 or Zoology 41. Open only to majors in science departments other than bacteriology.

Three lecture and six laboratory hours a week, spring quarter. Laboratory fee, \$10.00. Messrs. MacPherson, Straughn.

Courses for Graduates

301, 302, 303. RESEARCH IN BACTERIOLOGY, IMMUNOLOGY, OR VIROLOGY (5 or more each quarter). Prerequisite, permission of the department.

Opportunity is offered properly prepared students to undertake research in bacteriology, immunology, or virology.

Hours and credits to be arranged, throughout the year. Laboratory fee, to be determined. Messrs. MacPherson, Manire.

**DEPARTMENT OF BIOLOGICAL CHEMISTRY
AND NUTRITION**

Professor: J. C. ANDREWS

Associate Professors: C. E. ANDERSON, J. L. IRVIN

Assistant Professor: J. E. WILSON

Instructor: M. K. BERKUT

Graduate Assistant: R. L. GOLBY

Technical Assistant: J. H. McIVER

Courses for Graduates and Advanced Undergraduates

101. BIOLOGICAL CHEMISTRY (7). Prerequisites, Chemistry 42, 61, and 62 or equivalent.

A class and laboratory course covering the fundamental chemistry of carbohydrates, fats, proteins, and electrolytes.

Three lecture and eight laboratory hours a week, winter quarter. Laboratory fee for non-medical students, \$10.00. Messrs. Andrews, Anderson, Irvin, Wilson, Berkut.

102. BIOLOGICAL CHEMISTRY (5). Prerequisite, Biological Chemistry 101 or equivalent.

A class and laboratory course dealing with the quantitative aspects of metabolism with respect to the major foodstuffs, minerals, and vitamins. The laboratory work includes gastric juice, blood, and urine analysis and introductory nutritional experiments.

Three lecture and four laboratory hours a week, spring quarter. Laboratory fee for non-medical students, \$10.00. Messrs. Andrews, Anderson, Irvin, Wilson, Berkut.

103. FOOD CHEMISTRY (6). Prerequisites, Biological Chemistry 101, 102.

A course dealing with foodstuffs and the application of the basic principles of biological chemistry to the functional reactions which the foodstuffs undergo in the nutrition of the animal body. The laboratory work includes both nutritional experimentation on laboratory animals and chemical analysis.

Three lecture and six laboratory hours a week, fall quarter. Laboratory fee, \$10.00. Messrs. Andrews, Anderson, Irvin, Wilson.

Courses for Graduates

201, 202, 203. ADVANCED BIOLOGICAL CHEMISTRY (6 each). Prerequisites, Biological Chemistry 101, 102 or equivalent.

Equivalent of six hours a week, fall, winter, and spring quarters. Laboratory fee, \$10.00 each quarter. Messrs. Andrews, Anderson, Irvin, Wilson.

211, 212, 213. SEMINAR (1 each). Prerequisites, Biological Chemistry 101, 102 or equivalent and a reading knowledge of German.

One hour a week, fall, winter, and spring quarters. Messrs. Andrews, Anderson, Irvin, Wilson.

301, 302, 303. RESEARCH IN BIOLOGICAL CHEMISTRY (6 each). Prerequisite, Biological Chemistry 201 or equivalent.

Equivalent of six hours a week, fall, winter, and spring quarters. Laboratory fee, \$10.00 each quarter. Messrs. Andrews, Anderson, Irvin, Wilson.

DEPARTMENT OF BOTANY

Professors: J. N. COUCH, *W. C. COKER, H. R. TOTTEN, J. E. ADAMS

Associate Professors: V. A. GREULACH, EARLENE ATCHISON

Assistant Professor: A. E. RADFORD

Instructors: M. B. HUNEYCUTT, W. J. KOCH

Research Assistants: ALMA HOLLAND BEERS, KATHLEEN GOLDIE-SMITH

Teaching Fellow: EDMUND BERKELEY

Curator: A. E. RADFORD

Graduate Assistants: MIRIAM BARTEAUX, WINIFRED COMPTON, R. M.

JOHNS, S. P. JOHNSON, EMILY M. STACY, BERNARD TAYLOR, R. R.

WATTS, R. L. WYATT

For the A.B. with major in botany, six courses of the level of 41 or higher are required; one course in bacteriology may, with the consent of the department, be considered as part of the major. There are also required six courses in allied sciences—zoology, chemistry, geology, and physics. (Zoology 41 and Chemistry 1-2-3 or 1-2-31 must be included if not previously taken to satisfy General College requirements.) Six courses in departments outside of the Division of Natural Sciences are required.

Those students who plan to teach in public high schools should read the instructions under the School of Education section of the catalogue.

Courses for Undergraduates

1. BOTANY (5). Freshman elective. This may be taken to satisfy partially the requirement for natural science in the General College but should not be taken by anyone intending to major in a natural science.

The structure and functions of plants, their evolution, and a survey of fundamental biological facts and principles illustrated by plants and the relationship of these to man.

Four lecture and two laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, \$2.00. Mr. Adams, Miss Atchison, Mr. Greulich; assistants.

41. GENERAL BOTANY (6). To be taken instead of Botany 1 by students intending to major in the natural sciences. Credit will not be given for both these courses.

An introduction to the structure, physiology, genetics, and classification of plants.

Four lecture and four laboratory or field hours a week, fall, winter, and spring quarters, with a special section in the spring quarter for pharmacy students. Laboratory fee, \$4.00. Messrs. Couch, Totten, Greulich, Radford; assistants.

42. CRYPTOGAMIC BOTANY (6). Prerequisite, Botany 1 or 41.

A continuation of General Botany, with a study of the structure, physiology, and classification of the lower plants.

Four lecture and four laboratory or field hours a week, winter quarter. Laboratory fee, \$4.00. Messrs. Couch, Radford; assistants.

*Kenan Research Professor Emeritus.

43. SEED PLANTS (6). Prerequisite, Botany 1 or 41.

A continuation of General Botany, with more advanced work in the structure and classification of seed plants. Special attention to local flora, introduced ornamental plants, and propagation of cultivated plants.

Four lecture and four laboratory or field hours a week, spring quarter. Laboratory fee, \$4.00. Messrs. Totten, Radford.

45. PHARMACOGNOSY (5). Prerequisite, Botany 41. Required of second-year students in the School of Pharmacy and open to others only by special permission of the Department of Botany.

Two lecture and six laboratory hours a week, winter quarter. Laboratory fee, \$6.00. Mr. Totten, assistants.

Courses for Graduates and Advanced Undergraduates

102. FUNGI (5). Prerequisite, Botany 42.

A survey of the fungal groups including the true Fungi, Myxomycetes, and Lichens.

(Not offered in 1950-1951.) *Two lecture and six laboratory hours a week, summer session. Laboratory fee, \$4.00.* Mr. Couch.

103. ALGAE (5). Prerequisite, Botany 42.

A survey of the Algae including both fresh-water and marine groups.

(1950-1951 and alternate years.) *Two lecture and six laboratory hours a week, spring quarter. Laboratory fee, \$4.00.* Mr. Couch.

111, 112, 113. FUNGI: PHYCOMYCETES, ASCOMYCETES, BASIDIOMYCETES (5 each). Prerequisite, Botany 42.

Preparatory courses for research in Fungi; mycological foundation for work in plant pathology. Lectures and reports on the literature; collection and study of specimens.

Two lecture and six laboratory hours a week, 111, winter quarter; 112, spring quarter (1951-1952 and alternate years); 113, fall quarter. Laboratory fee, \$4.00 each quarter. Mr. Couch.

121. PLANT PHYSIOLOGY (5). Prerequisites, Botany 42 or 43, General Chemistry. Advised: Organic Chemistry.

A study of the life processes of plants, including cell physiology, water relations, photosynthesis, carbohydrate, fat, and nitrogen metabolism, mineral salt absorption and use, digestion, translocation, respiration.

Three lecture and four laboratory hours a week, fall quarter. Laboratory fee, \$8.00. Mr. Greulich.

122. PLANT GROWTH (5). Prerequisite, Botany 121.

Nature of plant growth, growth substances, environmental factors affecting growth, growth correlations and periodicity, reproductive development, germination and dormancy, plant movements.

Three lecture and four laboratory hours a week, winter quarter. Laboratory fee, \$8.00. Mr. Greulich.

145. ADVANCED MACROPHARMACOGNOSY (5). Prerequisite, Botany 45.

Studies in the culture of crude drugs in the drug garden and in the harvesting and preparation of cultivated and wild crude drugs. Of special interest to graduate students in the School of Pharmacy, though open to others also.

Two lecture or report and six laboratory or field hours a week, fall quarter. Laboratory fee, \$10.00. Mr. Totten.

147. ADVANCED MICROPHARMACOGNOSY (5). Prerequisite, Botany 45.

Advanced study of plant drugs; general methods in microanalysis of powdered drugs; preparation of materials for study; microanalysis of typical drugs and their adulterants and mixtures. Of special interest to graduate students in the School of Pharmacy, though open to others also.

Two lecture and six laboratory hours a week, spring quarter. Laboratory fee, \$10.00. Mr. Adams.

151, 153. ADVANCED TAXONOMY OF SEED PLANTS (5 each quarter). Prerequisite, Botany 43.

Advanced work in the collection, identification, preparation of herbarium specimens, and structural studies of the fall flowering (151) and the spring flowering (153) seed plants.

Two lecture or report and six laboratory or field hours a week, fall and spring quarters. Laboratory fee, \$4.00 each quarter. Messrs. Adams, Totten.

154, 155. DENDROLOGY (5 each). Prerequisite, Botany 43.

Course 154 is a taxonomic study of the woody plants based largely on bud, bark, and wood characteristics; 155 is based largely on foliage characters.

154, two lecture or report and six laboratory or field hours a week, winter quarter. 155, five lecture or report and fourteen laboratory or field hours a week in one term of the summer session. Laboratory fee, \$4.00. Mr. Totten.

156. PLANT GEOGRAPHY (3). Prerequisite, Botany 43.

Discussion of the principles and problems of the geographic distribution of plants.

(1950-1951 and alternate years.) Three lecture or report hours a week, fall quarter. Mr. Adams.

157. PLANT ANATOMY (5). Prerequisites, Botany 42 and 43.

Introduction to the developmental anatomy of vascular plants with consideration of the phylogenetic aspects of the subject; practice in methods of anatomical microtechnique.

Two lecture or report and six laboratory hours a week, winter quarter. Laboratory fee, \$4.00. Mr. Adams.

166. CYTOLOGY (5). Prerequisites, Botany 42 and 43.

The study of the structure and function of the cell.

Three lecture and four laboratory hours a week, fall quarter. Laboratory fee, \$4.00. Miss Atchison.

176. CYTOGENETICS (5). Prerequisites, Botany 41 and cytology or genetics.

Application of cytological and genetic techniques to problems in plant breeding and growth.

Three lecture and four laboratory hours a week, spring quarter. Laboratory fee, \$4.00. Miss Atchison.

Courses for Graduates

211, 212, 213. PROBLEMS IN FUNGI (5 each quarter). Prerequisite, consult the department.

Investigation of a research problem under the guidance of the instructor, preferably in Phycomycetes or Basidiomycetes and in the taxonomy, morphology, physiology, or genetics of fungi.

Fall, winter, and spring quarters. Laboratory fee, \$4.00 each quarter. Mr. Couch.

221, 222, 223. PROBLEMS IN PLANT PHYSIOLOGY (5 each quarter). Prerequisites, Botany 121 and 122.

Detailed consideration of specific topics and problems of plant physiology, including laboratory studies and extensive reading and discussion of original literature, the subjects covered each quarter to be selected after consultation between instructor and students.

Lecture, discussion, and laboratory hours to be arranged to suit the problems under consideration, fall, winter, or spring quarter. Laboratory fee, \$8.00 each quarter. Mr. Greulich.

251, 252, 253. MORPHOLOGY OF SEED PLANTS (5 or 2½ each quarter). Prerequisite, Plant Anatomy.

Advanced work in the embryology and anatomy of seed plants, including the preparation of material for the microscopic study of special problems.

Fall, winter, and spring quarters. Laboratory fee, \$4.00 a quarter. Mr. Adams.

276. CYTOTAXONOMY (3). Prerequisites, Botany 151 or 153 and cytology or genetics.

Seminar discussions on the relation of cytological and genetic data to problems in taxonomy and phylogeny.

Three lecture or report hours a week, winter quarter. Miss Atchison.

301, 302, 303. GRADUATE RESEARCH (5 or 2½ each quarter).

Original work on thesis problem under the guidance of an instructor, to be pursued in successive quarters as necessary.

Laboratory fee, \$4.00 a quarter. Messrs. Couch, Totten, Adams, Greulich, Miss Atchison.

BUSINESS ADMINISTRATION

(See Economics and Business Administration)

DEPARTMENT OF CHEMISTRY

Professors: R. W. BOST, *F. K. CAMERON, J. T. DOBBINS, H. D. CROCKFORD, E. C. MARKHAM, O. K. RICE, F. H. EDMISTER, S. B. KNIGHT, ARTHUR ROE

Associate Professors: R. L. MCKEE, S. Y. TYREE

Assistant Professors: J. C. MORROW, III, C. R. WALTER, JR.

Instructor: R. L. PARKS

Teaching Fellows: M. B. WINSTEAD, S. J. CHILDRESS, E. C. LEONARD

Graduate Assistants: J. W. AGER, B. J. ALLEY, R. H. BAILEY, EDWARD BERNASEK, JACQUELENE BOWEN, SUSAN W. BOWEN, W. P. CAVIN, DORIS LEE CRAIG, C. M. CRAWFORD, F. G. CRIDER, J. T. DOBBINS, JR., R. J. FAHL, J. B. FINLAY, T. C. FRAZIER, A. W. GRAHAM, R. T. GUTHRIE, H. A. HARTUNG, C. L. HENRY, J. K. HUMMER, W. S. HUMMERS, R. H. JOHNS, J. V. KILLHEFFER, W. F. LITTLE, A. L. MCPETERS, W. C. MATHIS, E. J. MEZEY, R. V. MOORE, C. S. PATTERSON, M. H. PETERSON, L. D. QUIN, J. E. SANSING, R. B. SELIGMAN, J. I. STEVENS, H. B. TATUM, M. P. UNDERWOOD, P. T. VON BRAMER, R. H. WALLICK, W. L. WILEY, B. L. WOOD

*Professor Emeritus.

For the A.B. with a major in chemistry these are required: Chemistry 1-2-3, 31, 42, 61, 62, or Chemistry 1-2-31, 42, 51, 61, 62; and for either sequence two of the following: Chemistry 41, 63, 83. Six courses in other natural sciences and six courses in departments outside the Division of Natural Sciences are also required.

Those students who plan to teach in public high schools should read the statement on pages 156-57.

*Bachelor of Science in Chemistry

FRESHMAN YEAR

Chemistry 1-2-31	Mathematics 7, 8
or	German 1
†Chemistry 1-2-3, 31	Hygiene 11
English 1, 2, 3	Physical Education

SOPHOMORE YEAR

†Chemistry 51, 42, 41	English 4 or 5 or 6 or fine arts
Mathematics 31, 32, 33	option
Physics 24-25 or 34, 35	Physical Education
‡German 2-3-4	

JUNIOR YEAR

Chemistry 61, 62, 63	English 59
Chemistry 181, 182, 183	§Electives, 2 non-science courses

SENIOR YEAR

Botany 41 or Zoology 41	¶Non-science electives, 2 courses
Chemistry electives, 18 quarter hours	Free electives, 2 courses not in chem-
Physics elective, one of the following	istry
courses: Physics 52, 53, 54, 56, 61	

Courses for Undergraduates

1-2-3. GENERAL DESCRIPTIVE CHEMISTRY (15). Chemistry 31 may be substituted for Chemistry 3. Chemistry 3 may not be taken after credit has been received for Chemistry 31. No credit will be given for Chemistry 1-2 until either Chemistry 3 or Chemistry 31 is completed.

Three lecture and four laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, \$3.00 a quarter. Messrs. Markham, Knight, Tyree, Morrow, Walter; assistants.

*This course meets the requirements of the American Chemical Society for the training of professional chemists.

†If the sequence, Chemistry 1-2-3, 31, is followed, Chemistry 31 will be delayed until summer school or the sophomore year, and Chemistry 51, which will be counted as one of the chemistry electives, will be delayed until the senior year. (See below, note ||.)

‡It is understood that the language requirement of the General College must be satisfied.

§Select two courses from the following: Economics 31-32, 41, 61; History 48, 49, 71, 72, 134, 135, 136, 167, 168, 170.

¶Also, select two from the following: Political Science 41, 42, 52, 101, 142; Sociology 51, 52, 167.

In special cases, subject to approval, two courses in a modern foreign language may be substituted for two on the foregoing lists.

||Not more than one and a half courses may be taken in any one of the five divisions of chemistry: inorganic, analytical, organic, physical, and industrial.

¶Select two courses from the following: Economics 31-32, 41, 61; History 48, 49, 71, 72, 134, 135, 136, 167, 168, 170.

31. QUALITATIVE ANALYSIS (6). Prerequisite, Chemistry 1-2 or equivalent. *Three lecture and six laboratory hours a week, fall and spring quarters. Laboratory fee, \$10.00.* Messrs. Dobbins, Markham, Knight; assistants.

41. ELEMENTARY QUANTITATIVE ANALYSIS: GRAVIMETRIC (6). Prerequisite, Chemistry 42.

Three lecture and six laboratory hours a week, spring quarter. Laboratory fee, \$10.00. Messrs. Dobbins, Knight; assistants.

42. ELEMENTARY QUANTITATIVE ANALYSIS: VOLUMETRIC (6). Prerequisite, Chemistry 31.

Three lecture and six laboratory hours a week, winter or spring quarter. Laboratory fee, \$10.00. Messrs. Dobbins, Knight; assistants.

51. INORGANIC CHEMISTRY (6). Prerequisites, Chemistry 1-2-3, 31, or 1-2-31, or equivalent.

Three lecture and six laboratory hours a week, fall quarter. Laboratory fee, \$10.00. Messrs. Knight, Tyree; assistants.

61, 62, 63. ORGANIC CHEMISTRY (6 each). Prerequisite, Chemistry 31.

Three lecture and six laboratory hours a week; 61 in the fall and winter quarters, 62 in the winter and spring quarters, 63 in the spring quarter. Laboratory fee, \$10.00 a quarter. Messrs. Bost, Roe, McKee.

83. PHYSICAL CHEMISTRY FOR PREMEDICAL STUDENTS (6). Prerequisites, Chemistry 31, 42, 62, Math. 7, 8, and one year of college physics. Does not carry credit toward S.B. in Chemistry.

Designed for A.B. students or students taking premedical, pharmaceutical, or biological work.

Five lecture and two laboratory hours a week, fall and spring quarters. Laboratory fee, \$3.00. Messrs. Crockford, Rice, Morrow.

Courses for Graduates and Advanced Undergraduates

101. SPECIAL PROBLEMS IN CHEMISTRY (1 to 3). Prerequisite, to be determined by consultation.

Equivalent of one to three hours a week, every quarter. Laboratory fee, to be determined by consultation with adviser or head of the department. Any member of the departmental staff.

102. CHEMICAL LITERATURE (3). Prerequisite, Chemistry 63.

Three hours a week, spring quarter. Mr. Walter.

143. THEORETICAL ANALYTICAL CHEMISTRY (6). Prerequisites, Chemistry 31, 41, 42.

Six hours a week, winter quarter. Mr. Dobbins.

145. INSTRUMENTAL ANALYSIS. ELECTRICAL METHODS (3). Prerequisites, Chemistry 41, 42.

One lecture and four laboratory hours a week, fall quarter. Laboratory fee, \$10.00. Mr. Markham.

146. INSTRUMENTAL ANALYSIS. OPTICAL METHODS (3). Prerequisites, Chemistry 41, 42.

One lecture and four laboratory hours a week, winter quarter. Laboratory fee, \$10.00. Mr. Markham.

147. QUANTITATIVE ORGANIC MICROANALYSIS (3). Prerequisites, Chemistry 41, 42, 63.

Six laboratory hours a week, spring quarter. Laboratory fee, \$10.00. Mr. Markham.

148. INORGANIC MICROANALYSIS (3). Prerequisites, Chemistry 41, 42.
Six laboratory hours a week, spring quarter. Laboratory fee, \$10.00. Mr. Markham.
- 151, 152, 153. ADVANCED INORGANIC CHEMISTRY (3 each). Prerequisites, Chemistry 31, 42.
Three hours a week, fall, winter, and spring quarters. Mr. Edmister.
154. INORGANIC PREPARATIONS (3). Prerequisites, Chemistry 41, 42, 51, 63, or their equivalent.
Six laboratory hours a week, winter quarter. Laboratory fee, \$10.00. Mr. Tyree.
163. QUALITATIVE ORGANIC ANALYSIS (6). Prerequisites, Chemistry 61, 62, 63.
Three lecture and six laboratory hours a week, fall quarter. Laboratory fee, \$10.00. Mr. Bost.
164. QUANTITATIVE ANALYSIS OF FUNCTIONAL GROUPS (3). Prerequisite, Chemistry 163.
Six laboratory hours a week, winter quarter. Laboratory fee, \$10.00. Messrs. Bost, Roe, McKee.
165. ORGANIC COMBUSTIONS (3). Prerequisite, Chemistry 163.
Six laboratory hours a week, spring quarter. Laboratory fee, \$10.00. Messrs. Bost, Roe.
- 166a, 167a, 168a. ADVANCED ORGANIC CHEMISTRY I (3 each). Prerequisite or corequisite, Chemistry 163.
Three hours a week, fall, winter, and spring quarters. Messrs. Bost, Roe.
- 166b, 167b, 168b. ADVANCED ORGANIC CHEMISTRY II (3 each). Prerequisite or corequisite, Chemistry 163.
Three hours a week, fall, winter, and spring quarters. Messrs. Bost, Roe.
- 166c, 167c, 168c. ADVANCED ORGANIC PREPARATIONS (3 each). Prerequisite or corequisite, Chemistry 163.
Six laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, \$10.00 a quarter. Messrs. Bost, Roe.
- 181, 182, 183. PHYSICAL CHEMISTRY (6 each). Prerequisites, Chemistry 31, 41, 42; prerequisites or corequisites, Chemistry 61, 62, 63; prerequisite, satisfactory work in physics and in integral and differential calculus.
Three lecture and six laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, \$10.00 a quarter. Messrs. Crockford, Rice, Morrow.
- 184, 185, 186. CHEMICAL THERMODYNAMICS (3 each). Prerequisites, Chemistry, 181, 182, 183.
(1950-1951 and alternate years.) Three hours a week, fall, winter, and spring quarters. Messrs. Crockford, Rice, Morrow.
- 187, 188, 189. ADVANCED PHYSICAL CHEMISTRY (3 each). Prerequisites, Chemistry 181, 182, 183.
Three hours a week, fall, winter, and spring quarters. Mr. Crockford.
- 191, 192, 193. INDUSTRIAL CHEMISTRY (3 each). Prerequisites, Chemistry 61, 62, 63.
Three hours a week, fall, winter, and spring quarters. Mr. Walter.

Courses for Graduates

231. DETECTION OF POISONS (6). Prerequisites, Chemistry 31, 42, 61, 62, 63. (1951-1952 and alternate years.) *Three lecture and six laboratory hours a week, spring quarter. Laboratory fee, \$10.00.* Mr. Dobbins.

241, 242, 243. SEMINAR IN ANALYTICAL CHEMISTRY (3 each). Prerequisite or corequisite, Chemistry 143. (1950-1951 and alternate years.) *Three hours a week, fall, winter, and spring quarters.* Mr. Dobbins.

244, 245, 246. SPECIAL TOPICS IN ANALYTICAL CHEMISTRY (3 each). Prerequisites, Chemistry 143, 183. (1951-1952 and alternate years.) *Three hours a week, fall, winter, and spring quarters.* Messrs. Markham, Knight.

251. SEMINAR IN INORGANIC CHEMISTRY (3). Prerequisite, Chemistry 151. *Three hours a week, fall quarter.* Mr. Edmister.

258, 259. HISTORY OF CHEMISTRY (3 each). Prerequisites, Chemistry 31, 61, 62. *Three hours a week, winter and spring quarters.* Mr. Edmister.

261, 262, 263. SYNTHETIC ORGANIC COMPOUNDS (3 each). Prerequisites, Chemistry 166a, 167a, 168a or Chemistry 166b, 167b, 168b. (1950-1951 and alternate years.) *Three hours, or equivalent, a week, fall, winter, and spring quarters.* Messrs. Bost, Roe.

264, 265, 266. SEMINAR IN ORGANIC CHEMISTRY (3 each). Prerequisites, Chemistry 166a, 167a, 168a or Chemistry 166b, 167b, 168b. (1951-1952 and alternate years.) *Three hours, or equivalent, a week, fall, winter, and spring quarters.* Messrs. Roe, McKee.

267. ORGANIC CHEMISTRY (3 to 6). Prerequisite, to be determined by consultation with professor in charge. *Three to six hours a week, every quarter. Laboratory fee, to be determined by consultation with professor in charge.* Messrs. Bost, Roe, McKee.

281. ATOMIC AND MOLECULAR CHEMISTRY (3). Prerequisites, Chemistry 181, 182, 183. *Three hours a week, fall quarter.* Mr. Rice.

282, 283. CHEMICAL BINDING AND VALENCE (3 each). Prerequisite, Chemistry 281. (1950-1951 and alternate years.) *Three hours a week, winter and spring quarters.* Mr. Rice.

284, 285. STATISTICAL PROBLEMS IN CHEMISTRY (3 each). Prerequisite, Chemistry 281. (1951-1952 and alternate years.) *Three hours a week, winter and spring quarters.* Mr. Rice.

286, 287, 288. SEMINAR IN PHYSICAL CHEMISTRY (3 each). Prerequisites, Chemistry 181, 182, 183. *Three hours a week, fall, winter, and spring quarters.* Messrs. Crockford, Rice.

RESEARCH COURSES.

Laboratory fee, \$10.00 a course.

341. ANALYTICAL CHEMISTRY (6).

Messrs. Dobbins, Markham, Knight.

351. INORGANIC CHEMISTRY (6).

Messrs. Edmister, Tyree.

361. ORGANIC CHEMISTRY (6).

Messrs. Bost, Roe, McKee.

381. PHYSICAL CHEMISTRY (6).

Messrs. Crockford, Rice, Morrow.

DEPARTMENT OF CITY AND REGIONAL PLANNING

Professors: J. A. PARKER, G. W. BLACKWELL, N. J. DEMERATH, J. W. FESLER

Associate Professors: F. S. CHAPIN, JR., J. M. WEBB

Assistant Professor: M. L. GRANSTROM

The work offered in the Department of City and Regional Planning leads to the degree of Master of Regional Planning. The normal course includes five quarters of residence study, an additional quarter of internship, and a thesis.

The following courses are required of all students enrolled in the department: Planning 127, 161, 167 or 215, 170 or 191, 209, 220, 221, 222, 223, 224, 230, 235, 240, 310, and 320. In addition to these requirements four electives are selected from one of the three departments of Economics, Political Science, or Sociology. Lists of courses approved for this curriculum in the three departments will be found on pages 237-38.

Each applicant is required to submit a transcript of his undergraduate record and to take a comprehensive aptitude test, the specific form of which is prescribed by the Graduate School in consultation with the department. Undergraduates who expect at a later time to take up the professional study of city and regional planning are advised to specialize in one of the following disciplines during the period of undergraduate training: architecture, economics, engineering, geography, history, landscape architecture, political science, or sociology. Courses in surveying and mechanical drawing, while not prerequisites, are recommended as valuable aids to students in the planning field.

Undergraduates who contemplate entering the department upon graduation are urged to consult with the department with regard to the planning of their undergraduate program.

Courses for Graduates and Advanced Undergraduates

127. TRANSPORTATION FACILITIES (3).

Highway systems and highway design and construction, traffic surveys and traffic control, airports, railroads, and rapid transit.

Three hours a week, winter quarter. Messrs. Hickerson and Webb.

161. THE PRINCIPLES OF SANITATION (Public Health 161) (4).

The course is designed to teach the theory of sanitation and how the environment is shaped to prevent disease and promote man's well-being. A series of practical study problems is worked out by the student to achieve a progressively broadening comprehension of engineering techniques and of the administrative policy of the environmental control of disease. Field trips to water treatment, sewage treatment, and milk pasteurization plants are made.

Three lecture and two laboratory hours a week, fall quarter. Messrs. Chanlett and Granstrom.

167. HOUSING AND COMMUNITY DEVELOPMENT (Sociology 167) (5).

An analysis of housing as a factor in social problems, health, general community well-being, and urban and rural community planning and redevelopment. Consideration of related housing problems of consumer needs, production, and distribution. The contributions of specialists in sociology, land economics, public administration, and architecture are studied in relation to these matters. Field trips are arranged from time to time.

Fall quarter. Mr. Demerath.

170. ECONOMIC STATISTICS (Economics 170) (6). Prerequisites, Mathematics 7, 9, Economics 31-32 or equivalent.

This course provides training in the important process of statistical technique used by economists and business men. Topics covered include methods of sampling, collection of data, tabular and graphic presentation, frequency distributions, tests of significance, analysis of time series, and simple correlation.

Four lecture and four laboratory hours a week, every quarter. Laboratory fee, \$3.00. Mr. Cowden.

191. SOCIAL STATISTICS (Sociology 191) (5).

The topics usually covered in an elementary statistics course are treated with emphasis on those best adapted to sociological research. With laboratory materials of a sociological nature, the student in learning the processes of statistical analysis may become familiar with sources, interpretation, and presentation of social data.

Four lecture and four laboratory hours a week, winter quarter. Laboratory fee, \$2.00. Mr. Price.

Courses for Graduates

209. PLANNING AND GOVERNMENT (Political Science 209) (5).

This course is concerned with the evolution of planning in the United States, the activities of planning agencies, planning problems at various levels of American government, and planning activities in other countries. Special emphasis is given to planning as a governmental process.

Fall quarter. Mr. Fesler.

215. THEORY OF PLANNING DESIGN (5).

Study and analysis of design theory as applied to problems of site selection and project development.

Five hours a week, fall quarter. Mr. Parker.

220. PRINCIPLES OF PLANNING DESIGN (5).

An introduction to the principles of site development and construction. The work includes the design and development of land areas. Instruction is given in grading, drainage, and road layout.

Fall quarter. Messrs. Webb, Granstrom.

221. URBAN PLANNING RESEARCH (5).

Students collaborate on the preparation of a research study and plan for a new community. The process of study includes analysis of probable social, economic, and physical requirements, selection of the site, and development of the physical plan.

Winter quarter. Mr. Webb.

222. URBAN PLANNING PRACTICE (5).

The study of an existing community. The student conducts a survey of existing social, economic, and physical conditions, determines the needs of the area in terms of physical development, formulates proposals for alternative solutions of problems, and prepares a program for the encouragement of citizen participation and governmental support for planning.

Spring quarter. Messrs. Webb, Parker, Chapin, and representatives of several departments.

223. ADVANCED PLANNING DESIGN (5). Prerequisite, Planning 220.

Studies of specific problems and areas in urban centers such as residential, commercial or industrial slums, outlying and central business areas, industrial improvement districts, etc. Areas are selected and studied in the field; essential social, economic, and physical characteristics and plan requirements are determined; and a redevelopment or improvement program is developed on the basis of the student's design.

Winter quarter. Mr. Chapin.

224. STATE AND REGIONAL PLANNING (5).

Research on and analysis of state and regional problems and planning.

Winter quarter. Mr. Blackwell.

230. PLANNING LEGISLATION AND ADMINISTRATION (3).

Enabling legislation for planning; urban, rural, and county zoning; subdivision and other land use controls; urban redevelopment law; housing legislation; and limited access highway legislation.

Three hours a week, winter quarter. Institute of Government.

235. URBAN PLANNING METHODS AND TECHNIQUES (3).

Analysis and evaluation of methods and techniques employed in developing a comprehensive plan for an urban area.

Three hours a week, spring quarter. Mr. Chapin.

240. PLANNING INTERNSHIP (5). Prerequisite, six required courses in the City and Regional Planning curriculum.

One quarter's work in an approved planning office or agency under competent supervision. During this period the student is required to submit monthly reports to the head of the department.

Any quarter. Mr. Parker.

310. PLANNING RESEARCH SEMINAR (3).

Field research and study on selected planning problems under special guidance of a member of the staff.

Any quarter. Professors in the Department of City and Regional Planning.

320. THESIS (5).

Study and presentation of a planning project selected by the student and approved by the department. Credit is given for this course upon acceptance of the thesis.

Any quarter. Professors in the Department of City and Regional Planning.

Approved Courses from Which the Four Departmental Electives May Be Selected

Department of Economics

- 111. Resources and Technics
- 124. Principles of Marketing
- 131. Economic Theory
- 135. Economic History
- 141. Public Finance
- 143. Problems in State and Local Finance
- 151. Transportation
- 153. Public Utilities
- 168. Sales and Market Analysis
- 179. Governmental Accounting
- 399. Seminar

Department of Political Science

- 101. Public Administration
- 132. Municipal Government in the United States
- 133. Municipal Administration in the United States
- 181. Recent National Policy and Administration
- 191. Public Finance
- 193. Problems in State and Local Finance
- 210. Public Administration of Resources
- 225. Administrative Organization and Management
- 331. Problems in Public Administration
- 341. Seminar Course

Department of Sociology

- 110. Rural Land Planning and Land Economics
- 153. Social Structure
- 154. Contemporary Society
- 168. The City
- 169. The Industrial Community
- 173. Community Recreation
- 174. Community Organization
- 181. Regional Sociology of the South

186. Population
 197. Population Statistics
 218. Human Ecology
 301, 302, 303. Graduate Research Seminar

DEPARTMENT OF CLASSICS

Professors: B. L. ULLMAN, J. P. HARLAND, P. H. EPPS, WALTER ALLEN, JR.

Associate Professor: A. I. SUSKIN

Part-time Instructors: B. B. GILLELAND, H. H. HARPER, JR., H. W.

TRAUB, R. E. WOLVERTON, J. W. ZARKER

Teaching Fellow: ANNA L. MOTTO

Graduate Assistant: ANN B. FLEMING

GREEK

Students interested in having their undergraduate major in Greek should consult the department in the last quarter of their sophomore year. Six courses are required in addition to Greek 4. For Greek as satisfying the language requirements for the A.B. degree see p. 136.

Courses for Undergraduates

1-2. ELEMENTARY GREEK (5 each).

Fall and winter quarters. Mr. Epps.

NOTE: Two quarters of Greek or Latin or mathematics must be taken by each candidate for the degree of A.B.

*3-4. INTERMEDIATE GREEK (5 each).

Spring and fall quarters. Mr. Epps.

NOTE: Majors in religion may substitute 3N (Elementary New Testament).

14. ELEMENTARY GREEK FOR GRADUATE STUDENTS (No credit).

Spring quarter. Mr. Epps.

*21-22. ADVANCED GREEK (5 each). Prerequisite, Greek 4 or equivalent.

Winter and spring quarters. Mr. Epps.

NOTE: Students so desiring may substitute Greek 88 for Greek 21 or 22.

80. HOMER, ILIAD (5). Prerequisite, Greek 22 or equivalent.

One quarter. Mr. Epps.

82. PLATO (5). Prerequisite, Greek 22 or equivalent.

One quarter. Mr. Epps.

88. GREEK NEW TESTAMENT (5). Prerequisite, Greek 4 or equivalent.

Winter quarter. Mr. Epps.

*Either of these courses may be taken separately for elective credit.

Courses for Graduates and Advanced Undergraduates

112. HOMER, ODYSSEY (5). Prerequisite, Greek 22 or equivalent.
One quarter. Mr. Epps.
153. GREEK TRAGEDY (in Greek) (5). Prerequisite, Greek 22 or equivalent.
Spring quarter. Mr. Epps.
154. GREEK COMEDY (in Greek) (5). Prerequisite, Greek 22 or equivalent.
One quarter. Mr. Epps.
158. GREEK NEW TESTAMENT (5). Prerequisite, Greek 22.
Winter quarter. Mr. Epps.
171. GREEK HISTORIANS (5). Prerequisite, Greek 22 or equivalent.
Spring quarter. Mr. Epps.
181. GREEK ORATORS (5). Prerequisite, Greek 22 or equivalent.
One quarter. Mr. Epps.
182. PLATO (5). Prerequisite, Greek 22 or equivalent.
Fall quarter. Mr. Epps.

For additional courses see below under Courses Requiring No Knowledge of the Greek or Latin Language and under Comparative Literature. Attention is called also to courses in the Department of Comparative Linguistics.

LATIN

Students interested in having their undergraduate major in Latin should consult the department in the last quarter of their sophomore year. Six courses are required in addition to Latin 22. For Latin as satisfying the language requirements for the A.B. degree see p. 136.

Courses for Undergraduates

1-2. ELEMENTARY LATIN (5 each).

1: *Fall, winter, and spring quarters.* 2: *Fall, winter, and spring quarters.* Messrs. Gilleland, Harper, Traub, Wolverton, Zarker, Miss Motto.

NOTE: Two quarters of Greek or Latin or mathematics must be taken by each candidate for the degree of A.B.

*3-4. INTERMEDIATE LATIN (5 each).

Freshman and sophomore elective.

3: *Fall, winter, and spring quarters.* 4: *Fall, winter, and spring quarters.* Messrs. Allen, Harper, Suskin, Wolverton.

NOTE: Two quarters of Greek or Latin or mathematics must be taken by each candidate for the degree of A.B.

14. RAPID READING IN LATIN (5).

May be taken with or without credit by those who wish to refresh their ability to read Latin prose. Class needs will determine selection of authors.

One quarter. Mr. Allen.

*Either of these courses may be taken separately for elective credit.

21-22. ADVANCED LATIN (5 each). Prerequisite, three or four units of high school Latin, or Latin 3-4.

Freshman and sophomore elective.

Selections from Latin prose, chiefly Livy and Horace.

21: *Fall and spring quarters*. 22: *Winter quarter*. Messrs. Allen, Suskin.

51. CICERO'S LETTERS (5). Prerequisite, Latin 22.

Fall quarter. Mr. Allen.

52. ROMAN SATIRE (5). Prerequisite, Latin 22.

Winter quarter. Mr. Suskin.

53. LATIN LYRIC POETRY (5). Prerequisite, Latin 22.

Spring quarter. Mr. Suskin.

71. COURSE FOR TEACHERS (5). Prerequisite, Latin 22.

On application. Mr. Ullman.

NOTE: Courses in Directed Teaching of High School Latin and in Materials and Methods of Teaching High School Latin will be found under the School of Education.

Courses for Graduates and Advanced Undergraduates

101. ROMAN HISTORICAL LITERATURE, TACITUS (5). Prerequisite, Latin 22.

One quarter. Mr. Allen.

102. ROMAN DRAMATIC LITERATURE, PLAUTUS AND TERENCE (5). Prerequisite, Latin 22.

Fall quarter. Mr. Ullman.

103. PROSE WRITINGS OF THE REPUBLIC (5). Prerequisite, Latin 22.

One quarter. Mr. Suskin.

104. CICERO: POLITICAL CAREER AND WORKS (5). Prerequisite, Latin 22.

The course will deal with Cicero's *Letters* or *Orations*, as determined by the needs of the class.

One quarter. Mr. Allen.

105. THE SATIRES OF JUVENAL (5). Prerequisite, Latin 22.

One quarter. Mr. Ullman.

106. LUCRETIUS (5). Prerequisite, Latin 22.

One quarter. Mr. Ullman.

107. LATIN COMPOSITION (5). Prerequisite, Latin 22.

Winter quarter. Mr. Allen.

108. MARTIAL (5). Prerequisite, Latin 22.

One quarter. Mr. Ullman.

109. CICERO: PHILOSOPHICAL WORKS (5). Prerequisite, Latin 22.

Spring quarter. Mr. Ullman.

110. MEDIEVAL LATIN (5). Prerequisite, Latin 22.

Reading of selections from representative writers in prose and poetry.

Winter quarter. Mr. Ullman.

112. ROMAN ELEGY (5). Prerequisite, Latin 22.

One quarter. Mr. Ullman.

113. LIVY (5). Prerequisite, Latin 22.

One quarter. Mr. Suskin.

117. VIRGIL (5). Prerequisite, Latin 22.

One quarter. Mr. Ullman.

121. PETRONIUS (5).

The relation of Petronius to satire and to development of the novel; introduction to Vulgar Latin.

One quarter. Mr. Ullman.

131. LATIN WRITERS OF THE ITALIAN RENAISSANCE (5). Prerequisite, Latin 22.

Reading of selections beginning with Petrarch, with some consideration of the origin of the Renaissance.

Fall quarter. Mr. Ullman.

Courses for Graduates

202. LATIN EPIGRAPHY (5).

One quarter. Mr. Ullman.

203. LATIN PALEOGRAPHY (5).

One quarter. Mr. Ullman.

301-302-303. LATIN SEMINAR (5 each).

Fall, winter, and spring quarters. Mr. Ullman.

310. THESIS COURSE (5).

Any quarter. Mr. Ullman.

CLASSICS IN ENGLISH

(Courses Requiring No Knowledge of the Greek or Latin Language)

The following courses in classical literature and civilization are especially designed to supply the necessary foundation for those who, without a reading knowledge of the ancient languages, wish a broader culture, or plan to specialize in modern literature, history, art, etc. When properly approved, they will be allowed to count as part of the major requirement in other departments. They may be taken also to satisfy the requirements of a minor in literature. Courses 61 and 62 may be substituted for English 3 and 4 by students taking a modern foreign language. See also under Comparative Literature.

Courses for Undergraduates

61. GREEK LITERATURE (5).

A survey of the major authors and their contributions to modern thought and literary forms.

Fall and spring quarters. Messrs. Epps and Allen.

62. LATIN LITERATURE (5).

A survey of the major authors and their contributions to modern thought and literary forms.

Winter quarter. Mr. Suskin.

75. GREEK CIVILIZATION (5).

The achievements of the ancient Greeks and their contributions to the modern world in art, architecture, medicine, science, politics, education, theater, religion, etc.

Winter quarter. Mr. Harland.

76. ROMAN CIVILIZATION (5).

Roman public and private life, manners, and ideals; buildings, living conditions, commerce, religion, government, art, etc.

Spring quarter. Mr. Allen.

77. GREEK MYTHOLOGY (5).

An introduction to mythology, followed by a study of the various cycles of myths which developed in ancient Greece. Illustrations from sculpture and vase-paintings.

One quarter. Mr. Harland.

85. ARCHAEOLOGY AND THE BIBLE (5).

Biblical history in the light of excavations in Palestine and the ancient Near East. The art and civilization of the peoples of the Old Testament.

Fall quarter. Mr. Harland.

91. ARCHAEOLOGY OF THE NEAR EAST (5).

The art and architecture of Egypt, Mesopotamia, and the rest of the ancient Near East.

Fall quarter. Mr. Harland.

92. GREEK ARCHAEOLOGY (5).

The historical development of the art of Greece from the Bronze Age through the historical period. Greek architecture, painting, and the other arts.

Winter quarter. Mr. Harland.

93. GREEK SCULPTURE (5).

The development of Greek sculpture as one phase of the civilization of the ancient Hellenes.

Spring quarter. Mr. Harland.

95. ANCIENT ARCHITECTURE (5).

The architecture of Egypt, Mesopotamia, Greece, and Rome, with emphasis on the contributions made by these lands to modern architecture.

Spring quarter. Mr. Harland.

97. ROMAN ART (5).

The arts of Rome, particularly architecture, sculpture, and painting, preceded by a survey of Etruscan and Hellenic art and their influence on Rome.

Spring quarter. Mr. Harland.

Courses for Graduates and Advanced Undergraduates

103. GREEK AND ROMAN EPIC (5).

Reading of the ancient epics, with emphasis on Homer and Virgil. Structure of the poems, history of epic as a literary form, the poems as expressions of the spirit of their ages.

Spring quarter. Mr. Allen.

107. GREEK DRAMATIC LITERATURE (5).

Reading of about fifteen Greek plays. Origin and growth of the Greek theatre and drama; Aristotle's Poetics; literary quality of the plays; religious, social, and political ideas of the fifth century B. C.

Fall quarter. Mr. Allen.

109. GREEK AND ROMAN HISTORICAL LITERATURE (History 109) (5).

The study in English translation of selections from Herodotus, Thucydides, Livy, Tacitus, and others, with consideration of their literary qualities and their reliability as historians.

Winter quarter. Mr. Allen.

114. GREEK AND ROMAN COMEDY (5).

One quarter. Messrs. Epps, Allen.

176. ROMAN CIVILIZATION (5).

One quarter. Mr. Allen.

193. HELLENIC ART (5). Prerequisite, Archaeology 92 or 93, or Greek 75, or Greek history.

One quarter, on application. Mr. Harland.

195. THE AEGEAN CIVILIZATION (5). Prerequisite, Archaeology 91, or ancient history.

One quarter, on application. Mr. Harland.

CURRICULUM IN COMPARATIVE LINGUISTICS

DEAN W. W. PIERSON, *Chairman*

Professors: G. S. LANE, *Secretary*, U. T. HOLMES, N. E. ELIASON, R. W. LINKER, J. E. KELLER

This curriculum intends to organize the facilities for the study of comparative linguistics which are already offered by the various departments of the University in the form of historical and comparative grammar courses; and, in addition, it fills certain gaps which would otherwise obviously present themselves to a graduate student who might desire to devote himself seriously to any particular branch of Indo-European linguistics. Under special circumstances, after consultation with the secretary of the curriculum, an undergraduate major is allowed.

Students with an undergraduate major in any department of language and literature are eligible to take work in this curriculum with a view to becoming candidates for higher degrees. A reading knowledge of French and German and one classical language is required of candidates for higher degrees in comparative linguistics. From both a cultural and practical viewpoint, it is advisable that a student should not detach his linguistic studies too completely from those in literature.

The curriculum draws upon the library facilities, as well as the faculties, of the departments in language of the University. These include the essential handbooks, monographs, and linguistic periodicals of the special fields. In addition, through recent appropriations for linguistics, fundamental works in Sanskrit, Slavic, and the more general aspects of Indo-European comparative grammar have been acquired.

Attention is called to courses in paleography and epigraphy in the Department of Classics for which credit in linguistics may be given under particular circumstances.

General

101. INTRODUCTION TO THE STUDY OF LANGUAGE (5). Prerequisites, one classical language and one modern language.

Spring quarter. Mr. Lane.

103. THE INDO-EUROPEANS (5).

One quarter, on demand. Mr. Lane.

105. CELTIC: OLD IRISH (5). See under Romance Languages (French).

Winter quarter. Mr. Holmes.

106. CELTIC: WELSH (5).

One quarter, on demand. Mr. Holmes.

111, 112, 113. SANSKRIT (5 each).

(1950-1951 and alternate years.) *Fall, winter, and spring quarters.* Mr. Lane.

201, 202, 203. ADVANCED SANSKRIT (5 each).

Through the year, on demand. Mr. Lane.

204. COMPARATIVE GRAMMAR OF GREEK AND LATIN (5).

(1951-1952 and alternate years.) *Five hours a week, winter quarter.* Mr. Lane.

206. LITHUANIAN (5).

Winter quarter, 1951. Mr. Lane.

207. CHURCH SLAVIC (5).

Spring quarter, on demand. Mr. Lane.

361, 362, 363. SEMINAR IN LINGUISTICS (5 each).

Through the year. Staff.

English Linguistics

101. OLD ENGLISH GRAMMAR AND READING (5).

Fall quarter. Mr. Eliason.

201. BEOWULF (5).

Winter quarter. Mr. Eliason.

202. MIDDLE ENGLISH (5).

Spring quarter. Mr. Coffman (of the Department of English).

204. HISTORY OF THE ENGLISH LANGUAGE (5). Prerequisite, English 101 or permission of the instructor.
Spring quarter. Mr. Eliason.

Germanic Linguistics

161. HISTORY OF THE GERMAN LANGUAGE (German 161) (5).
Fall quarter, on demand. Mr. Lane.
221. GOTHIC (German 221) (5).
Fall quarter. Mr. Lane.
222. OLD HIGH GERMAN (German 222) (5).
Winter quarter. Mr. Lane.
223. COMPARATIVE GERMANIC GRAMMAR (German 223) (5).
Spring quarter, on demand. Mr. Lane.
232. OLD SAXON (German 232) (5).
One quarter, on demand. Mr. Lane.
- 233, 234. OLD NORSE (German 233, 234) (5 each).
Two quarters, on demand. Mr. Lane.
- 235, 236. MIDDLE HIGH GERMAN (German 235, 236) (5 each).
Two quarters, on demand. Mr. Jente.

Romance Linguistics

126. HISTORY OF THE FRENCH LANGUAGE (5). Prerequisite, French 72.
Winter quarter. Messrs. Holmes, Linker.
220. VULGAR LATIN (5).
Five hours a week, spring quarter. Mr. Holmes.
- 221, 222, 223. OLD FRENCH (5 each).
Fall, winter, and spring quarters. Mr. Holmes.
225. PROVENÇAL (5).
Spring quarter. Mr. Holmes.
221. OLD ITALIAN (5).
Fall quarter. Mr. Holmes.
- 221, 222. OLD SPANISH (5 each).
Fall and winter quarters. Mr. Keller.
221. OLD PORTUGUESE (5).
Fall quarter. Mr. Holmes.
370. MINOR ROMANCE TONGUES (5).
Five hours a week, spring quarter, on demand. Mr. Holmes.

DEPARTMENT OF COMPARATIVE LITERATURE

Professors: H. R. HUSE, *Acting Chairman*, G. R. COFFMAN, U. T. HOLMES, JR., C. P. LYONS, A. P. HUDSON, A. C. HOWELL, *R. P. BOND, S. A. STOUDEMIRE, W. L. WILEY, P. H. EPPS, W. P. FRIEDERICH, WALTER ALLEN, JR.

Associate Professors: R. W. LINKER, A. I. SUSKIN, KAI JURGENSEN

An undergraduate major in the department consists normally of six to eight courses, two of which must be in the classics. Students are encouraged to substitute courses in the original languages whenever possible.

Literature in English Translation

Courses for Undergraduates

61. GREEK LITERATURE (5).

A survey of the major authors and their contributions to modern thought and literary forms.

Fall and spring quarters. Messrs. Epps, Allen.

62. LATIN LITERATURE (5).

A survey of the major authors and their contributions to modern thought and literary forms.

Winter quarter. Mr. Suskin.

65. ORIENTAL LITERATURE (5).

A rapid survey of interesting features in the literature, language, and civilization of China, Japan, India, and Arabia.

Spring quarter. Mr. Holmes.

87. LITERARY ASPECTS OF THE BIBLE (Religion 87) (5).

The Old and New Testaments will be taken up in alternate years.

Spring quarter. Mr. Howell.

Courses for Graduates and Advanced Undergraduates

117. CERVANTES (5).

A study of Cervantes' *Don Quixote* and the *Exemplary Novels*.

Winter quarter. Mr. Stoudemire.

135. FRENCH CLASSICISM (5).

A survey of the origins of classicism in France. The plays of Corneille, Molière, Racine, and their contemporaries. The decline of classicism.

Spring quarter. Mr. Wiley.

137. SURVEY OF GERMAN LITERATURE (5).

German literature of the past 1000 years, with special emphasis on the periods around 1200, 1800, and 1920.

Fall quarter. Mr. Friederich.

*Absent on leave, 1950-1951.

155. GOETHE (5).

Goethe's life and works placed against a background of European classicism and romanticism.

Spring quarter. Mr. Friederich.

156. DANTE (5).

The beginnings of Italian literature. The *Vita Nuova* and *The Divine Comedy*.

Winter quarter. Mr. Huse.

Comparative Courses

Courses for Graduates and Advanced Undergraduates

103. GREEK AND ROMAN EPIC (5).

Reading of the ancient epics with emphasis on Homer and Virgil. Structure of the poems, history of the epic as a literary form, the poems as expressions of the spirit of their ages.

Spring quarter. Mr. Allen.

107. GREEK DRAMATIC LITERATURE (5).

Reading of about fifteen Greek plays. Origin and growth of the Greek theater and drama; Aristotle's *Poetics*; literary quality of the plays; religious, social, and political ideas of the fifth century B. C.

Fall quarter. Mr. Allen.

109. GREEK AND ROMAN HISTORICAL LITERATURE (5).

The study in English translation of selections from Herodotus, Thucydides, Livy, Tacitus, and others, with consideration of their literary qualities and their reliability as historians.

Winter quarter. Mr. Allen.

162. MODERN CONTINENTAL DRAMA (5).

A study of representative plays of the modern period from Ibsen to Giraudoux.

Winter quarter. Mr. Jurgensen.

163. LITERARY CRITICISM (5).

The principles which have animated classical, romantic, and realistic literature. (Not offered in 1950-1951.)

Fall quarter. Mr. Bond or Mr. Lyons.

170. THE MIDDLE AGES (5).

A survey of Medieval France, England, Germany, Spain, Italy, and Byzantium, from the viewpoints of civilization, art, and literature.

Spring quarter. Mr. Linker.

173. MEDIEVAL ROMANCE (5).

A survey of romance materials in English literature, with particular attention to the Arthurian tradition.

(Not offered in 1950-1951.) Mr. Coffman.

175. RENAISSANCE AND BAROQUE. (5).

The period from Dante to Calderon with special emphasis on Italian and Spanish contributions.

Winter quarter. Mr. Friederich.

177. CLASSICISM AND PRE-ROMANTICISM (5).

The period from the French school of 1660 to the German *Sturm und Drang*, with special emphasis on French and English contributions.

Spring quarter. Mr. Friederich.

185. INTRODUCTION TO FOLKLORE (5).

Definitions and examples of folklore in general and its various categories. Collection, classification, study, and analysis of folklore materials. Bibliography.

Fall quarter. Mr. Hudson.

201. PROBLEMS AND METHODS IN COMPARATIVE LITERATURE (5).

The growth of comparative scholarship since 1800. Bibliography, Thematology, Influences, Parallelisms, *Zeitgeist*, and other modes of investigation.

Fall quarter. Mr. Friederich.

DEPARTMENT OF DRAMATIC ART

Professors: SAMUEL SELDEN, R. B. SHARPE, EARL WYNN, H. E. DAVIS,
J. W. PARKER

Associate Professor: KAI JURGENSEN

Assistant Professors: R. L. GAULT, *FOSTER FITZ-SIMONS, ROBERT
SCHENKKAN, EDWARD FREED, A. V. BRISKIN, T. M. PATTERSON, RHODA
HUNTER

Instructors: IRENE SMART, J. E. YOUNG

Visiting Lecturer: W. L. MACILWINEN

Assistants: E. C. FITZPATRICK, JR., SARA STEWART, G. L. HONAKER, C.
A. KELLOGG, G. W. MCKINNEY, N. S. WHITE, JR.

Admission to the Department of Dramatic Art presupposes the completion of the work of the General College in this institution or of equivalent work done elsewhere.

The courses in the Department of Dramatic Art are designed to give the student a comprehensive knowledge of the literature of the drama and intensive training in all phases of theatre work, from the writing of the play to the complete presentation before an audience.

Intensive study and research in all phases of dramatic art are made effective through introductory and advanced lecture courses, the seminar, and supervised practice work in theatre technique. The library resources for the student of dramatic literature and of the history of the theatre include a large and constantly increasing collection of critical and technical works and plays of all periods.

Practical training for the student of playwriting, acting, directing, and technical work is provided by the production unit of the Department of Dramatic Art, The Carolina Playmakers. The Playmakers Theatre building, the Koch Memorial Forest Theatre, and the scene shop furnish ample opportunity for the student to test theory with practice, in both experimental and major performances.

*Absent on leave, 1950-1951.

Requirements for a Major: A student choosing dramatic art as his major field should take a minimum of eighteen full courses distributed as follows:

Seven to ten courses in dramatic art:

One course in Voice Training (40).

One course in Technical Laboratory (69).

One course in Shakespeare in the Theatre (150).

At least two courses in dramatic literature from: History of the Theatre (160), Continental Drama before Ibsen (161), Modern Continental Drama (162), British and American Drama of the Twentieth Century (164).

At least two courses in theatre arts from: 57, 61, 63, 64, 65, 66, 67, 70, 71, 74, 75, 85, 90, 155, 156, 157, and 193.

Four to seven courses in allied departments of the Division of the Humanities, to be taken after conference with the departmental adviser.

Four to seven courses from other divisions.

Students interested in reading for honors in drama should consult the regulations governing the honors program of the Division of the Humanities.

Students who plan to take graduate work must include in their undergraduate program one course in playwriting and one in acting. Those who intend to take the advanced course in Staging Methods (202) should see the prerequisites for that course.

Courses for Undergraduates

40. VOICE TRAINING (English 40) (5). Open to dramatic art majors only.

Improvement of the voice as a speaking and reading instrument and the study and application of a true American diction.

Three lecture and four laboratory hours a week, winter quarter. Fee for materials, \$1.50. Mr. Wynn.

50. DIRECTED READINGS (5). Only for graduate transfer students needing to make up undergraduate deficiencies in the department.

Assigned readings in a selected field of dramatic literature.

Mr. Jurgensen.

57. THE DANCE (5). Open for credit to dramatic art majors only.

A study of the cultural development of the Dance and its relation to the other arts from the beginning to the present time, with practical training in fundamental techniques.

Two lecture and six laboratory hours a week, fall or winter quarter. Fee for materials, \$3.00. Messrs. Fitz-Simons, MacIlwinen.

61. ACTING (5). Registration is limited to twenty.

A study of fundamental principles and practice for the actor.

Fall or winter quarter. Fee for materials, \$2.00. Messrs. Fitz-Simons, MacIlwinen.

63. PLAY DIRECTION (5). Prerequisite, Dramatic Art 61.

Registration is limited. Before registering for this course, students must secure the permission of Professor Fitz-Simons. Students training for teaching who wish to

take this course to complete a minor program in dramatic art should consult their advisers. (A student cannot receive degree credit for both this course and Dramatic Art 193.)

The theory and practice of play directing.

Spring quarter. Fee for materials, \$2.00. Messrs. Fitz-Simons, MacIlwinen.

***64. SCENERY CONSTRUCTION AND PAINTING (5).**

Elementary theory and practice in the construction and painting of scenery for the stage.

Three lecture and four laboratory hours a week, fall quarter. Fee for materials, \$2.00. Mr. Davis.

***65. STAGE LIGHTING (5).**

Elementary theory and practice in stage lighting, including the choice of equipment and its control in the theatre.

Three lecture and four laboratory hours a week, winter quarter. Fee for materials, \$2.00. Mr. Davis.

***66. STAGE DESIGN (5).** Prerequisite, Dramatic Art 64.

The history of, and elementary theory and practice in, the designing of scenery for the stage, through the preliminary sketch, the model, and the working drawings.

Spring quarter. Fee for materials, \$2.00. Mr. Gault.

***67. COSTUMING (5).**

The designing and making of stage costumes with some consideration of make-up.

One lecture and eight laboratory hours a week, spring quarter. Fee for materials, \$2.00. Mrs. Smart.

***69. TECHNICAL LABORATORY (5).**

Required of all majors in the Department of Dramatic Art, and limited to them. Practical technical work on the stage and in the scene and costume shops.

One lecture and eight laboratory hours a week, fall or winter or spring quarter. Messrs. Davis and Gault and Mrs. Smart.

70. INTRODUCTION TO RADIO (Radio 70) (5).

A survey course covering the organization and operation of stations and networks, participating organizations, the audience, the program, the servicing of programs, and broadcasting to schools.

Fall or winter quarter. Miss Hunter and guest lecturers.

70A. INTRODUCTION TO RADIO (Radio 70A) Laboratory (1). Open to dramatic art and radio majors only.

Small group instruction in the use of the basic radio equipment.

Fall or winter quarter. Fee for materials, \$2.00. Mr. Young.

71. SPEAKING AND ACTING FOR THE MICROPHONE (Radio 71) (5). Prerequisite, Dramatic Art 70A. Open to dramatic art, radio and journalism majors only.

An introduction to speaking and acting for an aural medium; lectures, discussion, and laboratories.

Three lecture and four laboratory hours a week, winter or spring quarter. Fee for materials, \$2.00. Mr. Wynn.

74. DRAMATIC SCRIPT-WRITING FOR RADIO (Radio 74) (5). Open to dramatic art, radio, and journalism majors only.

*Those enrolled will be expected to assist with the technical work in the productions of The Carolina Playmakers.

A study of some basic forms of radio unit drama, including dramatic-narrative and documentary drama, both original and in adaptation.

Winter or spring quarter. Mr. Schenckan.

75. RADIO PRODUCTION (Radio 75) (5). Open to dramatic art, radio, and journalism majors only. Prerequisite, Dramatic Art 70A or 71.

A study of the principles and methods of direction and production of talk, musical, and simple dramatic programs with emphasis on those basic principles which underlie all radio directing.

Four lecture and two laboratory hours a week, fall or spring quarter. Fee for materials, \$2.00. Mr. Young.

85. ELEMENTARY MOTION PICTURE PRODUCTION (Radio 85) (5).

Registration is limited to fifteen and restricted to dramatic art and radio majors. Before registering for this course, students must secure the permission of Professor Freed.

An elementary course dealing with the basic principles of writing, producing and directing the sound screen play.

Three lecture and four laboratory hours a week, fall quarter. Fee for materials, \$5.00. Mr. Freed.

86. MOTION PICTURE LABORATORY (Radio 86) (3). Prerequisite, Dramatic Art 85.

Registration is limited to fifteen and restricted to dramatic art and radio majors who have completed Dramatic Art 85 with distinction. Students must secure the permission of Professor Freed before registering.

This course is a laboratory continuation of Dramatic Art 85, designed for those students who have shown outstanding promise. It requires actual participation on the part of the student in writing and directing films produced by the Communication Center.

Six laboratory hours a week, winter quarter. Fee for materials, \$10.00. Mr. Freed.

90. ELEMENTARY TELEVISION WRITING AND PRODUCTION (Radio 90) (5). Prerequisites, Dramatic Art 70, 71, and 75.

Registration is limited to ten and restricted to senior dramatic art and radio majors. Students must secure the permission of Professor Wynn before registering.

This course surveys the Television industry and emphasizes specifically current and experimental methods of Television writing and production.

Three lecture and four laboratory hours a week, spring quarter. Fee for materials, \$10.00. Department of Radio staff.

Courses for Graduates and Advanced Undergraduates

150. SHAKESPEARE IN THE THEATRE (5).

A study of the literary and stage history of about twelve representative plays.

Winter quarter. Mr. Jurgensen.

155. PLAYWRITING AND EXPERIMENTAL PRODUCTION I (5).

A practical course in playwriting and the experimental production of stage plays.

Fall quarter. Fee for experimental production, \$3.00. Messrs. Patterson, Selden, Davis, Parker, Jurgensen.

156. PLAYWRITING AND EXPERIMENTAL PRODUCTION II (5).

The principles of dramatic construction and practice in the writing and production of one-act plays.

Winter quarter. Fee for experimental production, \$3.00. Messrs. Patterson, Selden, Parker, Jurgensen.

157. PLAYWRITING AND EXPERIMENTAL PRODUCTION III (5).

Practice in writing one-act and full-length plays for the stage with experimental and public productions.

Spring quarter. Fee for experimental production, \$3.00. Messrs. Patterson, Selden, Davis, Parker, Jurgensen.

160. HISTORY OF THE THEATRE (5).

A study of the development of the theatre, its place in the history of civilization and its changing relations to social conditions.

Spring quarter. Mr. Jurgensen.

161. CONTINENTAL DRAMA BEFORE IBSEN (5).

A general survey of the drama and the theatre from Aeschylus to Goethe.

Fall quarter. Mr. Jurgensen.

162. MODERN CONTINENTAL DRAMA (Comparative Literature 162) (5).

A study of representative plays of the modern period from Ibsen to Giraudoux.

Winter quarter. Mr. Jurgensen.

164. BRITISH AND AMERICAN DRAMA OF THE TWENTIETH CENTURY (English 164) (5).

A survey of dramatic movements and writers from 1900 to the present.

Spring quarter. Mr. Sharpe.

193. TEACHING DRAMATIC ART (5).

An intensive study of the theory and practice of play production and the organization of dramatic programs and courses, for high school teachers. (A student who has already taken Dramatic Art 63 cannot receive degree credit for this course.)

Spring quarter. Fee for materials, \$2.00. Mr. Parker.

Courses for Graduates

200. TECHNICAL DIRECTION (5). Prerequisites, Dramatic Art 64, 65, and 69, or equivalent training in technical practice.

Problems of the technical director in coordinating the engineering and mechanical aspects of production and theatre architecture.

Fall quarter. Fee for materials, \$2.00. Mr. Davis.

201. PLAY DIRECTING, ADVANCED (5). Prerequisites, Dramatic Art 61 and 63, or equivalent training in acting and directing.

Theory and practice in the training of actors and in directing.

Spring quarter. Fee for materials, \$3.00. Mr. Selden.

202. STAGING METHODS (5). Prerequisites, Dramatic Art 200 and a course in freehand drawing or equivalent experience.

The historical development of staging methods in the theatre; theory and practice in modern scenery and lighting design.

Winter quarter. Fee for materials, \$2.00. Mr. Davis.

203. TECHNICAL PROBLEMS IN PLAYWRITING (5). Prerequisite, Dramatic Art 155, 156 or 157.

An advanced course in the principles of writing the full-length play. A study of the organization of materials, the development of the scenario, and the preparation of the completed script.

Winter quarter. Mr. Patterson.

210. THEATRE ADMINISTRATION (5). Open to selected dramatic art majors only.

A study of practical problems of organization, management, and promotion, especially in the regional theatres.

Winter quarter. Mr. Parker.

299. THEATRE WORKSHOP (3 to 12 hours course credit, not toward a degree).

Open to a limited number of qualified students who have already secured a bachelor's or master's degree. Before registering for this course, students must have the special permission of the head of the department.

The staff of The Carolina Playmakers.

325. SEMINAR IN MODERN DRAMA (English 325) (5).

Research in dramatic literature, theatrical history, and staging methods.

Fall quarter. Messrs. Sharpe, Selden.

340. SPECIAL READINGS (5).

Research in a special field of modern drama or the history of the theatre. This course may not be repeated for credit. Mr. Selden.

DEPARTMENT OF ECONOMICS AND SCHOOL OF BUSINESS ADMINISTRATION

Professors: T. H. CARROLL, J. B. WOOSLEY, *D. D. CARROLL, E. E. PEACOCK, R. J. M. HOBBS, C. P. SPRUILL, G. T. SCHWENNING, CLARENCE HEER, H. D. WOLF, D. H. BUCHANAN, M. S. HEATH, D. J. COWDEN, R. S. WINSLOW, †J. M. LEAR, R. P. CALHOON, P. N. GUTHRIE, C. H. MCGREGOR, J. E. DYKSTRA, C. S. LOGSDON, O. T. MOUZON

Associate Professors: ‡C. C. CARTER, §F. J. KOTTKE, A. G. SADLER, C. A. KIRKPATRICK, J. C. D. BLAINE, G. A. BARRETT, J. T. O'NEIL, CLARENCE PHILBROOK, R. W. CRUTCHFIELD, L. D. ASHBY, D. M. MCGILL, R. L. STALLINGS, JR.

Assistant Professors: R. Y. DURAND, *T. M. STANBACK, JR., R. L. BUNTING, K. R. DAVIS, A. M. WHITEHILL, JR., R. M. JAMES

Lecturers: ||FRANZ GUTMANN, A. W. PIERPONT, G. M. WOODWARD, R. W. PFOUTS, A. R. DOOLEY

Part-time Lecturer: R. C. WADE

Instructors: L. A. BARCLAY, E. W. SCHADT

Part-time Instructors: I. C. CASTLES, A. C. FLORA, JR., H. H. MITCHELL, J. M. PARRISH, I. N. REYNOLDS, J. M. RYAN, T. F. P. WISCHKAEMPER

Teaching Fellows: C. E. FERGUSON, W. A. SPIVEY

*Absent on leave, 1950-1951.

†Deceased, August 30, 1950.

‡Absent on leave for military duty, beginning spring quarter, 1951.

§Absent on leave for one year, beginning spring quarter, 1951.

||Lecturer Emeritus.

For the degree of A.B. with a major in economics:

1. Six full quarter advanced courses in economics, including Economics 81 and Economics 170 are required; and seven full quarter advanced courses in economics may be taken.

a) Economics 31 and 32 should be taken while in the General College, as these basic courses are prerequisites for the six required advanced courses. A grade of C or better in Economics 31 and 32 is required as a condition of admission to a program leading to a major in economics.

b) Mathematics 7 and 9 or R, 7x, and 9 should be taken while in the General College as these courses are prerequisites for Economics 170. In special cases Mathematics 8 may be substituted for Mathematics 9.

c) Economics 41 should not be taken, as credit toward the major will not be given for this course.

2. From five to seven full quarter allied courses within the Division of Social Sciences are required. With the permission of the head of the department, a maximum of three courses in business administration may be counted as allied courses, provided that the program of study warrants these courses as a part of a well-developed and integrated plan. Credit will not be granted for Business Administration 51, and credit for Business Administration 66 will be allowed only to transfer students from the School of Business Administration who took the course prior to the time of transfer. In any case, the combined maximum number of courses in economics and business administration shall not exceed nine.

3. From five to seven full quarter non-divisional courses within the Divisions of Humanities and Natural Sciences are required.

4. A minimum total of eighteen full quarter divisional and non-divisional courses in addition to those necessary for admission to the College of Arts and Sciences are required.

ECONOMICS

Courses for Undergraduates

31-32. GENERAL ECONOMICS (5 each quarter). Not open to freshmen. Sophomore elective.

The organization and underlying principles of modern economic life. The production, exchange, distribution, and consumption of wealth, and auxiliary economic problems.

Every quarter. Messrs. Spruill, Buchanan, Kottke, and other members of the staff.

41. **RESOURCES AND INDUSTRIES (5)**. Prerequisites, Economics 31 and 32 or equivalent. Not open to economics majors.

A functional study of the availability of agricultural and industrial resources. The social and economic problems related to the appraisal and utilization of world resources.

Every quarter. Mr. Mouzon.

61. **PRINCIPLES OF ECONOMICS (5)**. Not open to freshmen or sophomores. For juniors and seniors not majoring in economics who desire a working knowledge of the American economic system and the structure and functioning of its characteristic institutions.

Every quarter. Mr. Heer.

81. **MONEY AND BANKING (5)**. Prerequisite, Economics 31-32 or equivalent. The functional operation of the American monetary system. The value of money, with particular reference to growing influences exerted by banks upon our credit structure.

Every quarter. Messrs. Bunting, Woodward.

111. **INTERNATIONAL RESOURCES AND NATIONAL POLICY (5)**. Prerequisite, Economics 31-32 or equivalent.

The impact of technics upon international resources. The nature of resources, resources and production, basic international agricultural and industrial resources, and international resource interdependence.

Winter quarter. Mr. Mouzon.

124. **PRINCIPLES OF MARKETING (5)**. Prerequisite, Economics 31-32 or equivalent.

Marketing organization and methods with emphasis on the social and economic aspects of distribution. Consumer problems, marketing functions and institutions, marketing methods and policies.

Every quarter. Messrs. McGregor, Kirkpatrick, Blaine, Davis, Wischkaemper.

131. **ECONOMIC THEORY (5)**. Prerequisite, Economics 31-32 or equivalent.

The analytical devices basic to the field of economics. The forces determining relative prices of products and of productive services. The role of competition in the planning of social-economic affairs.

Fall quarter. Messrs. Spruill, Philbrook.

135. **ECONOMIC HISTORY (5)**. Prerequisite, Economics 31-32 or equivalent.

A study of economic developments in Europe and the United States. Emphasis is placed upon comparative economic conditions and developments and their relation to the political and cultural movements.

Fall quarter. Mr. Buchanan.

137. **ECONOMIC DEVELOPMENTS IN THE ORIENT SINCE 1800 (5)**.

A study of traditional economic life and modern economic developments in Japan, China, and India. Special attention is given to modern commerce, finance, industry, and labor and their effect on indigenous cultures.

Spring quarter. Mr. Buchanan.

141. **PUBLIC FINANCE (5)**. Prerequisite, Economics 31-32 or equivalent.

A general course covering the facts and theories of American public finance—federal, state, and local. Public expenditure, taxes and other forms of revenue, public borrowing, fiscal administration and policies.

Every quarter. Messrs. Heer, Ashby, Schadt.

143. PROBLEMS IN STATE AND LOCAL FINANCE (5). Prerequisite, Economics 141.

Selected problems relating to the financing of state and local functions.
Spring quarter. Mr. Heer.

145. THEORIES AND FORMS OF BUSINESS ENTERPRISE (5). Prerequisite, Economics 31-32 or equivalent.

The theories of business enterprise held by government officials and by business leaders. The development of institutions through which each group has sought to organize American business in conformity with its theories.

Fall quarter. Mr. Kottke.

151. TRANSPORTATION (5). Prerequisite, Economics 31-32 or equivalent.

The facilities and relative importance of the several types of transportation, state and federal regulations, rate-making practices, carrier relations, financing, and reorganizations.

Fall and spring quarters. Mr. Blaine.

153. PUBLIC UTILITIES (5). Prerequisite, Economics 31-32 or equivalent.

The theory, techniques, and problems of government intervention in the establishment and operation of communications and power facilities, whether through regulation or public ownership.

Winter quarter. Mr. Kottke.

161. THEORY OF INTERNATIONAL TRADE (5). Prerequisite, Economics 31-32 or equivalent.

International economic relations. Problems involved in maintaining a world order and the role of free enterprise in their solution. The bases of trade, tariffs, exchange control, and trade policies.

Winter quarter. Mr. Philbrook.

170. ECONOMIC STATISTICS (6). Prerequisites, Mathematics 7, 8 or 9, Economics 31-32 or equivalent.

Sources and collection of data, tabular and graphic presentation, averages, dispersion, time-series analysis, correlation, index numbers, reliability of statistics and tests of significance.

Four lecture and four laboratory hours a week, every quarter. Laboratory fee, \$3.00. Messrs. Cowden, Durand, Pfouts.

171. SAMPLING AND STATISTICAL INFERENCE (5). Prerequisite, Economics 170.

Methods of sampling. Industrial quality control. Frequency distributions: normal; Pearsonian; Gram-Charlier; hyper-geometrical; binomial; Poisson. Curve fitting. Uses of F, t, and Chi-square. Estimation; confidence limits; tests of hypotheses. Analysis of variance.

Five lecture hours and outside assignments each week, fall quarter. Laboratory fee, \$3.00. Mr. Cowden.

172. INDEX NUMBERS AND ANALYSIS OF ECONOMIC TIME SERIES (5). Prerequisite, Economics 170.

Index numbers construction: kinds of bias; tests of index numbers. Analysis of economic time series: non-linear trends; progressive seasonal; harmonic analysis; autoregression. Use of orthogonal polynomials. Forecasting.

Five lecture hours and outside assignments each week, winter quarter. Laboratory fee, \$3.00. Mr. Cowden.

173. CORRELATION ANALYSIS (5). Prerequisite, Economics 170.

Fitting of regression equations. Multiple correlation, linear and non-linear. Partial correlation. Correlation concepts. Compact methods of computation. Tests of significance in correlation.

Five lecture hours and outside assignments each week, spring quarter. Laboratory fee, \$3.00. Mr. Cowden.

182. MATHEMATICAL ECONOMICS (Mathematical Statistics 182) (5). Prerequisite, Mathematics 171 and corequisite Mathematics 147.

Perfect and imperfect competition. Monopoly. Utility vs. ranking of preferences. Relations between commodities. General equilibrium. Effects of taxes and controls of various kinds. Index numbers.

(1950-1951 and alternate years.) *Fall quarter. Mr. Hotelling.*

183. ADVANCED MATHEMATICAL ECONOMICS (Mathematical Statistics 183) (3). Prerequisites, Statistics 182 and Mathematics 141 (differential equations).

Dynamic variations in the economy. Development of elements of the calculus of variations and of stochastic difference equation theory, with applications to economic problems. Mathematical treatment of business cycles. Valuation of property taking account of depreciation and depletion. Most profitable rates of exploitation of mineral and biological resources. Relation of private exploitation to the public welfare and effects of various taxes and regulations.

(1950-1951 and alternate years.) *Winter quarter. Mr. Hotelling.*

185. BUSINESS CYCLES (5). Prerequisite, Economics 81 or equivalent.

Unemployment and its avoidance. A critical examination of theories of business fluctuations, and consideration of means of maintaining a high level of employment.

Winter and spring quarters. Mr. Philbrook.

191. AN INTRODUCTION TO THE LABOR PROBLEM (5). Prerequisite, Economics 31-32 or equivalent.

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.

Every quarter. Messrs. Wolf, Guthrie.

192. LABOR AND SOCIAL CONTROL (5). Prerequisite, Economics 191.

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.

Winter quarter. Mr. Wolf.

193. HISTORY OF THE LABOR MOVEMENT (5). Prerequisite, Economics 191.

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.

(1951-1952 and alternate years.) *Spring quarter. Mr. Guthrie.*

194. SOCIAL INSURANCE (5). Prerequisite, Economics 191.

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.

(1950-1951 and alternate years.) *Spring quarter. Mr. Guthrie.*

195. THEORIES OF ECONOMIC REFORM (5). Prerequisite, Economics 31-32 or equivalent.

A review of the basic institutions of the present economic order, followed by a critical examination of the leading proposals for reform, including Socialism, Communism, Totalitarianism, Single Tax, Consumer Cooperation, and Social Insurance.

Winter and spring quarters. Mr. D. D. Carroll.

197. GOVERNMENT AND BUSINESS (5). Prerequisite, Economics 31-32 or equivalent.

The regulation and control of business by government. Constitutional provisions, the antitrust laws, public utilities, taxation, labor laws, and transportation are the fields explored.

Winter and spring quarters. Messrs. Hobbs, Carter.

Courses for Graduates

211. ADVANCED COMMODITY ECONOMICS (5). Prerequisite, Economics 111.

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 quarter. Mr. Mouzon.

224. THE ECONOMICS OF MARKETING (5). Prerequisite, Economics 124.

An evaluation of marketing structure and practices in terms of economic costs and social needs. Emphasis placed on the application of economic principles in the solution of marketing problems.

Spring quarter. Mr. McGregor.

235. ECONOMIC DEVELOPMENTS IN THE OCCIDENT BEFORE 1750 (5).

A survey of economic institutions in the ancient world, a study of medieval agriculture, the rise of cities, the Commercial Revolution, and the earlier stages of the Industrial Revolution.

(1951-1952 and alternate years.) *Winter quarter.* Mr. Buchanan.

236. ECONOMIC DEVELOPMENTS IN THE OCCIDENT SINCE 1750 (5).

The evolution of modern economy in Europe and the United States. Emphasis on the Industrial Revolution and the changes which have accompanied it in agriculture, transportation, money and banking, trade, and the condition of laborers.

(1950-1951 and alternate years.) *Winter quarter.* Mr. Buchanan.

241. HISTORY OF FISCAL DOCTRINES (5). Prerequisite, Economics 141.

Theories of distributive justice and taxation; the incidence and economic effects of taxation; and the use of fiscal measures as instruments of social control.

Spring quarter. Mr. Heer.

242. PROBLEMS IN FEDERAL FINANCE (5). Prerequisite, Economics 141.

An advanced critical study of the problems of American national finance with particular reference to federal taxes and federal tax procedure.

(1951-1952 and alternate years.) *Winter quarter.* Mr. Heer.

244. INDUSTRIAL COMBINATIONS (5). Prerequisite, Economics 145 or permission of the instructor.

The nature and significance of the policies of the principal forms of industrial combinations in domestic and foreign trade. The alternative courses of government action with respect to such combinations.

Winter quarter. Mr. Kottke.

251-252-253. **ADVANCED ECONOMIC THEORY** (5 each quarter). Prerequisite, Economics 31-32 or equivalent.

The scope and analytical structure, the underlying philosophical postulates, and the relations to historical problems and policies of the leading types of economic theory. Economics 251 includes a survey of scope and method, but devotes primary attention to the Classical, Historical, and Socialist schools; Economics 252 covers the period of the earlier marginal utility economists and Marshall; and Economics 253, the developments in current theory since 1918.

Fall, winter, and spring quarters. Mr. Heath.

281. **MONEY, PRICES, AND FOREIGN EXCHANGE** (5). Prerequisite, Economics 81.

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 quarter. Mr. Philbrook.

282. **COMMERCIAL AND CENTRAL BANKING** (5). Prerequisite, Economics 81.

The structure, functions, and operations of commercial and central banks with special reference to the Federal Reserve System. The policies of central banks as they relate to production, the national income, and the price level.

Spring quarter. Mr. Woosley.

291. **LABOR ECONOMICS** (5). Prerequisite, Economics 191.

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 quarter. Mr. Wolf.

295. **CASE STUDIES IN ECONOMIC REFORM** (5). 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 quarter. Mr. D. D. Carroll.

324. **SEMINAR IN MARKETING** (5).

A course providing selected graduate students the opportunity to make an intensive study of specific marketing problems.

**Fall or winter or spring quarter.* Messrs. McGregor, Logsdon.

NOTE: Registration for this course must be approved by the professor in charge.

341. **RESEARCH COURSE IN PUBLIC FINANCE** (5).

Open to qualified graduate students who wish to make intensive studies under the supervision of the instructor in charge of particular fields of public finance. Conference hours subject to arrangement.

**Fall or winter or spring quarter.* Messrs. Heer, Ashby.

NOTE: Registration for this course must be approved by the professor in charge.

351abc. **SEMINAR IN ECONOMICS** (5 each quarter).

Designed to give the advanced graduate student an opportunity to deal critically with special problems or areas of theoretical analysis beyond the general scope of Economics 251-252-253.

**Fall or winter or spring quarter.* Messrs. Heath, Philbrook.

NOTE: Registration for this course must be approved by the professor in charge.

*Equivalent of five hours a week.

371. RESEARCH IN ECONOMIC STATISTICS (5).

**Winter or spring quarter.* Mr. Cowden.

NOTE: Registration for this course must be approved by the professor in charge.

382. SEMINAR IN PRIVATE FINANCE (5).

An advanced study of commercial banking, central banking policies, and the forces operating in the money and capital markets.

**Winter or spring quarter.* Messrs. Woosley, O'Neil.

NOTE: Registration for this course must be approved by the professor in charge.

385. ECONOMIC DYNAMICS (5).

The advanced study of business cycles. The modern controversy over employment and wages, interest, and money; anti-depression policy.

**Winter quarter.* Mr. Philbrook.

NOTE: Registration for this course must be approved by the professor in charge.

391. HUMAN RELATIONS IN INDUSTRY (5).

This course offers mature students an opportunity to carry their investigations of significant subject matter beyond the limits of the formal course offerings.

**Fall or winter or spring quarter.* Messrs. Wolf, Guthrie.

NOTE: Registration for this course must be approved by the professor in charge.

399. SEMINAR (5).

Individual research in a special field under direction of a member of the department.

BUSINESS ADMINISTRATION

Courses for Undergraduates

51. BUSINESS ORGANIZATION (5). Prerequisite, Economics 31 or equivalent.

The forms of business organization with emphasis on the corporation. Special attention is given to the functions of production, finance, personnel, marketing, risk-taking, and records and standards.

Every quarter. Messrs. Schwenning, Blaine, Durand, Pierpont, Mitchell.

66. GENERAL PSYCHOLOGY FOR STUDENTS OF BUSINESS ADMINISTRATION (5). For students in the School of Business Administration; not open to others.

The basic principles of psychology which will enable the student to read and evaluate intelligently in any of the special fields. Much of the illustrative material relates to business problems.

Every quarter. Messrs. Bagby, Shepard.

71. ACCOUNTING PRINCIPLES I (6). Prerequisites or corequisites, Economics 31-32 or equivalent, Business Administration 51.

An introduction to elementary accounting principles for single proprietorship, partnership, and corporation; covers the cycle of bookkeeping procedure: journalizing, posting, preparing a trial balance, adjustments, working papers, and closing the books.

Four lecture and four laboratory hours a week, every quarter. Laboratory fee, \$3.00. Messrs. Peacock, Sadler, Crutchfield, Stallings, James, Barclay, Wade, Reynolds.

72. ACCOUNTING PRINCIPLES II (6). Prerequisite, Business Administration 71.

*Equivalent of five hours a week.

Accounts for corporations and manufacturing companies are given special attention. The valuation of assets and liabilities and the analysis of financial statements.

Four lecture and four laboratory hours a week, every quarter. Laboratory fee, \$3.00. Messrs. Peacock, Sadler, Crutchfield, Stallings, James, Barclay.

91-92. BUSINESS LAW (10). Prerequisite, Economics 31-32 or equivalent.

The main principles of law which govern in the daily conduct of business. The topics discussed include contracts, agencies, negotiable instruments, sales, bailments, corporations, partnerships, and bankruptcy.

Every quarter. Messrs. Hobbs, Carter, Barrett.

Courses for Graduates and Advanced Undergraduates

120. GENERAL INSURANCE (5). Prerequisite, Economics 31-32 or equivalent.

A survey of the fundamental principles of insurance and their application to life, property, casualty, and social insurance. Laws of probability, hazards, transfer and pooling of risks, contracts, rate-making, reserves, loss prevention, and state regulations.

Fall quarter. Mr. McGill.

121. LIFE INSURANCE (5). Prerequisite, Economics 31-32 or equivalent.

Detailed analysis of the basic principles and practices of life insurance. Includes functions of life insurance, types of policies and their purposes, calculations of premiums and reserves, sources of dividends, settlement options, non-forfeiture benefits, selection of risks, company organization, and important legal principles.

Fall and winter quarters. Mr. McGill.

122. PROPERTY INSURANCE (5). Prerequisite, Economics 31-32 or equivalent.

A study of the important types of property coverages, including fire, marine, and inland marine insurance. Includes hazards, types of policies and endorsements, determination of rates, reinsurance, company organization, state regulations, and judicial decisions.

Winter quarter. Mr. McGill.

123. CASUALTY INSURANCE (5). Prerequisite, Economics 31-32 or equivalent.

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.

Spring quarter. Mr. McGill.

124. ADVANCED LIFE INSURANCE (5). Prerequisite, Business Administration 121.

An analytical study of the more specialized life insurance services, such as administration of policy proceeds, the integration of life and property estates, business life insurance, and group coverages.

Spring quarter. Mr. McGill.

141. TRAFFIC PROBLEMS (5). Prerequisite, Economics 151.

A study of the problems related to the operation and management of traffic departments, the movement of freight traffic, services, shipping forms and regulations, charges and rate construction, and claims and claim prevention.

Spring quarter. Mr. Heath.

151. PRINCIPLES OF INDUSTRIAL MANAGEMENT (5). Prerequisites, Economics 31-32 or equivalent, Business Administration 51.

A survey of the basic principles and control practices of modern scientific management, as applied in industry.

Fall and winter quarters. Mr. Dykstra.

154. PRODUCTION MANAGEMENT: THEORIES AND PRACTICES (5). Prerequisite, Business Administration 151.

A case analysis course. Actual cases from industry are analyzed in the light of scientific management principles, and sound solutions are sought. Practice in writing problem-solution reports is an important part of the course.

Winter quarter. Mr. Dykstra.

155. PERSONNEL MANAGEMENT (5). Prerequisites, Economics 31-32, Business Administration 51 or equivalent.

The methods of hiring and handling personnel; the supply, selection, training, promotion, transfer, and discharge of employees; the computation and significance of labor turnover; housing, educational, and recreational facilities.

Every quarter. Messrs. Schwenning, Calhoon, Whitehill.

156. PERSONNEL PROBLEMS (5). Prerequisite, Business Administration 155. Development of personnel projects and problem solutions on a professional scale. Analysis of personnel problems by use of case studies and demonstrations.

Four lecture and two laboratory hours a week, every quarter. Laboratory fee, \$3.00. Mr. Calhoon.

157. TIME AND MOTION STUDY (6). Prerequisite, Business Administration 151. Open to seniors and graduate students only.

The principles and techniques of modern motion and time study. This is principally a laboratory course in which students learn by doing.

Four lecture and four laboratory hours a week, spring quarter. Laboratory fee, \$6.00. Mr. Dykstra.

158. PRODUCTION MANAGEMENT PROBLEMS (5). Prerequisite, Business Administration 151.

This course deals with the solution of common industrial problems, such as determining economical manufacturing lot sizes and machinery replacement problems. The approach combines management principles with mathematical methods.

Spring quarter. Mr. Dykstra.

159. EMPLOYMENT AND TRAINING PROCEDURES (5). Prerequisite, Business Administration 155.

An analysis of the methods of selecting and training employees, with primary emphasis on interviewing, evaluating, inducting, and counseling on the job.

Four lecture and two laboratory hours a week, winter quarter. Laboratory fee, \$3.00. Mr. Calhoon.

161. ADVERTISING (5). Prerequisites, Economics 31-32, 124 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.

Every quarter. Mr. Kirkpatrick.

163. ADVANCED COURSE IN MARKETING (5). Prerequisite, Economics 124.

A problem course dealing with specialized marketing functions and policies such as product and line, brands, channels of distribution, prices and pricing, sales promotion, and operating diagnosis and control.

Every quarter. Messrs. McGregor, Logsdon, Davis.

165. RETAIL DISTRIBUTION (5). Prerequisites, Economics 124 and Business Administration 163.

The general policies and operating practices of retail institutions. Store location, layout and merchandise classification, planning and stock control, store operations, and budgeting and cost control.

Every quarter. Mr. McGregor.

167. SALES MANAGEMENT (5). Prerequisites, Economics 124 and Business Administration 163.

The planning, organization, and control of sales operations. Emphasis is placed upon the sales manager's functions and problems in manufacturing, wholesaling, and service establishments.

Every quarter. Messrs. Logsdon and Davis.

168. SALES AND MARKET ANALYSIS (5). Prerequisites, Economics 170 and Business Administration 163.

A study of procedures and problems in the analysis and evaluation of market areas, distribution channels, and marketing methods. Emphasis is placed on commercial research in the determination of sound marketing policies.

Fall and spring quarters. Mr. Logsdon.

171. ADVANCED ACCOUNTING I (5). Prerequisites, Business Administration 71, 72.

A study of the complex and technical accounting problems involved in actuarial science, consignments, installment sales, branches, mergers, partnership installment liquidation, and insurance.

Every quarter. Messrs. Sadler and James.

172. ADVANCED ACCOUNTING II (5). Prerequisite, Business Administration 171.

A study of accounting for combinations, consolidations, trustees, estates and corporate receiverships, liquidations, and reorganizations.

Every quarter. Mr. James.

173. COST ACCOUNTING (6). Prerequisites, Business Administration 71, 72.

A thorough study of cost systems, including job order, process and standard costs. Much attention is given to the control of costs through the use of material and labor forms.

Four lecture and three laboratory hours a week, every quarter. Laboratory fee, \$3.00. Mr. Stallings.

175. AUDITING (6). Prerequisites, Business Administration 71, 72.

A course in auditing theory and practice. The auditing procedures established by the American Institute of Accountants are covered and the duties of both the junior and senior accountants are studied.

Four lecture and three laboratory hours a week, every quarter. Laboratory fee, \$3.00. Mr. Peacock.

177. INCOME TAX PROCEDURE (6). Prerequisites, Business Administration 71, 72.

A study of the federal income tax laws and their application to practical tax situations. Lectures are supplemented by laboratory problems designed to afford training in the preparation of actual returns.

Four lecture and three laboratory hours a week, every quarter. Laboratory fee, \$3.00. Mr. Crutchfield.

178. CERTIFIED PUBLIC ACCOUNTING PROBLEMS (6). Prerequisite, major in accounting.

A review of the general and specialized accounting problems which constitute the subject matter of C.P.A. examinations.

Winter quarter. Mr. Crutchfield.

179. GOVERNMENTAL ACCOUNTING (6). Prerequisite, Business Administration 172.

Application and procedures for fund accounting in local governments, including counties, townships, cities, villages, school and special districts. Special consideration given to drafting of work sheet layouts.

Four lecture and three laboratory hours a week, winter quarter. Laboratory fee, \$3.00. Mr. Sadler.

181. **ADVANCED BANKING (5)**. Prerequisite, Economics 81.

A study of the organization and operation of banks; analyses of bank assets, liabilities, earnings, and expenses; the interrelations of business and banking policies.

Winter quarter. Mr. Woosley.

191. **CORPORATION FINANCE (5)**. Prerequisites, Economics 31-32, Business Administration 71.

A study of the principles and practice of corporate financing. The methods of raising permanent capital, problems of current financing, the treatment of earnings, and financial problems incident to expansion and reorganization.

Every quarter. Messrs. O'Neil, Whitehill, Dooley.

192. **CORPORATE FINANCIAL PROBLEMS (5)**. Prerequisite, Business Administration 191.

The development of policies by both large and small corporations to solve financial problems. Cases provide the basis for a critical evaluation of managerial decisions which create a defensible financial policy.

Fall quarter. Mr. O'Neil.

195. **INVESTMENTS (5)**. Prerequisite, Business Administration 191.

A survey of investment principles and practices. Primary emphasis is placed on security analysis with the objective of developing techniques and standards of investment appraisal.

Winter and spring quarters. Messrs. Woosley, O'Neil.

199. **BUSINESS POLICY (5)**. Prerequisite, senior standing and permission of the instructor.

This course integrates and builds upon the basic courses in the business administration curriculum. It approaches the field of policy-making and administration from the top management point of view. The dynamic character of a firm's position in the economy and society is stressed.

Winter quarter. Mr. T. H. Carroll.

Courses for Graduates

207. **THE FUNCTIONS AND THEORIES OF MANAGEMENT (5)**. Prerequisite, Business Administration 51 or equivalent.

The function and theories of management in contemporary business. The management movement, scientific method in management, laws of organization, and types and theories of management organization.

Winter quarter. Mr. Schwenning.

255. **WAGE ADMINISTRATION AND JOB EVALUATION (5)**. Prerequisite, Business Administration 155.

The technical aspects of wage administration with emphasis on incentive plans, job evaluation systems, and problems encountered in wage and salary administration.

Four lecture and two laboratory hours a week, spring quarter. Laboratory fee, \$3.00. Mr. Calhoun.

273. **ADVANCED COST ACCOUNTING (5)**. Prerequisite, Business Administration 173.

Process cost accounting procedures, budgetary control and cost accounting, standard cost accounting and managerial analyses and reports.

Four lecture and three laboratory hours a week, winter quarter. Laboratory fee, \$3.00. Mr. Stallings.

274. **ACCOUNTING SYSTEMS (5)**. Prerequisites, Business Administration 172, 173.

The design and installation of accounting systems for textile and furniture manufacturing firms, banks, and public utilities.

Five lecture and two laboratory hours a week, spring quarter. Laboratory fee, \$3.00. Mr. Sadler.

399. **SEMINAR (5 each quarter)**.

Individual research in a special field under the direction of a member of the department.

SCHOOL OF EDUCATION

Professors: G. B. PHILLIPS, *W. C. RYAN, E. W. KNIGHT, A. M. JORDAN, O. K. CORNWELL, †A. K. KING, W. E. ROSENSTENGEL, J. M. GWYNN, W. J. MCKEE, W. H. PLEMMONS, H. A. PERRY, R. E. JAMERSON, G. E. SHEPARD

Director of Physical Education and Athletics: R. A. FETZER

Associate Professors: W. H. PEACOCK, W. D. PERRY, RUTH WHITE FINK, DOROTHY MCCUSKEY, C. F. BROWN, GORDON ELLIS, C. E. MULLIS, H. C. HOUSE

Assistant Professors: HARRY ARMOGIDA, S. M. HOLTON, E. M. ALLEN, W. W. RABB, DORIS HUTCHINSON, RUTH PRICE, C. M. CLARKE, WILLINDA SAVAGE

Instructors: CARL BLYTH, HAMMOND STRAYHORN, JAMES CAMP, BUNN HEARN, J. F. KENFIELD, M. D. RANSON, R. A. WHITE, M. Z. ROMAN, J. R. MURPHY, C. P. ERICKSON, G. J. RADMAN, TOM SCOTT, MARY FRANCES KELLAM, W. T. MEADE, FRITZ LUTZ, JOSEPH HILTON, TED HAZELWOOD, ROY STRAIGHT, R. B. COX, WALTER PUPA, C. R. PREWETT, RICHARD MAXWELL, ‡RALPH CASEY

Part-time Instructor: MARY KISER

Visiting Lecturer: J. S. TIPPETT

Teaching Fellow: V. S. WARD

Graduate Assistants: D. F. DRIGGS, G. W. HOLMES, III, R. W. WHETSTONE, M. J. WHITE, DONALD BORING, J. W. GURTIS, E. G. HOOKS, A. C. MOORE, DANIEL NYIMICZ, W. K. PERRY, W. T. PLANT, J. P. SIFFORD, C. R. TAYLOR, COLLINS BENNETT, TANNYE BURNETT, SALLY SOUTHERLAND, JOHN CLEMENTS, HAYWOOD FOWLE, JOSEPH RAMANO, JAMES BARNWELL, EUGENE KENNEY, O. W. GUPTON, ERVIN STRAUB

*Absent on leave, fall quarter, 1950.

†Absent on leave, spring quarter, 1951.

‡Absent on leave, 1950-1951.

General Information

On June 1, 1948, the Department of Education was changed by the University Administration to a School of Education. The faculty of the new school was authorized to proceed with a reorganization of the program of teacher education under the direction of a dean.

Students who plan to meet the requirements for a teaching certificate in Elementary Education or Secondary Education are under the joint direction of the School of Education and the respective subject matter departments.

Students interested in preparing to teach should consult the Dean of the School of Education, who will give information about the requirements in various teaching fields. Students are admitted to the School of Education for professional work at the beginning of the junior year.

The professional work in preparation for teaching must be taken over a two-year period. For that reason juniors should begin their work promptly in order to meet the requirements.

Courses for Undergraduates

NOTE: For undergraduate courses in physical education see the Department of Physical Education.

41. INTRODUCTION TO THE STUDY OF EDUCATION I (5). (*The School, The Pupil, and Teaching*). This course or its equivalent is required of all prospective teachers.

This is an orientation course designed to help develop an understanding of the philosophy and procedures of public education.

Any quarter. Messrs. Phillips, Holton, Armogida, Holmes, Rosenstengel.

42. INTRODUCTION TO THE STUDY OF EDUCATION II (5).

Winter quarter. Mr. Plemmons.

61, 63, 75, 76, 77, 81, 83a, 83b, 85, 87, 89, 91. METHODS AND MATERIALS IN TEACHING IN: ELEMENTARY GRADES, HEALTH AND PHYSICAL EDUCATION, INSTRUMENTAL MUSIC, CHORAL MUSIC, ART, ENGLISH, FRENCH, SPANISH, SOCIAL STUDIES, LATIN, MATHEMATICS, SCIENCE (5). (*Teaching*). These courses yield course or hour credit only for the degree granted by the School of Education.

Emphasis is placed upon the teacher's function in classroom learning situations and in the operation of the public school. The course is concerned with the study of problems common to all teachers, as well as those peculiar to teaching in the subject areas.

Any quarter.

62, 64, 78, 79, 80, 82, 84a, 84b, 86, 88, 90, 92. STUDENT TEACHING IN: ELEMENTARY GRADES, HEALTH AND PHYSICAL EDUCATION, INSTRUMENTAL MUSIC, CHORAL MUSIC, ART, ENGLISH, FRENCH, SPANISH, SOCIAL STUDIES, LATIN, MATHEMATICS, SCIENCE (10 or 15). (*School, Pupil, Teaching*). These courses yield course or hour credit only for the degree granted by the School of Education.

Student teaching is conducted on a full-time basis which enables the student to participate in all aspects of public school life. It is designed to emphasize learnings in the three areas of *The Child*, *The School*, and *Teaching*, as outlined in the plan of the professional courses. Student teaching is carried out under University supervision in cooperating public schools in the state.

Any quarter. Laboratory fee, \$20.00.

71. CHILD GROWTH AND DEVELOPMENT (5). (*The Pupil*). Required of all prospective teachers.

A course designed to acquaint the student with significant aspects of child growth and development as they relate to the educational process. Functional understanding of individual differences, growth, personality, and factors influencing learning is stressed.

Four lecture and two laboratory hours a week, any quarter. Laboratory fee, \$2.00. Messrs. Jordan, Ward, Prewett, Driggs.

73. STATISTICAL METHODS IN EDUCATION (3).

Any quarter. Staff.

74ab. THE ELEMENTARY SCHOOL (3 or 5). (*The School*).

This course is designed to give the student an understanding of the purposes and organization of the elementary school. The work of the school is studied in relationship to the various community agencies concerned with the education of the child.

Any quarter. Messrs. Perry, Brown, Miss Savage.

95. BOOK SELECTION FOR YOUNG PEOPLE (5).

Winter quarter. Miss Kalp (of the School of Library Science).

96. SELECTION AND USE OF REFERENCE MATERIALS (5).

Winter quarter. Miss Kalp (of the School of Library Science).

97. BOOK SELECTION FOR CHILDREN (5).

Spring quarter. Miss Kalp (of the School of Library Science).

99. THE SECONDARY SCHOOL (5). (*The School*).

A course designed to assist the prospective teacher in developing an understanding of the functions and organization of the American secondary school. Examination is made of the relationship between the school and each of the other social institutions concerned with the education of the adolescent. Actual and projected school practices are evaluated.

Any quarter. Messrs. Gwynn, Holton, Armogida, King.

Courses for Graduates and Advanced Undergraduates

Undergraduate students who are not in the School of Education must get the permission of the dean to enroll in these courses.

NOTE: Most of the graduate courses in education are also available in one or both of the two terms of the summer session. See the catalogue of the summer session.

Attention is called to courses listed under psychology, sociology, physical education, dramatic art, and other departments as of particular importance in present day preparation of teachers and educational administrators. For advanced courses in physical education see the Department of Physical Education.

For graduate courses for teachers and school administrators offered on Saturdays at Chapel Hill see separate announcements available in advance of each quarter's work.

- 101ab. EDUCATIONAL ADMINISTRATION (5).
Any quarter. Messrs. Phillips, Rosenstengel.
102. ELEMENTARY SCHOOL ORGANIZATION AND ADMINISTRATION (3).
Three hours a week, winter quarter. Mr. Perry.
- 105ab. GUIDANCE IN THE SCHOOL (3 or 5).
Three or five hours a week, fall or winter quarter. Messrs. Perry, Ellis.
110. PHILOSOPHY OF MODERN EDUCATION (5).
Fall quarter. Messrs. Ryan, Plemmons, Miss Savage.
111. ORGANIZATION AND ADMINISTRATION OF INDUSTRIAL ARTS IN THE MODERN SCHOOL (3).
Three hours a week, fall quarter.
112. EDUCATIONAL SOCIOLOGY (5). See Sociology 171.
120. PRINCIPLES OF PHYSICAL EDUCATION (3). See Physical Education.
121. ADMINISTRATION OF PHYSICAL EDUCATION (5). See Physical Education.
130. PRINCIPLES AND METHODS IN ADULT EDUCATION (3).
(Not offered in 1950-1951.) *Three hours a week.*
131. ADULT EDUCATION: A GENERAL SURVEY (3).
(Not offered in 1950-1951.) *Three hours a week.*
135. AUDIO-VISUAL INSTRUCTION-TECHNIQUES AND MATERIALS (3).
Three hours a week, fall and spring quarters. Materials fee, \$2.00. Mr. Milner.
142. EUROPEAN FOUNDATIONS OF MODERN EDUCATION (5).
Winter quarter. Mr. Knight.
143. SOCIAL AND EDUCATIONAL HISTORY OF THE UNITED STATES (History 170) (5).
Fall quarter. Mr. Knight.
- 144ab. COMMUNITY EDUCATION (3 or 5).
Three or five hours a week, winter or spring quarter. Messrs. Perry, Ryan, Tippet.
146. CONTEMPORARY ISSUES AND TRENDS IN EDUCATION (5).
Spring quarter. Mr. Knight.
147. HIGHER EDUCATION IN THE UNITED STATES (5). Prerequisite, Education 142 or Education 143, or equivalent.
(Not offered in 1950-1951.) Mr. Knight.
- 152ab. THE LANGUAGE ARTS IN THE ELEMENTARY SCHOOL (3 or 5).
Three or five hours a week, fall quarter. Miss McCuskey, Mr. Tippet.
154. THE SOCIAL STUDIES IN THE ELEMENTARY SCHOOL (3).
Three hours a week, winter quarter. Mr. Perry.
155. NATURAL SCIENCE IN THE ELEMENTARY SCHOOL (3).
Three hours a week, spring quarter. Mr. Tippet.
156. ARITHMETIC IN THE ELEMENTARY SCHOOL (3).
Three hours a week, fall quarter.

160ab. CURRICULUM CONSTRUCTION (3 or 5).

Open to seniors and graduate students with 25 quarter hours of credit in education.

Three or five hours a week, fall or winter quarter. Messrs. Gwynn, Tippett, Miss McCuskey.

161. PROGRESSIVE PRACTICES IN THE MODERN SCHOOL (3).

Three hours a week, winter or spring quarter. Messrs. Brown, Tippett, Miss McCuskey, Miss Savage.

171ab. GROWTH AND DEVELOPMENT OF THE SCHOOL CHILD (3 or 5).

a. Child Development (3).

b. Adolescence (3).

Three or five hours a week, spring quarter. Mr. Jordan, Miss Savage.

172. THE PROBLEMS OF MALADJUSTMENT AMONG CHILDREN (3).

Three hours a week, winter quarter. Messrs. Jordan, Perry.

174ab. USE AND INTERPRETATION OF EDUCATIONAL TESTS AND MEASUREMENTS (3 or 5).

Three or five hours a week, fall quarter. Mr. Jordan.

175. EXTRACURRICULAR ACTIVITIES (5).

Spring quarter. Mr. Plemmons.

176. MENTAL HYGIENE IN TEACHING (5). Prerequisite, introductory courses in psychology and education.

Winter or spring quarter. Messrs. Ryan, Jordan.

177abc. SURVEY IN SPECIAL EDUCATION (3 or 9).

(Not offered in 1950-1951.) *Three or five hours a week, fall and spring quarters.*

178ab. THEORY AND PRACTICE IN EDUCATING THE SPEECH HANDICAPPED (3 or 5).

(Not offered in 1950-1951.) *Three or five hours a week, winter quarter.*

196. THE JUNIOR HIGH SCHOOL (3).

Three hours a week, spring quarter. Messrs. Gwynn, Plemmons.

197. SOCIAL POLICY AND EDUCATION (3).

Three hours a week, fall quarter. Mr. King.

199. SECONDARY EDUCATION IN THE UNITED STATES (5).

Winter quarter. Messrs. King, Plemmons, Gwynn.

201. PROCEDURES IN EDUCATIONAL RESEARCH (3).

Three hours a week, any quarter. Messrs. King, McKee.

203. STATISTICAL METHODS IN EDUCATION (5). Prerequisite, Education 71.

Five hours a week, fall and winter quarters. Messrs. Jordan, Rosenstengel, Cornwell.

204. TECHNIQUES IN EDUCATIONAL LEADERSHIP (3).

Three hours a week, spring quarter. Messrs. Phillips, Rosenstengel.

205. TECHNIQUES IN COUNSELING (3). Prerequisites, appropriate psychology courses and Education 105.

Three hours a week, winter quarter. Messrs. Perry, Ellis.

206. GENERAL PRINCIPLES OF OCCUPATIONAL DIAGNOSIS AND GUIDANCE (5). Prerequisites, practical experience and at least two years of education and psychology.

Five hours a week, fall quarter. Mr. Perry.

207. STUDENT PERSONNEL ADMINISTRATION (3). Prerequisites, appropriate psychology courses and Education 205.

Three hours a week, spring quarter. Messrs. Perry, Ellis.

208ab. STATE AND COUNTY SCHOOL ORGANIZATION (5). Prerequisite, Education 101 or its equivalent.

Winter quarter. Mr. Rosenstengel.

209ab. BUSINESS MANAGEMENT AND SCHOOL FINANCE (3 or 5). Prerequisite, Education 101 or its equivalent.

Three or five hours a week, winter quarter. Messrs. Phillips, Rosenstengel.

210ab. MANAGEMENT OF SCHOOL PLANT AND EQUIPMENT (5). Prerequisite, Education 101 or its equivalent.

Five hours a week, fall quarter. Mr. Rosenstengel.

224. (See under Department of Physical Education).

225. (See under Department of Physical Education).

245. COMPARATIVE EDUCATION (5).

Five hours a week, spring quarter. Mr. Knight.

265. INVESTIGATIONS IN READING (3).

Three hours a week, fall quarter. Messrs. Tippet, Brown.

267ab. EDUCATION WORKSHOP (5 or 10).

Open by special permission to a limited number of qualified graduate students who have specific interests or problems that are adapted to staff and local resources available.

Graduate staff and visiting faculty.

271ab. PROBLEMS IN EDUCATIONAL PSYCHOLOGY I (5).

a. Individual Differences (3).

b. Problems of Conduct (3).

Five hours a week, fall quarter. Mr. Jordan.

272ab. PROBLEMS IN EDUCATIONAL PSYCHOLOGY II (5). Prerequisite, one and preferably two courses in educational and developmental psychology.

a. Psychology of Learning (Theoretical Aspects) (3).

b. Psychology of Learning (Practical Applications) (3).

Five hours a week, winter quarter. Mr. Jordan.

273. MENTAL MEASUREMENTS (5). Prerequisite, one course in educational psychology or a course in general psychology.

Five hours a week, spring quarter. Messrs. Jordan, Ellis.

274ab. TECHNIQUES IN THE ANALYSIS OF THE INDIVIDUAL (3 or 5). Prerequisite, Education 105.

a. The Use of Tests in the Analysis of the Individual.

b. The Individual Inventory.

Five hours a week, spring quarter. Professor Ellis.

275. ADMINISTRATIVE ASPECTS OF THE GUIDANCE PROGRAM (3). Prerequisite, Education 105.

Three hours a week, spring quarter. Mr. Ellis.

277ab. ADVANCED THEORY AND PRACTICE IN EDUCATING THE SPEECH HANDICAPPED (5).

a. Organic (3).

b. Functional (3).

(Not offered in 1950-1951). Five hours a week, winter or spring quarter.

285. INVESTIGATIONS AND TRENDS IN TEACHING THE SOCIAL STUDIES (3).

Three hours a week, winter quarter. Mr. King.

291. INVESTIGATIONS AND TRENDS IN TEACHING NATURAL SCIENCE (3).

(Not offered in 1950-1951). Three hours a week, winter quarter.

296ab. ORGANIZATION AND ADMINISTRATION OF SECONDARY SCHOOLS (3 or 5).

Three or five hours a week, winter quarter. Messrs. Gwynn, Plemmons.

298ab. SUPERVISION OF INSTRUCTION (3 or 5).

Three or five hours a week, fall and winter quarters. Messrs. Perry, Gwynn, Phillips.

303ab. PROBLEMS IN EDUCATIONAL ADMINISTRATION (3 or 5). Prerequisites, Education 101 or its equivalent and one other course in educational administration.

Three hours a week, any quarter. Messrs. Phillips, Rosenstengel, Plemmons.

304ab. PROBLEMS IN EDUCATIONAL MEASUREMENT (3). Prerequisite, Education 174.

Three hours a week, any quarter. Mr. Jordan.

341ab. FOUNDATIONS OF MODERN EDUCATION (3 or 5). Prerequisites, Education 142 and 143, or equivalent.

Three hours a week, fall, winter, and spring quarters. Mr. Knight.

350ab. PROBLEMS IN ELEMENTARY EDUCATION (3 or 5). Prerequisites, two courses in undergraduate education.

Three hours a week, any quarter. Messrs. Perry, Brown, Miss Savage.

360ab. PROBLEMS IN THE CURRICULUM (3 or 5). Prerequisites, two courses in graduate education.

Three hours a week, any quarter. Mr. Gwynn, Miss McCuskey.

375. THESIS COURSE (maximum with thesis 5).

Any quarter. Members of the graduate faculty.

376ab. SEMINAR IN EDUCATION (3 to 5). Prerequisites, two courses in graduate education.

Three or five hours a week, any quarter. Members of the graduate faculty.

398ab. PROBLEMS IN SECONDARY EDUCATION (3 to 5). Prerequisites, two courses in graduate secondary education.

Three hours a week, every quarter. Messrs. Gwynn, Plemmons.

DEPARTMENT OF ENGLISH

Professors: C. P. LYONS, *G. C. TAYLOR, G. R. COFFMAN, A. P. HUDSON, A. C. HOWELL, DOUGALD MACMILLAN, †R. P. BOND, RAYMOND ADAMS, W. A. OLSEN, H. K. RUSSELL, SAMUEL SELDEN, WILLIAM WELLS, R. B. SHARPE, N. E. ELIASON, EARL WYNN, E. W. TALBERT, FLOYD STOVALL, ‡ROBERT PRATT

Associate Professors: J. O. BAILEY, E. H. HARTSELL, G. F. HORNER, N. W. MATTIS, L. A. COTTEN

Assistant Professors: CHARLES EATON, MACON CHEEK, C. H. HOLMAN, J. M. STEADMAN, III

Instructors: LILLIE HALL ANTONAKOS, J. R. GASKIN, G. M. HARPER, MARY FRANCES MINTON, JESSIE REHDER, W. O. S. SUTHERLAND, F. L. ALBERT, J. A. ALLEN, F. W. ANDERSON, R. E. AYCOCK, W. J. BARNHART, ELLEN B. BELL, J. C. BRODERICK, ALLAN BROWN, HOYLE BRUTON, MARIA H. BUTLER, KATHERINE CARMICHAEL, FRANCES D. DEDMOND, DAN COLLINS, ROBERT ESPY, M. L. FELDMAN, J. E. GINTHER, VIRGINIA HERRIN, KERMIT HUNTER, RALPH HYDE, J. D. JOHNSON, J. R. MCQUISTON, D. J. MILBURN, FRANCES PEDIGO, J. W. PLATT, L. H. POTTER, LOGAN PRATT, REBECCA C. PATTERSON, R. P. ROGERS, J. B. SHOLES, JACK SUBERMAN, E. F. TAYLOR, J. A. VIVERETTE, JR., T. E. WALKER, THOMAS WHEELER

Teaching Fellows: L. E. DOLLARHIDE, F. H. MOORE, W. M. PETERSON

Graduate Assistants: LOIS BARR, AVA JEAN BRANCH, J. A. REA, BRADLEY STROUP, EDITH WINSLOW

Courses for Undergraduates

Prerequisites: English 1, 2, and 3 are prerequisite to all advanced courses offered by the English department. Juniors will not be admitted to courses for advanced undergraduates except by permission.

Majors in English: A student choosing English as his major field should take (a) English 50; (b) one of the following: English 91, 93, 94, 95, 163; (c) one of the following: English 70, 112, 125; (d) one of the following: English 79, 81, 82, 83 or 131, 84 or 141, 88, 89, 111, 121, 151; (e) four courses chosen as free electives from the advanced courses offered by the department (courses numbered from 40 to 199, with the exception of 51 and 59). In accordance with University regulations a student must have a grade of C or better in at least thirty quarter hours in the major.

*Kenan Professor Emeritus.

†Absent on leave, 1950-1951.

‡Beginning, September 1, 1951.

Majors in English in the School of Education: Students aiming at a certificate to teach in the public high schools, with a major in English, should consult the School of Education for the courses in education and for the minor. The English requirements are: (a) English 81; (b) English 50; (c) one of the following: English 70, 95, 96; (d) one of the following: English 88, 84 or 141, or by permission, 83 or 131; (e) one of the following: English 44, 52, 53, 54, 55, 56, 95, 96; (f) two electives. A student may not take both 95 and 96 to satisfy requirements (c) and (e). In accordance with University regulations a student must have a grade of C or better in at least thirty quarter hours in the major.

Minors in English in the School of Education: Students who choose a minor program in English will take: (a) English 81; (b) English 50; (c) one of the following: English 88, 84 or 141, or by permission one of the following: English 70, 83 or 131, 99, 125; (d) one of the following: English 52, 53, 54, 96, or by permission an elective.

Honors in English: Students interested in reading for honors in English should consult the regulations governing the honors program in the Division of the Humanities.

1. FRESHMAN ENGLISH: GRAMMAR AND COMPOSITION (5).

Required of all freshmen except those qualifying for English 2.

Fall, winter, or spring quarter. Mr. Horner, *Chairman*, and the freshman staff.

2. FRESHMAN ENGLISH: COMPOSITION AND RHETORIC (5).

Required of all freshmen who have passed English 1 or been exempted from it.

Fall, winter, or spring quarter. Mr. Horner, *Chairman*, and the freshman staff.

3. ENGLISH LITERATURE (5). Prerequisite, English 2.

Substantial readings in Chaucer, Shakespeare, and Milton. Required of all sophomores.

Fall, winter, or spring quarter. Mr. Horner, *Chairman*, and staff.

4. ENGLISH LITERATURE (5). Prerequisites, English 2 and 3.

Substantial readings in major writers of the nineteenth century. Sophomore option.

Fall, winter, or spring quarter. Mr. Horner, *Chairman*, and staff.

5. ENGLISH AND AMERICAN FICTION (5). Prerequisites, English 2 and 3.

Readings in the novel (Hawthorne, Hardy, Twain, Maugham, Lewis) and in selected contemporary short stories. Sophomore option.

Fall, winter, or spring quarter. Mr. Horner, *Chairman*, and staff.

6. AMERICAN LITERATURE (5). Prerequisites, English 2 and 3.

Substantial readings in Poe, Hawthorne, Whitman, Twain, Frost, and Hemingway. Sophomore option. This course will not satisfy the American literature requirements for the teacher's certificate.

Fall, winter, or spring quarter. Mr. Horner, *Chairman*, and staff.

40. VOICE TRAINING (5).

Fall, winter, or spring quarter. Laboratory fee, \$1.50. Mr. Mattis.

41. THE ORAL INTERPRETATION OF LITERATURE (5).

Fall or spring quarter. Laboratory fee, \$150. Mr. Mattis.

44. PUBLIC SPEAKING (5).

Composition and delivery of original speeches.

Fall, winter, or spring quarter. Laboratory fee, \$150. Messrs. Olsen, Mattis.

50. SHAKESPEARE (5).

Study of about twenty representative comedies, histories, and tragedies.

Fall quarter, Mr. Wells; winter quarter, Mr. Talbert; spring quarter, Mr. Lyons.

51. ADVANCED COMPOSITION: PRACTICAL EXPOSITION (5).

Primarily for business administration and pharmacy students. Business forms, letters, reports, professional papers, and articles for the press. This course cannot be counted toward an English major.

Fall quarter, Mr. Gaskin; winter and spring quarters, Messrs. Steadman, Gaskin.

52. ADVANCED COMPOSITION: THE TECHNIQUE OF EXPOSITION (5).

Prerequisite, permission of the instructor.

Expository writing for students desiring practice in the organization of material.

Winter quarter, Mr. Cheek; spring quarter, Mr. Bailey.

53. CREATIVE WRITING I: INTRODUCTION TO THE SHORT STORY (5). Prerequisite, permission of the instructor.

Class discussion of classic short stories and general literary principles; technical training in the writing of original short stories.

Fall and spring quarters. Mr. Eaton.

54. CREATIVE WRITING II (5). Prerequisite, permission of the instructor.

An advanced course in imaginative writing for students who have had some previous experience in this field.

Winter quarter. Mr. Eaton.

55. ADVANCED VOICE TRAINING (5). Prerequisite, English 40 or permission of the instructor.

Winter quarter. Laboratory fee, \$150. Mr. Mattis.

56. ADVANCED PUBLIC SPEAKING (5). Prerequisite, English 44 or permission of the instructor.

Composition and delivery of original speeches. Political speeches and analysis of propaganda techniques. Elementary semantics.

Winter quarter. Laboratory fee, \$150. Mr. Olsen.

59. SCIENTIFIC WRITING (5). Prerequisite, permission of the instructor.

To meet the needs of students in the sciences, through practice in writing explanations, descriptions, business letters, professional papers, and reports. This course cannot be counted toward an English major.

Fall, winter, and spring quarters. Mr. Howell.

70. CHAUCER (5).

The poet as literary artist in *The Canterbury Tales* and other selected works.

Fall quarter. Mr. Coffman or Mr. Lyons.

72-73. COURSE FOR HONORS (10). See the Program for Honors Work in the Division of the Humanities.

Readings and the preparation of an essay under the direction of departmental advisers.

75. MILTON (5).
The works of Milton studied in the light of the life, times, and culture of the poet.
Winter quarter, Mr. Howell; *spring quarter*, Mr. Cheek.
79. ENGLISH LITERATURE, 1890-1920 (5).
Hardy, Henley, Housman, Kipling, Wilde, Shaw, Conrad, Galsworthy, and the Irish Revival.
Spring quarter. Mr. Cotten.
81. AMERICAN LITERATURE (5).
A survey, 1830 to 1855, with especial attention to Poe, Emerson, Thoreau, Lowell, Hawthorne, and Melville.
Fall quarter, Mr. Holman; *winter quarter*, Mr. Horner; *spring quarter*, Mr. Adams.
82. AMERICAN LITERATURE (5).
A survey from Whitman to the present, with emphasis on the literature of the South, the local-color movement, the rise of realism, and the social novel after 1880.
Fall quarter, Mr. Adams; *winter quarter*, Mr. Stovall.
83. PROSE AND POETRY OF THE CLASSICAL PERIOD (5).
Addison, Steele, Swift, Pope, Johnson, Boswell, Gray, Cowper.
Winter quarter. Mr. MacMillan.
84. THE CHIEF ROMANTIC POETS (5).
Wordsworth, Coleridge, Byron, Shelley, and Keats.
Fall quarter. Mr. Hudson.
87. THE LITERARY ASPECTS OF THE BIBLE (5).
The Old Testament and the New Testament will be taken up in alternate years.
Spring quarter. Mr. Howell.
88. VICTORIAN LITERATURE I, 1832-1860 (5).
Carlyle, Tennyson, Browning, Dickens, Thackeray, and Charlotte Brontë.
Fall quarter. Mr. Bailey or Mr. Cotten.
89. VICTORIAN LITERATURE II, 1860-1890 (5).
Ruskin, Arnold, Rossetti, Morris, Swinburne, George-Eliot, and Meredith.
Winter quarter. Mr. Cotten.
91. THE ENGLISH NOVEL (5).
The English novel from Defoe to Hardy.
Winter quarter, Mr. Russell; *spring quarter*, Mr. Holman.
93. THE ENGLISH DRAMA (5).
The English drama from the beginnings to 1900.
Fall quarter. Mr. Steadman.
94. PRINCIPLES OF LITERARY ART (5).
A study of the theories of literature through their application to specific English masterpieces.
Winter quarter. Mr. Holman.
95. THE ENGLISH LANGUAGE (5).
English of the present day, standard and dialectal, its historical background and development, British and American.
Spring quarter. Mr. Eliason.

96. ENGLISH GRAMMAR (5).

A study of modern English grammar especially for prospective teachers; bases of grammatical rules, prescriptive *vs.* descriptive grammar, relationship of grammar and composition.

Fall quarter. Mr. Eliason.

97. RECENT BRITISH AND AMERICAN PROSE (5).

A study of prose writings, chiefly fiction, since 1920.

Fall and spring quarters. Mr. Russell.

98. RECENT BRITISH AND AMERICAN POETRY (5).

A study of the poetry written in English since 1920.

Winter quarter. Mr. Cotten.

Courses for Graduates and Advanced Undergraduates

NOTE: Except by permission juniors will not be admitted to these courses.

101. OLD ENGLISH GRAMMAR AND READINGS (5).

Primarily a linguistic course, the study of Old English grammar, but includes some translation of prose and poetry.

Fall quarter. Mr. Eliason.

105. MEDIEVAL ROMANCE IN ENGLISH (5).

A survey of romance materials in English literature, with particular attention to the Arthurian tradition.

(Not offered in 1950-1951.) Mr. Coffman.

111. ENGLISH LITERATURE OF THE RENAISSANCE (5).

A survey of the literature of the Elizabethan period, exclusive of the drama.

Winter quarter. Mr. Wells.

112. SPENSER (5).

The works of Spenser studied in the light of the life, times, and culture of the poet.

Spring quarter. Mr. Wells.

113. ENGLISH DRAMA TO 1600 (5).

English drama in the sixteenth century, with preliminary consideration of the medieval religious drama.

Fall quarter. Mr. Coffman.

114. ENGLISH DRAMA, 1600-1642 (5).

Jacobean and Caroline drama, with emphasis on Jonson, Chapman, Webster, Beaumont, Fletcher, Massinger, and Ford.

Winter quarter. Mr. Sharpe.

121. ENGLISH LITERATURE, 1616-1700 (5).

The non-dramatic literature of the period.

Spring quarter. Mr. Howell.

131. ENGLISH LITERATURE, 1700-1780 (5).

The non-dramatic literature of the period.

Fall quarter. Mr. Bond or Mr. MacMillan.

133. RESTORATION AND EIGHTEENTH-CENTURY DRAMA (5).

A study of the drama from 1660 to 1780.

(Not offered in 1950-1951.) Mr. MacMillan.

148. NINETEENTH-CENTURY DRAMA, ENGLISH AND AMERICAN (5).

A survey of dramatic movements and writers from 1800 to 1900.

Fall quarter. Mr. Bailey.

153. SOUTHERN AMERICAN LITERATURE (5).

The three centuries from John Smith to Ellen Glasgow, treating major trends and authors.

(Not offered in 1950-1951.) Mr. Stovall.

155. THE AMERICAN NOVEL (5).

The American novel from its beginnings to the twentieth century.

Fall quarter. Mr. Stovall.

163. LITERARY CRITICISM (5).

The principles which have animated classical, romantic, and realistic literature.

(Not offered in 1950-1951.) Mr. Bond or Mr. Lyons.

164. BRITISH AND AMERICAN DRAMA OF THE TWENTIETH CENTURY

(Dramatic Art 164) (5).

A survey of dramatic movements and writers from 1900 to the present.

Spring quarter. Mr. Sharpe.

167. THE ENGLISH BALLAD (5).

English and Scottish popular ballads and their survivals in America, particularly in North Carolina.

Spring quarter. Mr. Hudson.

Courses for Graduates

201. STUDIES IN OLD ENGLISH LITERATURE: BEOWULF (5). Prerequisite, English 101.

Primarily a literary course; the whole body of Old English literature surveyed, but Beowulf given major attention.

Winter quarter. Mr. Eliason.

202. MIDDLE ENGLISH (5).

The literature of the period in relation to its social, political, and religious background.

Spring quarter. Mr. Coffman.

204. HISTORY OF THE ENGLISH LANGUAGE (5). Prerequisite, English 101 or permission of the instructor.

For students of linguistics and others wishing a thorough background for literary studies; an intensive study of the language according to historical methods.

Spring quarter. Mr. Eliason.

208. CHAUCER (5).

A reading of Chaucer's works with attention to critical, historical, and linguistic problems involved in their interpretation.

Winter quarter. Mr. Coffman or Mr. Lyons.

225. MILTON (5).

An intensive study of Milton's works and thoughts.

Spring quarter. Mr. Talbert.

231. SHAKESPEARE: THE COMEDIES (5).

Emphasis on historical and critical problems presented by Shakespeare's works.

Fall quarter. Mr. Talbert or Mr. Lyons.

232. SHAKESPEARE: THE TRAGEDIES (5).
Emphasis on historical and critical problems presented by Shakespeare's works.
Winter quarter. Mr. Talbert or Mr. Lyons.
241. ENGLISH LITERATURE, 1780-1839 (5).
A survey of the Romantic period, with especial attention to the greater poets.
Winter quarter. Mr. Hudson.
243. VICTORIAN LITERATURE: POETRY (5).
The major Victorian poets with emphasis on Tennyson and Browning.
Fall quarter. Mr. Cotten.
244. VICTORIAN LITERATURE: PROSE (5).
Primarily Ruskin, Morris, Eliot, Arnold, Hardy.
Spring quarter. Mr. Bailey.
282. EARLY AMERICAN LITERATURE (5).
A survey of the colonial, revolutionary, and early national periods, including Bryant, Irving, and Cooper.
Fall quarter. Mr. Horner.
283. AMERICAN LITERATURE, 1830-1855 (5).
English 282 precedes this survey, but is not prerequisite. Poe, Emerson, Thoreau, Longfellow, Lowell, and Hawthorne.
Winter quarter. Mr. Adams.
284. AMERICAN LITERATURE, 1855-1900 (5).
Chief authors: Melville, Whitman, Mark Twain, Bret Harte, Howells, and James. Realism, literary criticism, and the dominance of magazines.
Spring quarter. Mr. Stovall.
307. SEMINAR: STUDIES IN MEDIEVAL LITERATURE (5).
Research in special problems in the vernacular literature of the Middle Ages.
Winter quarter. Mr. Coffman.
310. I: SEMINAR: STUDIES IN ELIZABETHAN LITERATURE (5).
Fall quarter. Messrs. Lyons, Talbert.
310. II: SEMINAR: STUDIES IN ELIZABETHAN LITERATURE (5).
Spring quarter. Messrs. Lyons, Talbert.
312. SEMINAR: STUDIES IN SEVENTEENTH-CENTURY LITERATURE (5).
Winter quarter. Mr. Howell.
313. SEMINAR: STUDIES IN EIGHTEENTH-CENTURY LITERATURE (5).
Special problems in the literary and intellectual movements of the century.
Spring quarter. Mr. MacMillan or Mr. Bond.
317. SEMINAR: STUDIES IN NINETEENTH-CENTURY ROMANTICISM IN ENGLAND (5).
Two divisions in alternate years: Byron and Shelley problems; Wordsworth and Coleridge problems.
Spring quarter. Mr. Hudson.
318. SEMINAR: STUDIES IN AMERICAN LITERATURE (5).
Winter quarter. Mr. Adams or Mr. Stovall.

320. SEMINAR: STUDIES IN VICTORIAN LITERATURE (5).

The study of a Victorian writer selected by the seminar.

By special arrangement.

325. SEMINAR: MODERN DRAMA (Dramatic Art 325) (5).

Fall quarter. Messrs. Sharpe, Selden.

331. BIBLIOGRAPHY AND METHODOLOGY (5). Required of all candidates for the A.M. and Ph.D. degrees.

A course designed to aid students in preparing term papers, theses, and dissertations. Attention to bibliographical guides, problems of literary research, and standard scholarly forms and procedures.

Fall quarter, Mr. Howell; *spring quarter*, Mr. MacMillan.

340. SPECIAL READINGS (5).

341. SPECIAL RESEARCH (5).

Investigation in a special field, usually in the course of writing a thesis or dissertation, under the direction of a member of the department.

Attention is called to the courses in philology and advanced literary study offered in the departments of Classics (Latin Epigraphy, Latin Paleography), Comparative Literature, Germanic Languages (Gothic, Old and Middle High German, Old Saxon, Old Norse, etc.), and Romance Languages (Old French, Provençal, Old Irish, Old Spanish, Dante, etc.).

See also the Curriculum in Comparative Linguistics.

CURRICULUM IN FOLKLORE

Dean W. W. PIERSON, *Chairman*

Professors: A. P. HUDSON, *Secretary*, J. P. GILLIN, U. T. HOLMES, RICHARD JENTE, G. B. JOHNSON, J. E. KELLER, J. P. SCHINHAN

This curriculum assembles the facilities of the University for those who desire a major or minor for the master's degree or a doctoral minor in folklore with a major in some related department and mobilizes the pertinent graduate instruction in this field now being offered in such departments as English, Germanic Languages, Music, Romance Languages, and Sociology and Anthropology. Students having had an undergraduate major in any one of these departments, and having had the prerequisite courses, are eligible to take work in this curriculum with a view to becoming candidates for higher degrees.

Courses for Graduates and Advanced Undergraduates

104. FOLK MUSIC (Music 104) (3).

A comparative study of the folk songs of various nations, with special emphasis on the American folk music of the South. Lectures, readings, and the study of music available in print or on phonograph records.

To be arranged. Mr. Schinhan.

105. CELTIC: OLD IRISH (French 105) (5).

Winter quarter. Mr. Holmes.

106. CELTIC: OLD WELSH (French 106) (5).

One quarter. Mr. Holmes.

122. CULTURAL ANTHROPOLOGY (Anthropology 122) (5).

Winter quarter. Materials fee, \$1.00. Messrs. Gillin, Johnson.

127. NATIVE PEOPLES AND CULTURES OF LATIN AMERICA (Anthropology 127) (5). Prerequisites, ability to read Spanish and/or Portuguese, undergraduate work in one or more social sciences, and Folklore 185.

(1950-1951 and alternate years.) *Winter quarter. Materials fee, \$1.00.* Mr. Gillin.

128. FOLK CULTURES IN THE MODERN WORLD (Anthropology 128) (5). Prerequisite, Folklore 185.

The folk culture is viewed as a way of life which stands midway between that of the "primitive" tribal native and that of the urbanized city-dweller. Consideration is given to this design for living in various parts of the world, with particular reference to the folk culture of southeastern United States.

(1951-1952 and alternate years.) *Fall quarter. Materials fee, \$1.00.* Mr. Gillin.

167. THE ENGLISH BALLAD (5). Prerequisite, Folklore 185.

English and Scottish popular ballads and their survivals in America, particularly in North Carolina.

Spring quarter. Mr. Hudson.

185. INTRODUCTION TO FOLKLORE (Comparative Literature 185) (5).

Definitions and examples of folklore in general and its various categories. Collection, classification, study, and analysis of folklore materials. Bibliography.

Fall quarter. Mr. Hudson.

Courses for Graduates

203. PROVERBIAL SPEECH (5). Prerequisite, Folklore 185.

Study of origin, development, use, and dissemination of proverbs, maxims, Wellerisms, and proverbial phrases, their importance in life and literature, with emphasis on folk wit and humor.

Spring quarter. Mr. Jente.

*204-205. INTRODUCTION TO COMPARATIVE MUSICOLOGY (Music 204-205) (6). Prerequisite, a reading knowledge of one or more foreign languages, preferably German, Spanish, or French, a working knowledge of the theory and history of music, and permission of the instructor.

Three hours a week, fall and winter quarters. Mr. Schinhan.

210. FOLK SOCIOLOGY (Sociology 210) (5). Prerequisite, Folklore 185.

Spring quarter. Mr. Odum.

230. RACE AND CULTURE CONTACTS (Anthropology 230) (5). Prerequisite, Folklore 185.

This course describes and analyzes the problems of acculturation arising from the contacts of peoples of different racial or cultural heritages, with particular reference to Negro, white, and Indian relations in the New World.

(1950-1951 and alternate years.) *Spring quarter.* Mr. Johnson.

*Will be given as the demand warrants.

314. FOLK NARRATIVE (5). Prerequisite, Folklore 185.

Study of origin, development, and dissemination of myths, legends, and folktales, with a survey of their use in masterpieces of world literature.

Spring quarter. Mr. Keller.

395. RESEARCH (5).

Research in a special field under the direction of members of the staff.

FRENCH

(See Romance Languages)

DEPARTMENT OF GEOLOGY AND GEOGRAPHY

Professors: S. T. EMORY, G. R. MACCARTHY

Associate Professors: W. A. WHITE, J. S. GIBSON

Assistant Professors: R. L. INGRAM, D. G. BASILE, V. I. MANN

Part-time Instructors: E. C. BERRY, R. A. JONES

Teaching Fellow: M. E. SIMONS

Graduate Assistants: R. E. DAHLBERG, C. O. ENSIGN, JR., V. R. GEYER,

W. G. HOOKS, DORIS MCCHESENEY HOWELL, J. M. JENNINGS, W. F.

MARKGRAF, J. E. PAYNE, M. C. POWERS, J. H. RECKNAGEL, E. M.

SMITH, JR.

GEOLOGY

For A.B. with major in geology there are required, beyond Introduction to Physical and Historical Geology, the following courses: six courses in geology; at least five and not more than seven courses in allied sciences, including introductory course in chemistry or physics, which may be taken in the General College; and sufficient courses outside of the Division of Natural Sciences to complete the required number of hours for graduation. The A.B. program is not considered sufficient training for graduate work in geology.

For S.B. in Geology the following are required:

GENERAL COLLEGE

English 1, 2, 3, 4

Foreign language (4 courses)

(French, German, or Spanish)

Chemistry 1-2-3

Social Science 1-2

Geology 41, 42

Mathematics 7, 8

Geography 38

Physical Education

Hygiene

UPPER COLLEGE

English 59
 Physics 24-25
 Geology 101, 102, 103
 Geology 104, 105, 106

Geology 107, 108, 109
 Geography 171 or equivalent
 Geology 128-129 (summer field course)
 Elective—4 courses, not geology

Courses for Undergraduates

1. ELEMENTS OF GEOLOGY (5). Freshman elective. This course may be taken in partial fulfillment of the General College requirement in science but should not be taken by anyone planning to major in a natural science. (See Botany.)

Four lecture and two laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, \$3.50. Staff.

41. INTRODUCTION TO PHYSICAL GEOLOGY (6).

Four lecture and four laboratory hours a week, each quarter. Laboratory fee, \$3.50 a quarter. Messrs. MacCarthy, White, Ingram; assistants.

42. INTRODUCTION TO HISTORICAL GEOLOGY (6). Prerequisite, Geology 41.

Four lecture and four laboratory hours a week, each quarter. Laboratory fee, \$3.50 a quarter. Mr. Ingram; assistants.

Courses for Graduates and Advanced Undergraduates

101. MINERALOGY (6). Prerequisites, Chemistry 1-2 and Geology 41, or special permission.

Three lecture and six laboratory hours a week, fall quarter. Laboratory fee, \$10.00. Mr. Mann.

102. LITHOLOGY (5). Prerequisites, Geology 41 and 101.

Three lecture and four laboratory hours a week, winter quarter. Laboratory fee, \$5.00. Mr. Mann.

103. GEOLOGIC FIELD METHODS (5). Prerequisites, Geology 101, 102, Mathematics 41 or Geography 171.

Three lecture and four laboratory hours a week, spring quarter. Laboratory fee, \$5.00. Mr. Ingram.

104. GEOMORPHOLOGY (6). Prerequisites, Geology 41, general physics.

Four lecture and four laboratory hours a week, fall quarter. Laboratory fee, \$5.00. Mr. White.

105. STRATIGRAPHY (5). Prerequisite, Geology 42.

Four lecture and two laboratory hours a week, winter quarter. Laboratory fee, \$5.00.

106. INVERTEBRATE PALEONTOLOGY (5). Prerequisite, Geology 42.

Three lecture and four laboratory hours a week, spring quarter. Laboratory fee, \$5.00.

107. STRUCTURAL GEOLOGY (5). Prerequisites, Geology 103, general physics.

Four lecture and two laboratory hours a week, fall quarter. Laboratory fee, \$5.00. Mr. MacCarthy.

108. ECONOMIC GEOLOGY (5). Prerequisite, Geology 107.

Three lecture and four laboratory hours a week, winter quarter. Laboratory fee, \$5.00.

109. ELEMENTS OF GEOPHYSICS (5). Prerequisites, Geology 107, general physics.

Four lecture and two laboratory hours a week, spring quarter. Laboratory fee, \$5.00. Mr. MacCarthy.

117. ROCK WEATHERING AND SOIL FORMATION (5). Prerequisites, Geology 101 and 102.

(1950-1951 and alternate years.) Four lecture and two laboratory hours a week, winter quarter. Laboratory fee, \$5.00. Mr. Ingram.

122. PHYSIOGRAPHY OF THE EASTERN UNITED STATES (5). Prerequisites, Geology 41, 42, and 104.

(1951-1952 and alternate years.) Five hours a week, winter quarter. Materials fee, \$3.50. Mr. White.

123. PHYSIOGRAPHY OF THE WESTERN UNITED STATES (5). Prerequisites, Geology 41, 42, and 104.

(1951-1952 and alternate years.) Five hours a week, spring quarter. Materials fee, \$3.50. Mr. White.

127. OIL GEOLOGY (5). Prerequisites, Geology 105, 107.

(1950-1951 and alternate years.) Four lecture and two laboratory hours a week, fall quarter. Materials fee, \$3.50. Mr. Ingram.

128-129. SUMMER FIELD COURSES IN GEOLOGY (12). Prerequisites, Geology 101, 102, 103.

Equivalent to twelve hours a week for one quarter. Staff.

144. OPTICAL MINERALOGY (5). Prerequisite, Geology 101.

Two lecture and six laboratory hours a week, fall quarter, on demand. Laboratory fee, \$5.00. Mr. Mann.

145. PETROLOGY (5). Prerequisites, Geology 102, 144.

Two lecture and six laboratory hours a week, spring quarter, on demand. Laboratory fee, \$5.00. Mr. Mann.

147. DETERMINATIVE MINERALOGY (5). Prerequisite, Geology 101.

Ten laboratory hours a week, spring quarter, on demand. Laboratory fee, \$10.00. Mr. Mann.

166. VULCANOLOGY (5). Prerequisites, Geology 41 and, except by special permission, Geology 102.

This course serves as an introduction to vulcanism and related phenomena. Five lectures a week, winter quarter. Materials fee, \$3.50. Mr. MacCarthy.

168, 169. FIELD WORK IN GEOPHYSICS (5 each). Prerequisites, Geology 109, general physics.

Given any quarter, on application. Materials fee, \$5.00 each course. Mr. MacCarthy.

Courses for Graduates

221, 222, 223. ADVANCED STRUCTURAL GEOLOGY (5 each). Prerequisites, Geology 104, 105, 106, 107.

Four lecture and two laboratory hours a week, 221, fall quarter; 222, winter quarter; 223, spring quarter. Laboratory fee, \$5.00 each quarter. Mr. MacCarthy.

224, 225, 226. ADVANCED ECONOMIC GEOLOGY (5 each). Prerequisites, Geology 104, 105, 108.

Two lecture and six laboratory hours a week, 224, fall quarter; 225, winter quarter; 226, spring quarter. On demand. Laboratory fee, \$3.50. Mr. Mann.

228-229. ADVANCED FIELD GEOLOGY (6 each). Prerequisite, Geology 128-129.

Equivalent to six hours a week for two quarters, on demand. Laboratory fee, \$3.50 each quarter. Staff.

241, 242, 243. ADVANCED MINERALOGY (5 each). Prerequisites, Geology 144, 145, except by permission.

Two lecture and six laboratory hours a week, on demand. Laboratory fee, \$5.00 each quarter.

244, 245, 246. ADVANCED PETROLOGY (5 each). Prerequisites, Geology 144, 145.

Two lecture and six laboratory hours a week, fall, winter, and spring quarters, on demand. Laboratory fee, \$5.00 each quarter.

247, 248, 249. SEDIMENTATION (5). Prerequisites, Geology 104, 105, 106.

(1951-1952 and alternate years.) Four lecture and two laboratory hours a week. Laboratory fee, \$5.00. Mr. Ingram.

261, 262. APPLIED GEOPHYSICS (5 each). Prerequisites, Geology 109, mathematics through calculus.

Three lecture and four laboratory hours a week, winter and spring quarters, on demand. Laboratory fee, \$5.00 each quarter. Mr. MacCarthy; assistant.

265. THE PHYSICS OF THE EARTH: GEODYNAMICS (5). Prerequisite, Geology 107, except by special permission.

Winter quarter. Materials fee, \$3.50. Mr. MacCarthy.

271, 272, 273. ADVANCED GEOMORPHOLOGY (5 each). Prerequisite, Geology 107.

(1950-1951 and alternate years.) Five lecture hours a week. Mr. White.

281, 282, 283. STRATIGRAPHY OF NORTH AMERICA (5 each). Prerequisites, Geology 104, 105, 106.

Winter and spring quarters. Materials fee, \$3.50.

284. PRINCIPLES OF PALEONTOLOGY (5). Prerequisites, Zoology 41 or Botany 41, Geology 106.

Fall quarter. Materials fee, \$3.50.

285, 286. ADVANCED PALEONTOLOGY (5 each). Prerequisite, Geology 284.

Three lecture and four laboratory hours a week, winter and spring quarters. Laboratory fee, \$5.00 each quarter.

287. FORAMINIFERA (5). Prerequisite, Geology 106.

Two lecture and six laboratory hours a week, winter quarter, on application. Laboratory fee, \$5.00.

288, 289. MICROPALAEONTOLOGY (5 each). Prerequisite, Geology 287.

Equivalent to five hours a week, each quarter, on application. Laboratory fee, \$5.00 each quarter.

Research Courses

These courses are intended for applicants for advanced degrees. Laboratory work and conferences with the professor in charge of the work. Work in each of these courses may be continued under the same number with sub-letter designations.

- 321. RESEARCH IN STRUCTURAL GEOLOGY (3 or more). Mr. MacCarthy.
- 329. RESEARCH IN ECONOMIC GEOLOGY (3 or more). Mr. Mann.
- 341. RESEARCH IN MINERALOGY (3 or more). Mr. Mann.
- 348. RESEARCH IN SEDIMENTATION (3 or more). Mr. Ingram.
- 349. RESEARCH IN PETROLOGY (3 or more). Mr. Mann.
- 361. RESEARCH IN GEOPHYSICS (3 or more). Mr. MacCarthy.
- 371. RESEARCH IN GEOMORPHOLOGY (3 or more). Mr. White.
- 381. RESEARCH IN STRATIGRAPHY (3 or more).
- 389. RESEARCH IN PALEONTOLOGY (3 or more).

GEOGRAPHY

For A.B. with major in geography there are required, in addition to Geography 38 and Geology 41, six courses in geography and six courses in allied studies, selected with the approval of the chairman of the Department of Geology and Geography. Six courses must be taken outside the Division of Natural Science.

Geography 38 is recommended as preparation for all advanced geography courses.

Courses for Undergraduates

- 38. INTRODUCTION TO GEOGRAPHY (6). Natural science credit.
Five lecture and two laboratory hours a week, each quarter. Laboratory fee, \$3.00. Messrs. Emory, Gibson, Basile.
- 64. INTRODUCTION TO THE STUDY OF THE WEATHER (5).
Three lecture and four laboratory hours a week. Laboratory fee, \$3.50. Mr. Gibson.
- 75. TRADE ROUTES AND TRADE CENTERS (5).
Five lectures a week. Laboratory fee, \$2.00. Mr. Emory.

Courses for Graduates and Advanced Undergraduates

- 117. SOILS (5). Prerequisites, Geology 41, Chemistry 1-2, or equivalent.
Five lecture and field work hours a week, fall quarter. Laboratory fee, \$5.00. Mr. Gibson.
- 118. LAND UTILIZATION MAPPING, RURAL OR URBAN (5).
Laboratory fee, \$3.50. Messrs. Gibson, Emory.

131. GEOGRAPHY OF THE SOUTH (5).
Mr. Gibson.
132. LAND UTILIZATION AND SOIL CONSERVATION (5). Prerequisites, Geography 38 and Geology 41.
Spring quarter. Mr. Gibson.
151. URBAN GEOGRAPHY (5). Prerequisites, Geography 38 and two other courses in geography.
Spring quarter. Mr. Emory.
152. ECONOMIC GEOGRAPHY (5).
Mr. Basile.
153. POLITICAL GEOGRAPHY (5).
Mr. Emory.
154. GEOGRAPHICAL INFLUENCES IN AMERICAN HISTORY (5).
Mr. Emory.
155. CLIMATOLOGY (5).
Mr. Gibson.
156. CONSERVATION OF NATURAL RESOURCES (5).
Mr. Gibson.
157. GEOGRAPHY OF NORTH AMERICA (5).
Mr. Emory.
158. GEOGRAPHY OF EUROPE (5).
Mr. Basile.
159. GEOGRAPHY OF SOUTH AMERICA (5).
Mr. Basile.
160. GEOGRAPHY OF MIDDLE AMERICA (5).
Mr. Basile.
164. SYNOPTIC METEOROLOGY (5). Prerequisites, Geography 64, general physics or equivalent.
Three lecture and four laboratory hours a week, winter quarter. Laboratory fee, \$3.50. Mr. Gibson.
171. CARTOGRAPHY (5).
Two lecture and six laboratory hours a week. Laboratory fee, \$5.00. Mr. Gibson.
- 178, 179. FIELD COURSES IN GEOGRAPHY. Prerequisites, Geography 38, Geology 41.
Messrs. Emory, Gibson, Basile.

Courses for Graduates

201. ADVANCED CLIMATOLOGY (5). Prerequisite, graduate status in geography.
Fall quarter. Mr. Gibson.
211. SPECIAL WORK IN GEOGRAPHY (3 or more). Prerequisites, Geography 38, and two courses in the one hundred bracket.
Messrs. Gibson, Emory.

301. SEMINAR (3 or more) .

On demand. Staff.

302. URBAN FIELD COURSE (5) . Prerequisite, graduate status in geography.

On demand. Mr. Emory.

311. RESEARCH IN GEOGRAPHY (3 or more) .

Messrs. Emory, Gibson.

315. THESIS (5 or more) .

DEPARTMENT OF GERMAN

Professors: RICHARD JENTE, G. S. LANE, W. P. FRIEDERICH

Associate Professor: F. E. COENEN

Assistant Professor: H. W. REICHERT

Lecturer in German: ERNST MORWITZ

Instructors: WILHELM BRAUN, P. F. GUENTHER, M. C. HELFERS, MARY

G. PORTER, H. L. TITUS

Teaching Fellow: A. H. CHAPPEL

Students are requested to consult with the departmental adviser in regard to the requirements for a major in German.

Courses for Undergraduates

1-2. ELEMENTARY GERMAN (10) .

Five hours a week, each quarter. Mr. Reichert; instructors.

3, 4. INTERMEDIATE GERMAN (10) .

Five hours a week, each quarter. Mr. Coenen; instructors.

21, 22. INTRODUCTION TO GERMAN LITERATURE (5 each) . Prerequisite, German 4 or equivalent.

Five hours a week, each quarter. Messrs. Jente and Friederich.

24, 25. SCIENTIFIC GERMAN (5 each) . Prerequisite, German 4 or equivalent. Open only to students with majors in a science.

Five hours a week, each quarter. Mr. Coenen.

31, 32. SPOKEN AND WRITTEN GERMAN (5 each) . Prerequisite, German 4 or equivalent.

Five hours a week, each quarter. Mr. Reichert.

RUSSIAN 76, 77, 78. ELEMENTARY AND INTERMEDIATE RUSSIAN (5 each) .

Five hours a week, on demand. Mr. Titus.

Courses for Graduates and Advanced Undergraduates

109. GERMAN PROSE IN THE NINETEENTH CENTURY (5) . Prerequisite, German 22 or the equivalent.

Winter quarter. Mr. Coenen.

111. GERMAN DRAMA IN THE NINETEENTH CENTURY (5). Prerequisite, German 22 or the equivalent.
Spring quarter. Mr. Coenen.
115. THE GERMAN LYRIC FROM GOETHE TO THE PRESENT (5). Prerequisite, German 22 or the equivalent.
Fall quarter. Mr. Jente.
121. GOETHE'S EARLY WORKS (5). Prerequisite, German 22 or the equivalent.
Winter quarter. Mr. Jente.
122. GOETHE'S LATER WORKS (5). Prerequisite, German 22 or the equivalent.
Spring quarter. Mr. Friederich.
131. LESSING AND HIS CONTEMPORARIES (5). Prerequisite, German 22 or the equivalent.
Spring quarter. Mr. Friederich.
141. SCHILLER (5). Prerequisite, German 22 or the equivalent.
Spring quarter. Mr. Jente.
145. GERMAN PHONETICS (5). Prerequisite, German 31.
One quarter, on demand. Mr. Coenen.
151. CONTEMPORARY GERMAN LITERATURE (1885-1930) (5). Prerequisite, German 22 or the equivalent.
Winter quarter. Mr. Reichert.
155. GOETHE IN ENGLISH TRANSLATION (Comparative Literature 155) (5).
Spring quarter. Mr. Friederich.
161. HISTORY OF THE GERMAN LANGUAGE (5). Prerequisite, a good reading knowledge of German.
Fall quarter. Mr. Lane.
171. GERMAN CIVILIZATION (5). Prerequisite, a knowledge of spoken German.
Winter quarter. Mr. Friederich.

Courses for Graduates

201. MATERIALS AND METHODS OF RESEARCH (2½).
One quarter, according to need. Staff.
221. GOTHIC (5).
Fall quarter. Mr. Lane.
222. OLD HIGH GERMAN (5).
Winter quarter. Mr. Lane.
223. COMPARATIVE GERMANIC GRAMMAR (5).
Spring quarter, on demand. Mr. Lane.
232. OLD SAXON (5).
One quarter, on demand. Mr. Lane.
- 233, 234. OLD NORSE (5 each).
Two quarters, on demand. Mr. Lane.

235, 236. MIDDLE HIGH GERMAN (5 each).

Two quarters, on demand. Mr. Jente.

240, 241. READING COURSE (10).

Through the year. Mr. Friederich.

252. THE RENAISSANCE AND REFORMATION (1400-1600) (5).

Fall quarter. Mr. Jente.

253. FROM OPITZ TO GOTTSCHED (5).

Winter quarter. Mr. Friederich.

261. PHILOSOPHICAL INFLUENCES ON GERMAN CLASSICISM AND ROMANTICISM (5).

Spring quarter. Mr. Reichert.

262. THE ROMANTIC SCHOOL IN GERMANY (5).

Spring quarter. Mr. Coenen.

341, 342. SEMINAR IN LITERATURE (5 each).

Five hours a week, according to need. Messrs. Jente, Friederich.

361, 362. SEMINAR IN LINGUISTICS (5 each).

Five hours a week, according to need. Mr. Lane.

395. RESEARCH (5).

GREEK

(See Classics)

DEPARTMENT OF HISTORY

Professors: *A. R. NEWSOME, W. W. PIERSON, M. B. GARRETT, W. E. CALDWELL, L. C. MACKINNEY, H. T. LEFLER, F. M. GREEN, C. H. PEGG, CECIL JOHNSON, †J. C. SITTERSON, J. L. GODFREY, J. W. PATTON

Assistant Professors: †H. A. BIERCK, JR., †C. O. CATHEY, J. E. KING, F. W. KLINGBERG

Visiting Assistant Professor: §R. K. MURDOCH

Instructors: J. R. CALDWELL, W. M. GEER, F. H. HARRIS, J. B. MACLEOD, W. D. AMIS, H. H. CUNNINGHAM, S. E. FOWLER, E. H. GIBSON, W. F. LAFORGE, F. D. LAURENS, P. A. MARROTTE, C. C. MARTIN, D. C. SOSSOMON, J. F. STEELMAN, W. W. THOMAS, P. A. WALKER

Teaching Fellows: W. B. BROWN, H. J. DOHERTY, S. A. SIMPSON

Waddell Memorial Fellows: J. E. GONZALES, E. A. MILES

Graduate Assistant: JAN SHORE

* Absent on leave, winter quarter, 1951.

† Absent on leave, fall quarter, 1950.

‡ Absent on leave, 1950-1951.

§ 1950-1951.

A student choosing history as his department of major interest must elect either American history or European history as his field of specialization and complete a minimum of six approved courses. The requirement for the major in American history shall be eight approved courses if the student has not completed History 21 and 22 or History 71 and 72 with a minimal grade of C; and for a major in European history a like number (eight) if the student has not completed History 41 and 42, or History 44 and 45, or History 48 and 49 with a minimal grade of C. The student must take at least four of his six or five of his eight courses in his field of specialization; he may elect the remaining two or three courses of his major from the other field. History 41 and 42 or History 44 and 45, or History 48 and 49 may be credited toward a major in American history, and History 71 and 72 may be credited toward a major in European history. Transfer students who major in history must take at least three approved history courses in the University.

Courses for Undergraduates

1-2. SOCIAL SCIENCE (10). Freshman requirement. Prerequisite to all other courses in history.

Five hours a week for two quarters. Fee for materials, \$1.00 each quarter. Members of staff.

21, 22. AMERICAN HISTORY: GENERAL COURSE (10). Sophomore elective.

Five hours a week, fall, winter, and spring quarters. Messrs. Johnson and Klingberg.

41, 42. ANCIENT AND MEDIEVAL HISTORY: GENERAL COURSE (10). Sophomore elective, open to juniors and seniors.

Five hours a week, winter and spring quarters. Messrs. Caldwell and MacKinney.

44, 45. ENGLISH HISTORY: GENERAL COURSE (10). Sophomore elective, open to juniors and seniors.

Five hours a week, winter and spring quarters. Mr. Godfrey.

48. MODERN EUROPEAN HISTORY, 1500-1815 (5). Sophomore elective, open to juniors and seniors.

Fall quarter. Mr. Garrett.

49. MODERN EUROPEAN HISTORY SINCE 1815 (5). Sophomore elective, open to juniors and seniors.

Spring quarter. Mr. Garrett.

51. HISTORY OF THE ANCIENT NEAR EAST (5).

Fall quarter. Mr. Caldwell.

52. HISTORY OF GREECE (5).

Winter quarter. Mr. Caldwell.

53. HISTORY OF ROME (5).

Spring quarter. Mr. Caldwell.

65. EUROPE IN THE CRUSADING AGE, 1000-1300 (5).

Fall quarter. Mr. MacKinney.

66. THE AGE OF THE RENAISSANCE, 1250-1550 (5).

Winter quarter. Mr. MacKinney.

71. AMERICAN HISTORY TO 1865: GENERAL COURSE (5). Junior-senior elective.

Both 21 and 71 may not be taken for credit by a student.

Fall, winter, and spring quarters. Messrs. Lefler, Sitterson, Klingberg, Murdoch.

72. AMERICAN HISTORY SINCE 1865: GENERAL COURSE (5). Junior-senior elective.

Both 22 and 72 may not be taken for credit by a student.

Fall, winter, and spring quarters. Messrs. Lefler, Sitterson, Klingberg, Murdoch.

90. LATIN AMERICAN HISTORY: COLONIAL AND REVOLUTIONARY PERIODS (5).

Fall quarter. Mr. Bierck (Mr. Murdoch in 1950-1951).

91. LATIN AMERICAN COUNTRIES DURING THE NATIONAL PERIOD (5).

Winter quarter. Mr. Bierck (Mr. Murdoch in 1950-1951).

97. HONORS COURSE (5).

Required of all students reading for honors in history.

98. HONORS COURSE (5).

Required of all students reading for honors in European history.

99. HONORS COURSE (5).

Required of all students reading for honors in United States history.

NOTE: Courses in Directed Teaching of the Social Sciences and in Materials and Methods of Teaching the Social Sciences will be found under the School of Education.

Courses for Graduates and Advanced Undergraduates

109. GREEK AND ROMAN HISTORICAL LITERATURE (Classics 109) (5).

Winter quarter. Mr. Allen (of the Department of Classics).

110. EUROPEAN COLONIZATION OF THE NEW WORLD (5). Not open to graduate majors in American history.

Fall quarter. Mr. Johnson.

111. EARLY AMERICAN HISTORY, 1689-1789 (5). Not open to graduate majors in American history.

Winter quarter. Mr. Lefler.

112. UNITED STATES HISTORY, 1789-1848 (5). Not open to graduate majors in American history.

Spring quarter. Mr. Newsome.

113. UNITED STATES HISTORY, 1848-1897 (5). Not open to graduate majors in American history.

Spring quarter. Mr. Klingberg.

114. UNITED STATES HISTORY SINCE 1897 (5). Not open to graduate majors in American history.

Fall quarter. Mr. Sitterson.

121. MEDIEVAL CULTURAL LIFE (5).
(1950-1951 and alternate years.) *Fall quarter*. Mr. MacKinney.
122. SOCIAL-ECONOMIC HISTORY OF THE MIDDLE AGES (5).
(1951-1952 and alternate years.) *Fall quarter*. Mr. MacKinney.
123. HISTORY OF SPAIN (5).
(1951-1952 and alternate years.) *Winter quarter*. Mr. MacKinney.
130. EUROPEAN FOUNDATIONS OF MODERN EDUCATION (Education
142) (5).
Fall quarter. Mr. Knight (of the School of Education).
131. THE PROTESTANT REVOLT (5).
(1951-1952 and alternate years.) *Fall quarter*. Mr. Garrett.
132. THE RISE OF ABSOLUTISM IN EUROPE (5).
(1950-1951 and alternate years.) *Fall quarter*. Mr. Garrett.
133. THE FRENCH REVOLUTION AND THE NAPOLEONIC PERIOD (5).
Winter quarter. Mr. Garrett.
134. RISE OF DEMOCRACY AND NATIONALISM IN MODERN EUROPE
(5).
(1950-1951 and alternate years.) *Spring quarter*. Mr. Garrett.
135. EUROPE, 1870-1918 (5).
Winter quarter. Mr. Garrett.
136. EUROPE SINCE 1918 (5).
Spring quarter. Mr. Pegg.
137. MEDIEVAL ENGLAND (5).
(1950-1951 and alternate years.) *Winter quarter*. Mr. MacKinney.
138. ENGLAND FROM 1485 TO 1760 (5).
(1951-1952 and alternate years.) *Fall quarter*. Mr. Godfrey.
139. GREAT BRITAIN FROM 1760 TO 1867 (5).
(1950-1951 and alternate years.) *Fall quarter*. Mr. Godfrey.
140. GREAT BRITAIN SINCE 1867 (5).
Winter quarter. Mr. Godfrey.
141. DEVELOPMENT OF THE ENGLISH CONSTITUTION (Political Sci-
ence 154) (5).
Fall quarter. Mr. Godfrey.
142. HISTORY OF MODERN RUSSIA (5).
Fall quarter. Mr. Pegg.
143. THE DIPLOMATIC HISTORY OF THE UNITED STATES (5).
Winter quarter. Mr. Johnson.
159. THE BRITISH EMPIRE (Political Science 159) (5).
Spring quarter. Mr. Godfrey.
161. NORTH CAROLINA I, 1584-1835 (5).
Spring quarter. Mr. Lefler.
162. NORTH CAROLINA II, 1835-1950 (5).
Fall quarter. Mr. Newsome.

163. THE OLD SOUTH (5).

Fall quarter. Mr. Green.

164. THE SOUTH SINCE RECONSTRUCTION (5).

Spring quarter. Mr. Green.

167. ECONOMIC HISTORY OF THE UNITED STATES I, 1783-1860 (5).

(1950-1951 and alternate years.) *Winter quarter.* Mr. Sitterson.

168. ECONOMIC HISTORY OF THE UNITED STATES II, 1860-1941 (5).

(1951-1952 and alternate years.) *Winter quarter.* Mr. Sitterson.

170. SOCIAL AND EDUCATIONAL HISTORY OF THE UNITED STATES

(Education 143) (5).

Winter quarter. Mr. Knight (of the School of Education).

171. ARGENTINA, BRAZIL, AND CHILE (5).

(1950-1951 and alternate years.) *Fall quarter.* Mr. Bierck (Mr. Murdoch in *spring quarter*, 1951).

172. INTER-AMERICAN ECONOMIC AND CULTURAL RELATIONS (5).

(Not offered in 1950-1951.) *Spring quarter.* Mr. Bierck.

173. THE BOLIVARIAN STATES SINCE INDEPENDENCE (5).

(1951-1952 and alternate years.) *Fall quarter.* Mr. Bierck.

175. THE CONSTITUTION OF THE UNITED STATES (Political Science

155) (5).

Fall, winter and spring quarters. *Materials fee, \$1.00.* Mr. Jenkins (of the Department of Political Science).

Courses for Graduates

201ab. HISTORIOGRAPHY (6). Required of all graduate students in history.
Three hours a week, fall and winter quarters. Messrs. Caldwell and Newsome.

206. GREEK HISTORY, 500-146 B.C. (5).

(1950-1951.) *Spring quarter.* Mr. Caldwell.

207. ROMAN HISTORY, 133-31 B.C. (5).

(1951-1952.) *Fall quarter.* Mr. Caldwell.

208. ROMAN HISTORY, 31 B.C.-180 A.D. (5).

(1951-1952.) *Spring quarter.* Mr. Caldwell.

224. THE AGE OF THE RENAISSANCE, 1250-1550 (5).

Spring quarter. Mr. MacKinney.

233. THE FRENCH REVOLUTION AND THE NAPOLEONIC PERIOD (5).

(1951-1952 and alternate years.) *Spring quarter.* Mr. Garrett.

236. RECENT AND CONTEMPORARY EUROPEAN HISTORY (5).

Winter quarter. Mr. Pegg.

249. CIVILIZATION IN THE AMERICAN COLONIES (5).

(1950-1951 and alternate years.) *Fall quarter.* Mr. Lefler.

250. THE AMERICAN REVOLUTION AND ITS BACKGROUND (5).

(1951-1952 and alternate years.) *Fall quarter.* Mr. Lefler.

251. THE FEDERAL PERIOD, 1783-1815 (5).
(1950-1951 and alternate years.) *Winter quarter*. Mr. Newsome.
252. THE MIDDLE PERIOD, 1815-1860 (5).
(1951-1952 and alternate years.) *Winter quarter*. Mr. Newsome.
254. CIVIL WAR AND RECONSTRUCTION (5).
(1950-1951 and alternate years.) *Winter quarter*. Mr. Green.
255. FOUNDATIONS OF MODERN AMERICA (5).
(1951-1952 and alternate years.) *Spring quarter*. Mr. Klingberg.
256. RECENT AND CONTEMPORARY UNITED STATES (5).
(1950-1951 and alternate years.) *Spring quarter*. Mr. Sitterson.
271. LATIN AMERICAN HISTORY: THE COLONIAL PERIOD AND THE WARS OF INDEPENDENCE (5).
(1951-1952 and alternate years.) *Spring quarter*. Mr. Bierck.
272. LATIN AMERICAN HISTORY: DEVELOPMENT OF NATIONALITY IN SOUTH AMERICA (5).
(1952-1953 and alternate years.) *Spring quarter*. Mr. Bierck.
- 301a. ANCIENT HISTORY (3).
Conference and reports.
Winter quarter. Mr. Caldwell.
- 311a. MEDIEVAL HISTORY (3).
Conference and reports.
Fall quarter. Mr. MacKinney.
- 321ab. MODERN EUROPEAN HISTORY (6).
Conference and reports.
Fall and winter quarters. Mr. Pegg.
- 323ab. MODERN ENGLISH HISTORY (6).
Conference and reports.
Fall and winter quarters. Mr. Godfrey.
- 331a. AMERICAN COLONIAL HISTORY (3).
Conference and reports.
Winter quarter. Mr. Lefler.
- 333ab. HISTORY OF THE UNITED STATES, 1783-1860 (6).
Conference and reports.
Fall and spring quarters. Mr. Newsome.
- 335abc. HISTORY OF THE SOUTH (9).
Conference and reports.
Fall, winter, and spring quarters. Mr. Green.
- 337a. RECENT HISTORY OF THE UNITED STATES (3).
Conference and reports.
Fall quarter. Mr. Sitterson. (Offered in *winter quarter*, 1950-1951.)
341. READING COURSE (5).
Any quarter. Members of the graduate faculty.
- 370a. LATIN AMERICAN HISTORY (3).
Conference and reports.
(Not offered in 1950-1951.) *Winter quarter*. Mr. Bierck.

370b. LATIN AMERICAN HISTORY (3).

Conference and reports.

Spring quarter. Mr. Pierson.

375. THESIS COURSE (5 or 10).

Any quarter. Members of the graduate faculty.

SCHOOL OF JOURNALISM

Professors: O. J. COFFIN, C. P. RUSSELL, *J. R. PARKER, WALTER SPEAR-
MAN

Associate Professors: S. W. SECHRIEST, J. R. RILEY

Assistant Professor: J. L. MORRISON

Instructor: LOLA LEE MUSTARD

Lecturer: L. M. POLLANDER (Advertising)

The courses in the School of Journalism are open generally to undergraduates of the University, but registration should be made only after consultation with a member of the Journalism faculty.

Curriculum Leading to the Degree of A.B. in Journalism: The course of study for the first two years is the same as that required of other candidates for the A.B. degree. The following courses are specified in the junior and senior years: one course in economics, two courses in American history or North Carolina history, two courses in political science (American government), six to eight courses in journalism, electives to complete hours and courses for the A.B. degree.

Since all journalism assignments must be typewritten, it is advisable for every student to be able to type with reasonable skill.

Courses for Undergraduates

30. COLLEGE REPORTING.

A course with a maximum credit of five quarter hours for reporting done on the student newspaper under the supervision of the Department of Journalism. Registration with department required.

31. COLLEGE EDITING.

A similar credit course for those who do the editorial work of the student newspaper. Registration with department required.

53. NEWS WRITING I (5). Prerequisite for Journalism 54.

Fall, winter, and spring quarters. Laboratory fee, \$2.00. Messrs. Spearman, Morrison, Sechriest, Riley, Miss Mustard.

54. NEWS WRITING II (5). Prerequisite, Journalism 53 or the equivalent.

Fall, winter, and spring quarters. Laboratory fee, \$2.00. Messrs. Spearman, Morrison, Sechriest, Riley, Miss Mustard.

*Professor Emeritus.

55. NEWS WRITING III (5). Prerequisites, Journalism 53 and 54 or the equivalent.

Fall, winter, and spring quarters. Laboratory fee, \$2.00. Messrs. Coffin, Spearman.

56abc. FEATURE WRITING (3 each).

Fall, winter, and spring quarters. Messrs. Coffin and Riley.

57. NEWS METHODS AND TREATMENTS (5). Prerequisite, Journalism 53 or 54.

Fall, winter, and spring quarters. Laboratory fee, \$2.00. Mr. Sechriest.

58. EDITORIAL WRITING (3).

Fall, winter, and spring quarters. Mr. Coffin.

59. COUNTRY NEWSPAPER PRODUCTION (5).

Fall and spring quarters. Laboratory fee, \$2.00. Mr. Riley.

60. BOOK REVIEWING AND DRAMATIC CRITICISM FOR NEWSPAPERS (3).

Winter quarter. Mr. Spearman.

61. HISTORY OF JOURNALISM (3).

Fall and spring quarters. Mr. Russell.

62. NEWSPAPER ADVERTISING I (5).

Fall, winter, and spring quarters. Laboratory fee, \$2.00. Mr. Pollander, Miss Mustard.

63. NEWSPAPER ADVERTISING II (5). Prerequisite, Journalism 62.

Fall and spring quarters. Laboratory fee, \$2.00. Mr. Pollander.

64, 65, 66. CREATIVE WRITING (5 each). Instructor's permission necessary. *Continuing courses, one taught each quarter. Mr. Russell.*

NOTE: These courses elective, by arrangement with the instructor, to those with majors in other fields. See English 53.

67. ADVERTISING COPYWRITING (3). Prerequisite, Journalism 62.

Fall, winter, and spring quarters. Laboratory fee, \$2.00. Miss Mustard.

73. RADIO JOURNALISM (5).

Winter and spring quarters. Laboratory fee, \$2.00. Mr. Morrison.

74. BUSINESS JOURNALISM (3).

Fall and winter quarters. Mr. Morrison.

80. NEWS PHOTOGRAPHY (3). Instructor's permission necessary.

Fall, winter, and spring quarters. Laboratory fee, \$5.00. Mr. Sechriest.

LATIN

(See Classics)

DEPARTMENT OF LIBRARY SCIENCE

Professors: *SUSAN G. AKERS, †LUCILE KELLING

Assistant Professor: MARGARET E. KALP

The courses listed below may be taken by advanced undergraduates in the College of Arts and Sciences with the approval of the Dean of the School of Library Science. They are planned for students who wish to meet the requirements for certification as part- or full-time school librarians in North Carolina. Besides the courses listed below the student will take the courses in education required for certification and a major or minor program in English, French, Latin, mathematics, natural science, or social science. These programs are outlined under the School of Education, (pp. 156-67).

Students who choose a major program in library science will take all of the courses listed below; those who choose a minor program will omit Library Science 96 and take 95 as a three-hour course.

Courses for Undergraduates

‡93. SURVEY AND EVALUATION OF BOOKS AND RELATED MATERIALS FOR CHILDREN (3).

Winter quarter. Miss Kalp.

94. PLACE OF THE LIBRARY IN THE SCHOOL (3).

Fall quarter. Miss Kalp.

95. SELECTION AND USE OF REFERENCE MATERIALS (3 or 5).

Fall quarter. Miss Kalp.

96. CATALOGUING AND CLASSIFICATION FOR SCHOOL LIBRARIES (5).

Winter quarter. Miss Kalp.

122. THE SELECTION OF BOOKS AND RELATED MATERIALS FOR YOUNG PEOPLE (5).

Winter quarter. Miss Kalp.

123. THE SELECTION OF BOOKS AND RELATED MATERIALS FOR CHILDREN (5).

Spring quarter. Miss Kalp.

143. SCHOOL LIBRARY ORGANIZATION AND ADMINISTRATION (5).

Spring quarter. Miss Kalp.

* Absent on leave, August 25, 1950-April 15, 1951.

† Acting dean, School of Library Science, August 25, 1950-April 15, 1951.

‡ Not included in the 28 quarter hour program for school librarians; a special course for elementary school teachers.

DEPARTMENT OF MATHEMATICAL STATISTICS

Professors: HAROLD HOTELLING, RAJ CHANDRA BOSE, SAMARENDRA NATH ROY, H. E. ROBBINS

Assistant Professors: G. E. NICHOLSON, JR., WASSILY Hoeffding

Lecturer (Spring, 1951): SUDHISH GOVIND GHURYE

Graduate Assistant: P. N. SOMERVILLE

This department is devoted chiefly to graduate teaching and to research in the theory of statistics, but qualified undergraduates are admitted, by special permission only, to courses with numbers below 200. The minimum prerequisite for courses with numbers above 130 is advanced calculus or other mathematical analysis higher than elementary integral calculus, for example, theory of functions, or differential equations.

Undergraduates looking forward to advanced work in statistics are strongly urged to acquire as much advanced mathematics as possible, and also to lay a groundwork of solid knowledge of some field in which statistical methods are applied. Examples of such fields are economics, sociology, psychology, genetics, astronomy, and many others. Applied statistical work of the highest grade requires a combination of knowledge of the nature of the application with the substantial knowledge of mathematical statistics and the supporting mathematics necessary for working out new substitutes for standard techniques when, as often happens, the latter do not fit the need. For this purpose it is not enough merely to know standard methods. Their underlying assumptions and mathematical derivations must also be clearly understood, and the statistician on these high levels must be proficient in the mathematical type of research needed.

The Institute of Statistics is an agency of the consolidated University of North Carolina and includes the Department of Mathematical Statistics at Chapel Hill as one of its parts. It also includes the Department of Experimental Statistics at Raleigh. Graduate students majoring in either of these departments normally take some work in the other and schedules and transportation are arranged to facilitate this. Certain Experimental Statistics courses are offered in Chapel Hill in the sessions 1950-1951 and 1951-1952. Further information may be found in the Institute of Statistics section of this catalogue, p. 415, and full details are in the separately issued Graduate School pamphlet on Statistics.

The attention of students of statistics is called to closely related courses in other departments, especially to Mathematics 110 (Finite

Differences), Philosophy 134 and 235 (Symbolic Logic), Physics 221 (Statistical Mechanics), Chemistry 284 and 285 (Statistical Problems in Chemistry), Economics 170 (Economic Statistics) and 172 (Index Numbers and Analysis of Economic Time Series), Psychology 132 (Test Construction), and Sociology 197 (Population Statistics).

Courses for Graduates and Advanced Undergraduates

The courses numbered 100 to 183 inclusive below do not carry any course or hour credit toward bachelors' degrees granted at Chapel Hill.

The courses 100, 104, and 105 are intended for students whose major field will be other than statistics, and not as initial steps to an advanced specialization in statistics. For the later purpose Statistics 131 and 132 are basic.

100. PRINCIPLES OF STATISTICAL INFERENCE (4). Same as Statistics 412 (Experimental Statistics). Prerequisite, college algebra.

An introduction to fundamental concepts of statistical inference, using as little mathematics as possible. Emphasis on comprehension and interpretation. The probability basis of statistics. The most common statistical techniques, illustrated with data from biological, psychological, economic, and other fields. Designed to supplement courses given in departments of application.

Fall and winter quarters. Mr. Nicholson.

104. INTRODUCTION TO STATISTICS I (4). Prerequisite, integral calculus. Classification of data. Distributions. Probability. Moments. Order statistics. Binomial, Poisson, and normal distributions. Nature of statistical hypotheses. Testing hypotheses. Efficiency of tests and estimates. Large-sample theory. Practical applications.

Winter quarter. Mr. Nicholson.

105. INTRODUCTION TO STATISTICS II (4). Prerequisite, Mathematical Statistics 104.

A continuation of 104. Regression and correlation from the point of view of least squares and the analysis of variance. Bivariate and multivariate distributions. Theory and application of chi tests. Efficient designs of experiments. Illustrations from numerous fields of application.

Spring quarter. Mr. Nicholson.

126. SAMPLE SURVEYS (5). Prerequisite, Statistics 105 or Statistics 132.

Different types of sampling with reference to finite as well as infinite populations. Non-response. Optimum allocation of resources. Practical problems arising in the planning, execution and analysis of a survey. Different types of surveys with illustrations.

Spring quarter. Mr. Bose.

131. ELEMENTARY PROBABILITY (5). Prerequisite, advanced calculus.

Logical foundations. Permutations and combinations. Variates, expectations, moments, and cumulants. Characteristic functions. Limit Theorems. Laws of great numbers.

Fall quarter. Mr. Robbins.

132. STATISTICAL INFERENCE (5). Prerequisite, Statistics 131.

Fundamentals of the use of observations to test hypotheses and estimate unknown quantities. The accuracy of means and variances. Illustrations from physical, biological, and social sciences.

Winter quarter. Mr. Robbins.

133. LEAST SQUARES AND TIME SERIES (5). Prerequisites, Statistics 132 and Mathematics 147 (Matrices).

The method of least squares, with probability interpretations, and applications to social and natural sciences. Time series problems, including trends, seasonal variations, periodicities, correlations.

Spring quarter. Mr. Hotelling.

143. SEQUENTIAL ANALYSIS (5). Prerequisite, Statistics 132.

Methods in which the number of observations is not predetermined but depends on the observations themselves. Applications to design of experiments and industrial quality control.

Spring quarter. Mr. Hoeffding.

144. CORRELATION, CONTINGENCY, AND CHI TESTS (5). Prerequisite, Statistics 132; corequisite, Mathematics 147 (Matrices).

Elements of the theory of testing composite hypotheses. General multivariate distributions and their characteristic functions. The meaning of population correlations. Multivariate normal populations; total, partial and multiple correlations. The best sample estimate of each of these and the best test of any hypothesis concerning any of them. Singular multivariate distributions. Tests of independence, homogeneity, and goodness of fit. Contingency tables; exact tests for independence and the chi approximation. Many-dimensional contingency tests.

Fall quarter. Mr. Roy.

145. MULTIVARIATE ANALYSIS (5). Prerequisites, Statistics 144 and Mathematics 147 (Matrices).

Optimum tests of hypotheses concerning means of multivariate normal populations. Generalization of Student's ratio. Power of this test. Optimum tests, for different classes of alternatives, of the hypothesis of equality of two dispersion matrices for two p -variate normal populations. Tests of independence of sets of variates. Relations between two sets of variates. Canonical correlations.

Winter quarter. Mr. Roy.

147. ANALYSIS OF VARIANCE AND COVARIANCE (5). Prerequisites, Statistics 131 and Mathematics 147 (Matrices); corequisite, Statistics 132.

(Not offered in 1950-1951 or 1951-1952.)

148. LINEAR ESTIMATION AND ANALYSIS OF VARIANCE AND COVARIANCE (5). Prerequisites, Statistics 132 and Mathematics 147 (Matrices).

Theory of linear estimation and tests of linear hypotheses. One- and many-way classifications with equal or unequal numbers in the cells. Interaction. Components of variance. Orthogonal polynomials. Missing variates. Analysis of covariance. Transformations. Applications.

Fall quarter. Mr. Bose.

153. RANK ORDER STATISTICS AND NON-PARAMETRIC INFERENCE (5). Prerequisite, Statistics 132.

Estimation and testing of hypotheses when the functional form of the underlying distribution is unknown. Rank order statistics, rank and sign tests, and tests based on permutations of observations. Theory of runs. Non-parametric tolerance limits.

Winter quarter. Mr. Hoeffding.

182. MATHEMATICAL ECONOMICS (Economics 182) (5). Prerequisite, Mathematics 171 (Advanced Calculus); corequisite, Mathematics 147 (Matrices).

Perfect and imperfect competition. Monopoly. Utility vs. ranking of preferences. Relations between commodities. General equilibrium. Effects of taxes and controls of various kinds. Index numbers.

(1950-1951 and alternate years.) *Fall quarter*. Mr. Hotelling.

183. ADVANCED MATHEMATICAL ECONOMICS (Economics 183) (3). Prerequisites, Statistics 182 and Mathematics 141 (Differential Equations).

Dynamic variations in the economy. Development of elements of the calculus of variations and of stochastic difference equation theory, with applications to economic problems. Mathematical treatment of business cycles. Valuation of property taking account of depreciation and depletion. Most profitable rates of exploitation of mineral and biological resources. Relation of private exploitation to the public welfare and effects of various taxes and regulation.

(1950-1951 and alternate years.) *Winter quarter*. Mr. Hotelling.

Courses for Graduates Only

216. ADVANCED MULTIVARIATE ANALYSIS (5). Prerequisite, Statistics 145.

Optimum tests (for different classes of alternatives) of the hypothesis of equality of corresponding means for $k (> 2)$ p -variate normal populations. The multivariate analysis of variance. The power functions of such tests. The power functions of the optimum tests for the hypothesis of equality of dispersion matrices. The problem of the rank of a set of observed variates, and some aspects of factor analysis. Some recent work in multivariate analysis.

Spring quarter. Mr. Roy.

225. THEORY OF ESTIMATION AND TESTING HYPOTHESES (5). Prerequisite, Statistics 132.

Consistent, efficient and sufficient statistics. Unbiased estimates of minimum variance. Estimates that minimize the maximum risk. Maximum likelihood estimates. The theory of testing hypotheses. The theory of confidence intervals.

Fall quarter. Mr. Hoeffding.

230. INTERMEDIATE PROBABILITY (5). Prerequisites, Statistics 131 and Mathematics 176 (Complex Variables I).

The general theory of measure and integration, with special reference to random variables. Properties of characteristic functions. Central limit theorems.

Winter quarter. Mr. Robbins.

231. ADVANCED PROBABILITY (5). Prerequisite, Statistics 230.

Continuation of Statistics 230. Probability distributions in spaces of an infinite number of dimensions. Strong convergence and ergodic theory.

(Not offered in 1950-1951 or 1951-1952.) Mr. Robbins.

232. STATISTICAL DECISION PROBLEMS (5). Prerequisite, Statistics 230.

A survey of the general theory of statistical decision which has been developed during the last few years and which goes beyond the classical theory of estimation and testing hypotheses. Topics covered include the general multi-decision problem, admissibility, Bayes and minimax solutions, and complete classes of decision functions. Wald's book *Statistical Decision Functions* will be used as a text.

Spring quarter. Mr. Robbins.

235. STOCHASTIC PROCESSES AND THEIR APPLICATIONS (5). Prerequisite, Statistics 131; corequisites, Mathematics 147 (Matrices), Mathematics 176 (Complex Variables I).

Cumulated random motions and other examples of stochastic processes from the physical, biological, and social sciences. Elements of the general theory. Discrete and continuous processes; stationary and evolutionary processes. Bearing on the statistical analysis of time series.

Fall quarter. Mr. Hotelling.

237. THEORY OF TIME SERIES (5). Prerequisite, Statistics 132; corequisite, Statistics 133.

Evolutionary and stationary discrete processes. Methods of analysing non-stationary series; trend lines, moving averages, variate differences. Elements of the theory of stationary discrete processes; the decomposition theorem. Special models: the sinusoidal limit theorem. Linear stochastic difference equations. Tests for randomness. Distribution of the serial correlation coefficient. Periodogram. Correlogram.

(1950-1951 and alternate years.) *Spring quarter.* Messrs. Hotelling and Ghurye.

250. MATHEMATICS OF EXPERIMENTAL DESIGN (5). Prerequisites, Statistics 132 and 148.

Unified mathematical theory for the analysis of data from experimental designs. Applications to randomized blocks, Latin squares, lattice designs, balanced and partially balanced incomplete block designs and Youden's squares. Modification for missing plots. Intra-block and inter-block analysis. Split plot and factorial designs. Applications of the methods of modern algebra and finite geometry to the combinatorial problems arising in the design of experiments.

Winter quarter. Mr. Bose.

352. SEMINAR ON THEORETICAL AND APPLIED STATISTICS (5). Prerequisite, work more advanced than Statistics 132.

353. SEMINAR IN ADVANCED MATHEMATICAL STATISTICS (5). Prerequisite, a course requiring Statistics 132 as prerequisite; also a knowledge of matrices, finite differences, and complex variables.

Winter quarter. Mr. Hotelling.

361, 362, 363. SPECIAL PROBLEMS (5 each).

371, 372, 373. ADVANCED RESEARCH (5 each).

DEPARTMENT OF MATHEMATICS

Professors: W. M. WHYBURN, T. F. HICKERSON, J. W. LASLEY, JR., A. W. HOBBS, E. T. BROWNE, E. L. MACKIE, *J. B. LINKER, M. A. HILL, A. S. WINSOR, R. M. TRIMBLE, V. A. HOYLE, E. A. CAMERON, A. T. BRAUER, F. B. JONES

Associate Professor: L. L. GARNER

Assistant Professors: I. R. HERSHNER, JR., W. R. MANN

Part-time Instructors: MARGARET SEELBINDER, G. C. CALDWELL, G. W. CAROW, B. B. GRESHAM, H. T. LABORDE, G. W. MEDLIN, G. B. PARRISH, A. H. PAYNE, T. J. PIGNANI, R. Z. VAUSE, W. J. DOUGLASS, MARY F. NUNN, T. L. NABORS, HARRY SMITH, JR., J. H. WAHAB, E. J. PELLICCIARO

Teaching Fellows: L. P. BURTON, EMILIE HAYNESWORTH

*Absent on leave, spring quarter, 1951.

For the degree of A.B. with major in mathematics there are required:

I. From six to eight courses beyond Mathematics 31. These courses shall include:

(a) Mathematics 32, 33, 36; or 34-35, 36; or their equivalent.

(b) At least three courses numbered 100 or above, of which two or more shall be in pure mathematics.

II. From five to seven courses from the departments of Botany, Chemistry, Geology, Physics, Psychology, Zoology and Philosophy 21, 134 or 141.

III. From five to seven courses outside the Division of Natural Sciences.

Those students who plan to teach in the public schools should read the statement on pages 156-57.

The following curriculum leading to the Bachelor of Science degree in Mathematics is now available:

FRESHMAN YEAR

Mathematics 7, 8, 31
Social Science 1, 2
English 1, 2

French or German—Two courses
of one language
Hygiene 11 and freshman physical
education

SOPHOMORE YEAR

Mathematics 34-35, 36; or 32, 33, 36
English 3, and 4 or 5 or 6 or elective
in the fine arts; or two courses in
classical language or literature
French or German—Two courses,
continuing the language begun in
the first year

Physics 24, 25; or 34, 35; or Chemistry
1, 2, 3 (or 1, 2, 31), if the two
physics courses are elected in the
junior or senior years
Sophomore physical education

JUNIOR AND SENIOR YEARS

Six courses in mathematics, including
141, and 131 or 136
Six divisional courses of which one
must be Botany 41 or Zoology 41,
and among which no mathematics

courses except Mathematics 41
and/or 51 may be included
Four non-divisional courses
Two free electives

Before registering for Mathematics R or Mathematics 7, each student is required to take a mathematics placement test.

Courses for Undergraduates

R. INTERMEDIATE ALGEBRA (0).

Five hours a week, each quarter during 1950-1951. Staff.

7X. COLLEGE ALGEBRA (5).

This course is for students who have taken and passed Mathematics R.
Each quarter. Staff.

6. MATHEMATICS OF FINANCE (5).

Each quarter. Staff.

7. COLLEGE ALGEBRA (5).

Each quarter. Staff.

8. PLANE TRIGONOMETRY (5).

Each quarter. Staff.

9. TRIGONOMETRY AND MATHEMATICS OF FINANCE (5).

Each quarter. Staff.

31. PLANE ANALYTIC GEOMETRY (5). Prerequisites, Mathematics 7 and 8.

Each quarter. Messrs. Lasley, Hobbs, Winsor, Linker, Hoyle.

32. DIFFERENTIAL CALCULUS (5). Prerequisite, Mathematics 31.

Each quarter. Messrs. Lasley, Hobbs, Mackie, Garner.

33. INTEGRAL CALCULUS (5). Prerequisite, Mathematics 32.

Winter and spring quarters. Messrs. Mackie, Hoyle.

34-35. INTENSIVE COURSE IN THE DIFFERENTIAL AND INTEGRAL CALCULUS (10). Prerequisite, Mathematics 31.

A two-quarter course in which calculus principles and operations share emphasis. Designed especially for majors in mathematics and closely related fields.

Five hours a week, fall and winter quarters. Mr. Mackie.

36. TOPICS IN CALCULUS (5). Prerequisite, Mathematics 33 or 35.

Partial differentiation, limits and continuity, multiple integrals, series.

Five hours a week, spring quarter. Mr. Mackie.

41. MECHANICAL DRAWING (5).

Six hours a week, winter quarter. Laboratory fee, \$1.00. Mr. Trimble.

51. PLANE SURVEYING (5). Prerequisites, Mathematics 7 and 8.

Four lecture and two field hours a week, fall and spring quarters. Laboratory fee, \$4.00. Mr. Trimble.

62. INTRODUCTORY STATISTICS (5). Prerequisites, Mathematics 7 and 8 or 9.

Fall quarter. Mr. Hill.

Courses for Graduates and Advanced Undergraduates

102. ELEMENTARY ALGEBRA FROM AN ADVANCED VIEWPOINT (5). Prerequisite, Mathematics 33.

Designed especially for teachers, the course treats topics of algebra in a way that provides both the skill and the mathematical maturity needed for good instruction in the subject. Among the topics included are: rational, real, and complex numbers; systems of equations; determinants; probability.

Fall quarter. Mr. Hill.

103. COLLEGE GEOMETRY (5). Prerequisite, Mathematics 33.

A triangle and its associated circles. Orthogonal circles and inverse points. Poles and polars. Coaxal circles. Isogonal lines. Similitude. Inversion. Brocard's figures. Lemoine circles.

Winter quarter. Mr. Winsor.

110. CALCULUS OF FINITE DIFFERENCES (5). Prerequisite, Mathematics 33 or equivalent.

Differencing functions, summation of series, relations among operators, interpolation formulas, Bernoulli's and Euler's polynomials, solution of difference equations.

Spring quarter. Mr. Garner.

111. ELEMENTARY MATHEMATICAL STATISTICS (5). Prerequisite, Mathematics 33 or equivalent.

A course dealing with elementary theory and applications, with special emphasis on the mathematical development of frequency curves, correlation, sampling, etc.

Winter quarter. Mr. Hill.

121. THEORETICAL AND APPLIED MECHANICS: STATICS (5). Prerequisite, Mathematics 32.

Force systems; friction; centroids; moment of inertia.

Fall quarter. Mr. Hickerson.

122. THEORETICAL AND APPLIED MECHANICS: KINEMATICS AND KINETICS (5). Prerequisite, Mathematics 33.

Motion of particles and rigid bodies; force, mass, and acceleration; work and energy; impulse and momentum; vibrations.

Winter quarter. Mr. Hickerson.

123. STRENGTH OF MATERIALS (5).

Stresses and strains in structural materials; riveted and welded joints; torsion and bending; stresses in beams and columns; deflection of beams; special topics.

Spring quarter. Mr. Hickerson.

124. HYDRAULICS (5). Prerequisites, Mathematics 121, 123. (1951-1952 and alternate years). *Winter quarter.* Mr. Trimble.

125. STRUCTURAL FRAMEWORKS (5). Prerequisites, Mathematics 121, 123.

Analyses of continuous beams and frames of constant and variable moment of inertia by fixation factors and moment distribution; also a critical study of retaining walls, dams, and tanks.

Winter quarter. Mr. Hickerson.

127. TRANSPORTATION FACILITIES (3).

Highway surveying and planning, traffic and parking studies; also route surveys and design applied to airports, railroads, and rapid transit.

Winter quarter. Mr. Hickerson.

131. THEORY OF EQUATIONS (5). Prerequisite, Mathematics 33 or equivalent.

Properties of polynomials in a field, equations in the rational and real number fields, elimination, resultants, symmetric functions, algebraic field extensions, and ruler and compass constructions.

Winter quarter. Mr. Cameron.

136. INTRODUCTION TO MODERN ALGEBRA (5). Prerequisite, Mathematics 33 or equivalent.

Introduction to integral domains, fields, groups, vector spaces, theory of linear dependence, systems of linear equations, linear transformations, and matrices.

Spring quarter. Mr. Cameron.

141. DIFFERENTIAL EQUATIONS (5). Prerequisite, Mathematics 33 or equivalent.

This course is designed for students specializing in mathematics and the sciences. It treats ordinary differential equations with applications in mechanics, geometry, and physics.

Fall and spring quarters. Messrs. Linker, Hoyle.

147. INTRODUCTION TO THE THEORY OF DETERMINANTS AND MATRICES (5). Prerequisite, Mathematics 33 or equivalent.

A study of the basic concepts and theorems concerning determinants and matrices; designed principally for students of statistics but open also to other students of mathematics.

Fall quarter. Mr. Browne.

149. PARTIAL DIFFERENTIAL EQUATIONS (5). Prerequisite, Mathematics 141.

A study of some of the partial differential equations of physics and boundary problems.

(1950-1951 and alternate years.) *Spring quarter.* Mr. Hobbs.

150. SYNTHETIC PROJECTIVE GEOMETRY (3). Prerequisite, Mathematics 33 or equivalent.

A study of forms of the first and second orders by synthetic methods. Projective correspondences, poles and polars, metric specializations.

Summer session. Mr. Lasley.

151. ANALYTIC PROJECTIVE GEOMETRY I (5). Prerequisite, Mathematics 33 or equivalent.

Projective geometry of one-dimensional forms, treated analytically, with special emphasis on applications to theory of equations.

Fall quarter. Mr. Lasley.

152. ANALYTIC PROJECTIVE GEOMETRY II (5). Prerequisite, Mathematics 151.

Projective geometry of two-dimensional forms, treated analytically, with special emphasis on the theory of conics.

Winter quarter. Mr. Lasley.

161. ANALYTIC GEOMETRY OF SPACE (5). Prerequisite, Mathematics 33.

A study from the analytic point of view of loci in three dimensions, with special emphasis on systems of planes and on quadric surfaces.

Spring quarter. Mr. Lasley.

166. THEORY OF FUNCTIONS OF REAL VARIABLES I (5). Prerequisite, Mathematics 171.

The real number system; point sets, theory of measure; correspondences and transformations.

Spring quarter. Mr. Whyburn.

171. ADVANCED CALCULUS I (5). Prerequisite, Mathematics 33 or equivalent. Mathematics 36 and 141 are recommended.

Limits, continuity, infinitesimals, differentials, power series, partial and implicit differentiation, definite and line integrals.

Fall quarter. Mr. Hobbs.

172. ADVANCED CALCULUS II (5). Prerequisite, Mathematics 171.

Gamma and beta functions; Legendre polynomials; Bessel functions; Fourier series; Laplace's equation; Harmonic functions; Potential.

Winter quarter. Mr. Hobbs.

173. TOPICS IN APPLIED MATHEMATICS (5).

A study of special methods useful in the solution of boundary value problems associated with second order partial differential equations—Orthonormal expansions, Laplace transform, conformal mapping, perturbation methods, methods of characteristics, etc.

Spring quarter. Mr. Mann.

176. THEORY OF FUNCTIONS OF A COMPLEX VARIABLE I (5). Prerequisite, Mathematics 36 or equivalent. Mathematics 171 is recommended.

Differentiation and integration of a function of a complex variable, mapping of elementary functions, infinite series, analytical continuation and properties of analytic functions.

Fall quarter. Mr. Hershner.

177. SERIES EXPANSIONS (5). Prerequisites, Mathematics 171, 172.

Power series; uniform convergence of series and infinite integrals; change of order in multiple limit processes; Dirichlets conditions for the convergence of Fourier series; properties of the Fourier constants; proof of the closure and completeness of the eigen functions associated with the Sturm-Liouville boundary value problem; expansion theorems for Bessel functions, Legendre polynomials and Hermite polynomials.

Fall quarter. Mr. Mann.

178. SPECIAL FUNCTIONS (5). Prerequisite, Mathematics 176.

A study of the more important properties of Bessel, Hankel, and Neumann functions; the gamma and beta functions; the hypergeometric function; surface and spherical harmonics; Legendre, Laguerre, and Hermite polynomials.

Winter quarter. Mr. Mann.

181. ELEMENTARY THEORY OF NUMBERS (5).

An elementary course in theory of rational integers, divisibility, scales, simplest properties of prime numbers, Diophantine equations, congruences, quadratic residues. Applications in elementary mathematics and mathematical games.

Fall quarter. Mr. Brauer.

191. VECTOR AND TENSOR ANALYSIS (5). Prerequisites, Mathematics 141 and 161 or equivalent.

Vector and tensor algebra applied to geometry and physics. Students taking this course should be familiar with ordinary differential equations and should have some knowledge of analytic geometry of three dimensions.

Fall quarter. Mr. Hoyle.

Courses for Graduates

207. ADVANCED THEORY OF FUNCTIONS OF A COMPLEX VARIABLE (5). Prerequisite, Mathematics 176.

Topics cover properties of analytic functions, calculus of residues, contour integration, integral functions, meromorphic functions, periodic functions, Riemann Surfaces, and conformal representation.

Winter quarter. Mr. Hershner.

208. CONFORMAL MAPPING (5). Prerequisite, Mathematics 207.

This course treats the modern aspects of the theory of conformal mapping.

(1951-1952 and alternate years.) *Spring quarter.* Mr. Hershner.

209. NORMAL FAMILIES (5). Prerequisite, Mathematics 207.
This course will treat Normal Families of analytic functions and their applications.
Spring quarter. Mr. Hershner.
226. FOUNDATIONS OF GEOMETRY (5).
A study of rigorous logic in geometry: postulates, systems of geometry, etc. Contributions of Pasch, Peano, Hilbert, Veblen, and the postulational school.
Summer session. Mr. Whyburn.
230. ADVANCED NUMBER THEORY OF RATIONAL INTEGERS I (5).
Prerequisite, Mathematics 181.
Recent results in elementary number theory. Arithmetic theory of binary quadratic forms.
(1951-1952 and alternate years.) *Winter quarter.* Mr. Brauer.
231. ADVANCED NUMBER THEORY OF RATIONAL INTEGERS II (5).
Prerequisite, Mathematics 181.
Selected problems of additive number theory and the geometry of numbers. Introduction to the analytic theory of numbers.
(1951-1952 and alternate years.) *Spring quarter.* Mr. Brauer.
232. ALGEBRAIC THEORY OF NUMBERS I (5). Prerequisites, Mathematics 131 and 181.
Existence of transcendental numbers, transcendence of e and π ; number theory in Euclidean fields, biquadratic and cubic residues; general algebraic fields; theory of ideals.
(1950-1951 and alternate years.) *Winter quarter.* Mr. Brauer.
233. ALGEBRAIC THEORY OF NUMBERS II (5). Prerequisite, Mathematics 232.
Continuation of 232. Discriminants of algebraic fields, unities, quadratic, cubic, and cyclotomic fields; Diophantine equations of higher degree, Fermat's Last Theorem.
(1950-1951 and alternate years.) *Spring quarter.* Mr. Brauer.
236. HIGHER PLANE CURVES (5). Prerequisite, Mathematics 151.
Applications of projective geometry to curves of degree higher than two; special types of curves; relationships; properties.
(1950-1951 and alternate years.) *Spring quarter.* Mr. Lasley.
241. LIE'S THEORY OF DIFFERENTIAL EQUATIONS (5). Prerequisite, Mathematics 141.
An introduction to continuous groups and to the theory of differential equations.
(1951-1952 and alternate years.) *Spring quarter.* Mr. Hobbs.
246. MODERN HIGHER ALGEBRA (5). Prerequisite, Mathematics 131.
A course dealing with certain fundamental aspects of modern algebra, including the topics of groups, rings, and fields.
Spring quarter. Mr. Browne.
247. THE THEORY OF MATRICES (5). Prerequisite, Mathematics 147.
A course designed to give the student a thorough grounding in some of the recent and most important results in the study of algebraic matrices.
Winter quarter. Mr. Browne.
256. ALGEBRAIC INVARIANTS (5). Prerequisites, Mathematics 131 and 152.
An introduction to the non-symbolic theory of invariants of binary forms with applications to geometry, followed by an explanation of the symbolic notation of Clebsch with practice in its use. Based on Dickson's Algebraic Invariants.
(1950-1951 and alternate years.) *Spring quarter.* Mr. Browne.

261. DIFFERENTIAL GEOMETRY (5). Prerequisites, Mathematics 141 and 161. A study of the metric differential properties of curves, surfaces, and curves on surfaces by means of differential equations.

(1951-1952 and alternate years.) *Winter quarter*. Mr. Lasley.

267. THEORY OF FUNCTIONS OF REAL VARIABLES II (5). Prerequisite, Mathematics 166.

Functions, continuity, measurability, Riemann and Lebesgue integration, Baire classes.

Fall quarter. Mr. Whyburn.

268. ADVANCED DIFFERENTIAL EQUATIONS (5). Prerequisite, Mathematics 267 or equivalent.

Fundamental existence theorems for ordinary equations, boundary value problems, applications to classical problems of mathematical physics.

Winter quarter. Mr. Whyburn.

280. CALCULUS OF VARIATIONS (5). Prerequisites, Mathematics 141 and 171.

The determination of necessary and sufficient conditions for functions which minimize certain definite integrals.

(1951-1952 and alternate years.) *Fall quarter*. Mr. Mackie.

281. GENERAL TOPOLOGY I (5).

A general introduction to point-set theoretic methods and axiomatic foundations.

(1950-1951). *Fall quarter*. Mr. Jones.

282. GENERAL TOPOLOGY II (5). Prerequisite, Mathematics 281.

A continuation of Mathematics 281.

(1950-1951.) *Winter quarter*. Mr. Jones.

283. GENERAL TOPOLOGY III (5). Prerequisite, Mathematics 282.

A continuation of Mathematics 282.

(1950-1951.) *Spring quarter*. Mr. Jones.

286. PROJECTIVE DIFFERENTIAL GEOMETRY (5). Prerequisites, Mathematics 151 and 261.

A study of the projective properties of curves and ruled surfaces by means of the invariants and covariants of systems of homogeneous differential equations.

(1951-1952 and alternate years.) *Spring quarter*. Mr. Lasley.

291. THEORY OF GROUPS (5). Prerequisite, Mathematics 136 or equivalent.

A study of properties of abstract groups, including subgroups, factor groups, homomorphisms and automorphisms, composition series, direct products, groups with operators, and special properties of abelian groups.

(1950-1951.) *Fall quarter*. Mr. Cameron.

297. GALOIS THEORY (5). Prerequisite, Mathematics 246.

A development of Galois theory by the methods of Artin, applications to solvability of equations and other problems.

(1951-1952 and alternate years.) *Fall quarter*. Mr. Cameron.

SEMINARS AND THESES (5).

351, Mr. Whyburn; 352, Mr. Hickerson; 356, Mr. Lasley; 357, Mr. Jones; 361, Mr. Hobbs; 366, Mr. Browne; 367, Mr. Garner; 371, Mr. Winsor; 372, Mr. Hoyle; 376, Mr. Mackie; 377, Mr. Hill; 381, Mr. Brauer; 382, Mr. Cameron; 386, Mr. Hershner; 387, Mr. Mann.

DEPARTMENT OF MUSIC

Professors: GLEN HAYDON, EARL SLOCUM, J. P. SCHINHAN

Associate Professor: W. S. NEWMAN

Assistant Professors: JOEL CARTER, WILTON MASON

Instructors: EDGAR ALDEN, ALLEN GARRETT, HUBERT HENDERSON

Assistants: DOROTHY ALDEN, FRANK BARTLETT, MELVIN BERNSTEIN,
RICHARD COX, CLAY CRISP, EFRIM FRUCHTMAN, JAMES HAAR, ROBERT KING, ANNE LYNCH, THOMAS NICHOLS, GEORGE OTTO, ROBERT WEAVER

The courses in music are designed to perform a threefold function in the University: (a) to give the student electing music as his chief interest a thorough training in the practical, theoretical, and historical aspects of the subject as a part of the general liberal arts curriculum for the A.B. degree; (b) to give the student interested in the scholarly aspects of the subject the basic training necessary for successful graduate work; (c) to afford students in other departments the opportunity to take music as an elective for its cultural value in the liberal arts program.

Course leading to the A.B. degree with music as the major: Students who take music as the major must modify the regular program for the first two years in order to begin music their first year. They normally will take English 1, 2, a foreign language, Music 1 and 14-15, and mathematics or Latin or Greek. Courses in the regular freshman program postponed to make way for the music must be taken at some later time. Similar arrangements must be made in the sophomore year to provide for Music 21, 44-45, and 47.

The undergraduate major in music consists of from thirty to forty quarter hours beyond the freshman-sophomore requirements and must include Music 48, 61, 64, 71, 74, and 101. Attention is called to the special requirements in applied music. See pages 313-15.

Honors in Music: Students interested in becoming candidates for the A.B. degree with honors in music should read the general regulations governing the honors program in the Division of Humanities and should consult the chairman of the Department of Music for the specific modifications of this program as applied to music.

Course leading to the B.M. degree: The department offers the B.M. degree to students meeting the applied music requirements in conformity with the National Association of Schools of Music. This degree is awarded in conjunction with or after the A.B. degree in a

five-year program. Students must satisfy the requirements for this degree by giving such public recitals and by passing such examinations as may be specified by the department. Students interested in this degree should apply to the Department of Music for particulars.

Courses for Undergraduates

1. NOTATION, SIGHT-SINGING, AND DICTATION (5).

Ten laboratory hours a week, fall quarter. Messrs. Carter, Fruchtmán, Weaver.

1-x. SIGHT-SINGING (2½).

Five laboratory hours a week, any quarter. Messrs. Carter, Bartlett, Weaver.

1-y. DICTATION (2½).

Five laboratory hours a week, any quarter. Mr. Carter.

14-15. HARMONY (10). Prerequisite or corequisite, Music 1.

Five hours a week, winter and spring quarters. Messrs. Haydon, Fruchtmán.

21. NOTATION, SIGHT-SINGING, AND DICTATION (2½). Prerequisite, Music 1. Sophomore requirement for those who will have music as a major.

Five laboratory hours a week, spring quarter. Mr. Carter.

***41. MUSIC APPRECIATION (5).**

A general introduction, through readings, demonstrations, lectures, and listening, of the principal elements, forms, characteristics, and names in music. No prerequisite. May be substituted for the fourth quarter of English in the General College.

Any quarter. Fee, \$1.00. Mr. Newman.

44-45. ADVANCED HARMONY (10). Prerequisites, Music 1, Music 14-15. Sophomore requirement for those who will have music as a major.

Five hours a week, fall and winter quarters. Messrs. Schinhan, Mason.

47, 48. THE HISTORY OF MUSIC (5 each). Requirement for those who will have music as a major.

Five hours a week, winter and spring quarters. Mr. Mason.

***54. MUSIC APPRECIATION: INSTRUMENTAL MUSIC OF THE CLASSICAL PERIOD (5).**

A survey through lectures, readings, and listening, of important solo and ensemble instrumental music, musical forms, and composers of the seventeenth and eighteenth centuries. No prerequisite.

Fall quarter. Fee, \$1.00. Mr. Mason.

***55. MUSIC APPRECIATION: INSTRUMENTAL MUSIC OF THE ROMANTIC AND MODERN PERIODS (5).**

A survey through lectures, readings, and listening, of important solo and ensemble instrumental music, musical forms, and composers of the nineteenth and twentieth centuries. No prerequisite.

Winter quarter. Fee, \$1.00. Mr. Mason.

***56. MUSIC APPRECIATION: A SURVEY OF VOCAL MUSIC (5).**

A survey through lectures, readings, and listening, of important solo and ensemble vocal music (including opera), musical forms, and composers. No prerequisite.

Spring quarter. Fee, \$1.00. Mr. Mason.

*Will not be accepted as part of a major.

61. MODAL COUNTERPOINT IN THE SIXTEENTH-CENTURY STYLE (5). Prerequisite, Music 14-15.

Study and practice of the contrapuntal technique of the sixteenth century; the writing of simple motets.

Spring quarter. Messrs. Schinhan and Mason.

64. TONAL COUNTERPOINT (5). Prerequisite, Music 14-15.

Study and practice of the contrapuntal technique with particular reference to the style of Bach; writing of two- and three-part inventions.

Fall quarter. Mr. Slocum.

71. INSTRUMENTATION, ORCHESTRATION, AND ELEMENTARY CONDUCTING (5). Prerequisite, Music 44-45.

Spring quarter. Mr. Slocum.

74. ANALYSIS AND COMPOSITION IN THE SMALLER FORMS (5). Prerequisite, Music 44-45.

Winter quarter. Mr. Slocum.

Courses for Graduates and Advanced Undergraduates

101. INTRODUCTION TO MUSICOLOGY (5).

A study of the problems and methods in the various fields, historical and systematic, of musical research. Prerequisite, a reading knowledge of one or more of the important foreign languages, a fair knowledge of musical theory, and some skill in practical applied music.

Fall quarter. Mr. Haydon.

102. INTRODUCTION TO MUSICOLOGY (3). Continuation of 101.

To be arranged. Mr. Haydon.

104. FOLK MUSIC (3 or 5).

A comparative study of the folk songs of various nations, with special emphasis on the American folk music of the South. Lectures, readings, and the study of music available in print or on phonograph records.

To be arranged. Mr. Schinhan.

121, 122, 123. STUDIES IN THE HISTORY OF MUSIC (3 or 5). Prerequisites, Music 44-45 and 47, 48.

A critical study of certain composers, style species or style periods, such as Bach, the sonata, or the music of the sixteenth century.

Three or five hours a week, fall, winter, and spring quarters. Mr. Newman.

Courses for Graduates

201. SPECIAL STUDIES.

The department is ready to assist and advise competent graduate students who may propose plans for either research or creative work which meet with its approval.

Hours and credit to be arranged. Staff.

*204-205. INTRODUCTION TO COMPARATIVE MUSICOLOGY (6).

Three hours a week, fall and winter quarters. Mr. Schinhan.

214. APPLIED HARMONY (5). Prerequisites, Music 44, 45, 61, 64, 71, 74.

Five hours a week, fall quarter. Mr. Schinhan.

*Will be given as the demand warrants.

261. ADVANCED MODAL COUNTERPOINT IN THE SIXTEENTH-CENTURY STYLE (5). Prerequisites, Music 44, 45, 61, 64, 71, 74.
Five hours a week, fall quarter. Mr. Mason.
264. ADVANCED TONAL COUNTERPOINT (5). Prerequisites, Music 44, 45, 61, 64, 71, 74.
Five hours a week, winter quarter. Mr. Slocum.
274. ADVANCED COMPOSITION (5). Prerequisites, Music 214, 261.
Five hours a week, winter quarter. Mr. Schinhan.
271. ADVANCED ORCHESTRATION (5). Prerequisites, Music 214, 261, 264.
Five hours a week, spring quarter. Mr. Slocum.
299. THESIS (5).
Spring quarter. Staff.
- 301, 302, 303. SEMINAR: MUSICOLOGY (9-15).
Three or five hours a week (to be arranged), fall, winter, and spring quarters. Mr. Haydon.

Applied Music

The following courses in applied music are open to students in any department of the University having the necessary technical equipment. The work in applied music is regarded not merely as technical training in performance, but also as a study of the standard literature for the particular instrument or ensemble group. Credit in general will be given on the basis of one quarter hour credit a year in the first and second years; two quarter hours credit a year in the third and fourth years. Credits in applied music will be reported to the Registrar, normally at the end of each academic year. Credit in the School of Education will be given on the basis of one and one-half quarter hours per quarter. For those whose major is not music—a total credit not to exceed ten quarter hours may be counted as electives in the A.B. curriculum. Those whose major is music must offer at least ten quarter hours in applied music and may offer a total not to exceed twenty-five quarter hours in this field, of which not more than ten may be ensemble courses. All students with majors in music, unless given special permission by the chairman of the department, must continue individual instruction in applied music throughout the four years. Students planning to teach instrumental music in the public schools will arrange their schedule for the study of the wind and stringed instruments in consultation with the department.

The general prerequisite work for entrance into the first year courses is ability to perform music of difficulty rated as grade three for the particular instrument. Copies of the course of study for each instrument will be sent upon request. Students who do not have this

prerequisite will repeat the preparation course without credit until they qualify for the freshman course. The candidate for the A.B. degree with a major in music must complete as a minimum the freshman course in his chosen field of applied music. Students electing some other instrument than piano for their work in applied music must demonstrate sufficient pianistic ability to enable them to meet the practical requirements of the course to be pursued. This is interpreted to mean the ability to play at sight hymns or compositions of similar difficulty.

Students seeking the A.B. degree with a major in music will be required to participate in the musical organizations of the department and students in advanced applied music courses must take part in recitals as prescribed by the department.

Fees

Fees for individual instruction are: \$22.50 per quarter for one lesson a week; \$45.00 per quarter for two lessons a week. Fee for one daily practice period (room with piano), \$3.75 per quarter; fee for two hours daily practice, \$6.25 per quarter. Other fees in proportion. Fee for six hours practice a week on Reuter four-manual organ, \$18.75 per quarter; on Allen or Reuter practice organ, \$15.00 per quarter; on Estey practice organ, \$7.50 per quarter. Arrangements for applied music are made in the office of the Department of Music.

Individual Instruction

A. PREPARATORY ORGAN (no credit).

One or two half-hour lessons and six or twelve hours of practice a week, every quarter. Messrs. Schinhan, Bartlett.

1A. FIRST YEAR ORGAN (1 or 2). Prerequisite, ability to play music for a keyboard instrument of the difficulty of Heller, Op. 45, 46, 47; Bach, Two-Part Inventions; scales and arpeggios in moderate tempo; simple hymns (at sight).

Value, 1 or 2 quarter hours, respectively, for one or two lessons and six or twelve hours of practice a week through three quarters. Messrs. Schinhan, Bartlett.

21A. SECOND YEAR ORGAN (1 or 2). Prerequisite, Music 1A.

Value and hours as in 1A. Messrs. Schinhan, Bartlett.

51A. THIRD YEAR ORGAN (2 or 4). Prerequisite, Music 21A.

Value, 2 or 4 quarter hours, respectively, for one or two lessons and six or twelve hours of practice a week through three quarters. Messrs. Schinhan, Bartlett.

81A. FOURTH YEAR ORGAN (2 or 4). Prerequisite, Music 51A.

Value and hours as in 51A. Messrs. Schinhan, Bartlett.

91A. FIFTH YEAR ORGAN (9). Prerequisite, Music 81A. Required of candidates for the B.M. degree.

Similar numbering and description with regard to value, hours, and prerequisite work apply to each of the courses B, C, D, and E.

B. PIANO. Messrs. Schinhan, Newman, Mason, Nichols, Bernstein, Haar, Weaver.

C. VOICE. Messrs. Carter, Cox, Otto, Miss Lynch.

D. VIOLIN OR OTHER STRINGED INSTRUMENT. Messrs. Fruchtman, Alden, King, Mrs. Alden.

E. FLUTE OR OTHER BAND OR ORCHESTRAL INSTRUMENT. Messrs. Haydon, Slocum, Henderson, Garrett, Crisp.

Class Instruction

For students desiring to complete the general piano requirements, for those in the general instrumental course, and for those wishing special training in voice, class instruction will be offered as far as practicable. Applications for admission to any of these classes should be made at the office of the Department of Music as soon after registration as possible. Hours to be arranged.

Ensemble Groups

1F. FIRST YEAR BAND (1 for year). Prerequisite, approval of instructor based upon a "try-out" given at the beginning of each quarter.

A minimum of two hours a week through three quarters. Mr. Slocum.

21F. SECOND YEAR BAND (1 for year).

Hours and value as in preceding course. Messrs. Slocum, Henderson.

51F. THIRD YEAR BAND (2 for year).

A minimum of two hours a week through three quarters. Messrs. Slocum, Henderson.

81F. FOURTH YEAR BAND (2 for year).

Hours and value as in preceding course. Messrs. Slocum, Henderson.

Similar numbering, prerequisite work, value, and hours apply to each of the following courses in applied music:

G. ORCHESTRA. Messrs. Slocum, Alden.

H. GLEE CLUB. Mr. Carter.

I. PIANO ENSEMBLE OR OTHER INSTRUMENTAL ENSEMBLE. Staff.

DEPARTMENT OF NAVAL SCIENCE

Professor: J. E. COOPER, *Captain, USN*

Associate Professor: W. J. MANNING, *Commander, USN*

Assistant Professors: B. W. McLEAN, *Major, USMC*; J. W. AUSTIN, *Lieutenant Commander, USN*; J. A. MATTHEWS, *Lieutenant Commander, USN*; G. E. FRENCH, *Lieutenant, USNR*; T. W. LITTLETON, *Lieutenant, Supply Corps, USN*; R. L. J. LONG, *Lieutenant, USN*

General Statement

The purpose of the Naval Reserve Officers Training Corps is to provide a steady supply of well-educated junior officers for the Line and Staff Corps of the Navy and Marine Corps, and to build up a reserve of trained officers who will be ready to serve the country at a moment's notice in a national emergency. Students enrolled in the NROTC are of two categories—*regular* and *contract*. All procedures, benefits and requirements described hereinafter apply to both categories of NROTC students unless specifically indicated as pertaining to only one of the two types.

Emoluments

Regular students: For regular students the cost of tuition, fees, and textbooks is paid by the government. Necessary uniforms are provided and students receive retainer pay at the rate of \$600 per year.

Contract students: Contract students receive no emoluments during the first two years in the program. During the last two years they receive a subsistence allowance which amounts to approximately \$27.00 a month. They are issued the necessary uniforms and Naval Science textbooks at no expense.

Summer Training

Regular students: All regular students are required to take two summer cruises and one summer period of aviation indoctrination, usually of eight weeks duration each. The cruises are made on board modern warships. The aviation indoctrination is usually conducted at Pensacola, Florida.

Contract students: Contract students are required to take only one summer cruise during the summer between their junior and senior years, the cruise being of approximately three weeks' duration.

Travel expenses for both regular and contract students from the University to the summer training site and return are furnished by the government. In addition, all students receive active duty pay during summer training amounting to approximately \$75.00 per month.

University Status

The Naval ROTC Unit is a recognized department of instruction within the University (Department of Naval Science). Full credit toward degrees are granted Naval Science courses as in other departments.

Military Status

NROTC students wear the uniform only on cruises and when engaged in drills or in other naval activities prescribed by the professor of naval science. In addition to the ordinary requirements of gentlemanly conduct, they are subject to naval discipline and must conduct themselves at all times in a military manner when under naval jurisdiction, that is, when attending naval science classes, drills and exercises, and during summer training periods.

With the exception of the above described instances, NROTC students are in the same category as other students of the University.

Draft Deferment

A student enrolled in the Naval ROTC will be deferred from the draft (Selective Service Act of 1948) under the following conditions:

1. He pursues the Navy ROTC course for four full years including the summer training period applicable to his status as a contract or regular student.
2. He signs an agreement to accept a commission as a commissioned officer, if tendered, and to serve not less than two years on active duty as an officer, if called by the Secretary of the Navy.

This does not mean that a contract student who attains a commission as a result of successful completion of the course will automatically serve two years on active duty. Normally, the contract student serves only upon his own request, if vacancies exist, and will be called only in the event of a national emergency.

Status on Graduation

Contract students: After completion of their academic requirements for a baccalaureate degree and the four years of Naval requirements, which include the summer training, contract students are commissioned as ensigns in the U. S. Naval Reserve or second lieutenants in the Marine Corps Reserve, inactive. They are eligible for call to active duty as indicated above under "Draft Deferment."

Regular students: Upon graduation, regular students are commissioned as ensigns in the U. S. Navy or second lieutenants in the U. S. Marine Corps. They are required to serve on active duty for a maximum period of two years. At the end of this period they may request to remain on active duty as career officers. If they do not so request, or if not selected, they are released to an inactive status in the Reserve.

Eligibility Requirements

A candidate for the NROTC must:

1. Be a male citizen of the United States.
2. At the time of his enrollment, if a minor, have the consent of his parent or guardian.
3. Be not less than seventeen nor more than twenty-one years of age on July 1 of the year in which he enters the program.
4. Gain his own admittance to the University.
5. Agree to remain unmarried until commissioned.
6. Enter into a contract with the Secretary of the Navy, agreeing to accept a commission, if offered.
7. Be physically qualified, in accordance with the requirements of the U. S. Naval Academy.
8. Must agree to serve two years on active duty upon completion of college training, if called by the Secretary of the Navy.
9. If a regular student, agree to accept a commission, if offered, and to serve for two years as an ensign, U. S. Navy, or second lieutenant, U. S. Marine Corps.

Selection Procedures

Contract students are enrolled by the professor of naval science upon their own application and subject to selection and physical examination at the University within a limited quota as assigned by the Navy Department to each University. These students are taken from the entering freshman class at the beginning of the fall quarter.

Inasmuch as the selection of contract students is completed during the first week of the fall quarter and in view of the fact that the contract quota is limited, all students who desire to be considered for the NROTC program should apply prior to the first day of classes in the fall. An application is not binding, and, even after enrollment in the program, a contract student may withdraw from the program without prejudice upon his own request at any time within the first two years.

Regular students enter the NROTC through a nation-wide Aptitude-for-Learning test and selection system conducted by the College Entrance Examining Board, Princeton, New Jersey, and the Navy Department, respectively. The competitive examination is conducted in the late fall of the year, approximately nine months before enrollment of the applicant.

Transfer from contract to regular status: Contract NROTC students may compete for regular status and if selected will be enrolled as regular students without loss of standing.

Curricula

General: In order to obtain a commission either in the U. S. Navy, U. S. Naval Reserve, U. S. Marine Corps, or U. S. Marine Corps Reserve, students are required to obtain a baccalaureate degree and complete forty-eight quarter hours in the Department of Naval Science. During each quarter every student is required to attend one laboratory period of two hours' duration each week. By the end of the sophomore year every student must have satisfactorily completed one year of mathematics through trigonometry. In addition, each regular student must complete one year of college physics. Every student must achieve proficiency in written and oral expression in accordance with the standards of proficiency set by the University. Three separate curricula in naval science subjects are offered, leading to commissions in the Line of the Navy, the Supply Corps of the Navy, and the Marine Corps.

N. S. 101. NAVAL ORIENTATION (6).

Naval history and orientation.

Five lecture and two laboratory hours a week, fall and winter quarters.

N. S. 102. NAVAL ORIENTATION (6).

Naval history and orientation.

Five lecture and two laboratory hours a week, winter and spring quarters.

N. S. 201. NAVAL WEAPONS (6).

Naval ordnance and control of gunfire.

Five lecture and two laboratory hours a week, fall and winter quarters.

N. S. 202. NAVAL WEAPONS (6).

Control of gunfire and electronics.

Five lecture and two laboratory hours a week, winter and spring quarters.

N. S. 301. NAVIGATION (6).

Navigation equipment, piloting, International Rules of the Road.

Five lecture and two laboratory hours a week, fall and winter quarters.

N. S. 302. NAVIGATION (6).

Celestial navigation, day's work of a navigator.

Five lecture and two laboratory hours a week, winter and spring quarters.

N. S. 302M. HISTORY OF THE ART OF WAR (6).

History of the art of war and introduction to American military history. (For Marine officer candidates)

Five lecture and two laboratory hours a week, spring quarter.

N. S. 401. NAVAL MACHINERY (6).

General concepts of naval engineering, naval engineering installations and Diesel engines.

Five lecture and two laboratory hours a week, fall and winter quarters.

N. S. 402. SHIP STABILITY AND NAVAL JUSTICE (6).

Principles of ship stability and buoyancy, principles and procedures in administering naval law, principles of leadership.

Five lecture and two laboratory hours a week, winter and spring quarters.

N. S. 401M. AMERICAN MILITARY HISTORY AND POLICY (6).

Development of United States military policy and tactics of United States Forces in selected battles. (For Marine officer candidates)

Five lecture and two laboratory hours a week, fall quarter.

N. S. 402M. AMPHIBIOUS WARFARE (6).

History of Amphibious warfare, development of principles of amphibious warfare and application of these principles in selected examples from modern history. (For Marine officer candidates).

Five lecture and two laboratory hours a week, winter quarter.

N. S. 401S. NAVY SUPPLY (6).

Principles of navy supply ashore and accounting. (For Navy Supply officer candidates)

Five lecture and two laboratory hours a week, fall quarter.

N. S. 402S. NAVY SUPPLY (6).

Navy Supply afloat. (For Navy Supply officer candidates).

Five lecture and two laboratory hours a week, winter quarter.

N. S. 403S. NAVY SUPPLY (2).

Navy Supply afloat. (For Navy Supply officer candidates).

Two lecture and two laboratory hours a week, spring quarter.

DEPARTMENT OF PATHOLOGY

Professors: K. M. BRINKHOUS, *J. B. BULLITT

Assistant Professor: J. B. GRAHAM

Instructors: JUNE U. GUNTER, *Director of Watts Hospital Laboratories,*

G. D. PENICK, MARGARET SWANTON

Fellows: R. D. LANGDELL, J. H. S. FOUSHEE

Courses for Undergraduates

51. CLINICAL PATHOLOGY (6). Prerequisite, Pathology 161a.

The object of this course is to familiarize the student with routine examinations of the blood, urine, feces, gastro-intestinal contents, sputum, transudates, and exudates; to acquire accuracy in such procedures; and to secure a general understanding of their relation to the diagnosis of disease.

One lecture and two laboratory hours, last five weeks, winter quarter; three lecture and four laboratory hours, spring quarter. Dr. Gunter and staff.

52. CLINICAL PATHOLOGY (4). Prerequisites, general chemistry and one course in zoology.

A course designed to give undergraduate students an introduction to hematology, urinalysis, and some of the other technical procedures commonly employed in hospital and biological research laboratories.

Two lecture and four laboratory hours a week, spring quarter. Dr. Foushee.

Courses for Graduates and Advanced Undergraduates

161ab. PATHOLOGY (18). Prerequisites, anatomy, histology, physiology, biochemistry.

Four lecture and eight and a half laboratory hours a week, fall quarter; four lecture and eight and a half laboratory hours a week, winter quarter. Dr. Brinkhous and staff.

NOTE: Hours, credits, and instructor for the following courses to be arranged.

162 (I). SURGICAL PATHOLOGY. Prerequisite, Pathology 161.

A detailed study of surgical material, with special reference to tumors.

162 (II). EXPERIMENTAL PATHOLOGY. Prerequisites, physiology and biochemistry.

Production of various inflammatory lesions and other pathological processes (edema, hemorrhage, ischemia, jaundice, urinary obstruction, etc.), and study of their development.

162 (III). RESEARCH IN PATHOLOGY. Prerequisites, physiology and biochemistry.

*Professor Emeritus.

DEPARTMENT OF PHARMACOLOGY

Kenan Research Professor Emeritus: W. DEB. MACNIDER

Professor: T. C. BUTLER

Associate Professor: F. W. ELLIS

Technical Assistant: L. T. COLIE

Course for Undergraduates

55. PHARMACOLOGY (5). Prerequisites, Physiology 51, Materia Medica 68-69.

A course for pharmacy students.

Three lecture and four laboratory hours a week, spring quarter. Laboratory fee, \$5.00. Drs. Butler, Ellis.

Course for Graduates

171ab. PHARMACOLOGY (10). Prerequisites, anatomy, physiology, biological chemistry.

A course for second year medical students. The principal objective is to give an understanding of the scientific basis of the use of drugs in modern therapeutics.

Three lecture and three laboratory hours a week, fall quarter; four lecture and three laboratory hours a week, winter quarter. Laboratory fee for non-medical students, \$15.00 a quarter. Drs. Butler, Ellis.

In addition to the regularly scheduled courses, the department can by special arrangement offer facilities for research to a small number of students or graduates in medicine.

DEPARTMENT OF PHILOSOPHY

Professors: L. O. KATTSOFF, S. A. EMERY

Assistant Professors: E. M. ADAMS, *C. P. CAVARNOS, †M. E. LEAN,
W. H. POTEAT

Visiting Lecturer: GEORGE KRZYWICKI

Part-time Instructors: CLARE COTTON, J. N. PHILLIPS

The Department of Philosophy is a member of each division. Accordingly, an undergraduate student planning a major in philosophy will elect this department as in one of these divisions and will be governed by the rules of that division regarding the distribution of his work among departmental, divisional, and non-divisional courses.

No fixed group of courses in philosophy is required for an undergraduate major. Each student will decide his junior and senior program of courses in consultation with two advisers (one chosen by him, one appointed by the department). It is suggested that students looking toward a major in philosophy avail themselves of the introductory courses covering both systematic philosophy (21, 22, 41) and the history of philosophy (42, 56, 57, 58).

*Absent on leave, fall quarter, 1950.

†Resigned, January 1, 1951.

Courses for Undergraduates

21. INTRODUCTORY LOGIC (5).

Fundamentals of sound thinking and argument. Valid forms of deductive reasoning; induction and scientific method. Clarity in language. Practice in logical analysis and detection of fallacies.

Each quarter. Staff.

22. INTRODUCTORY ETHICS (5).

An examination of the ethical systems of Western Civilization and their relevance for determining values for personal conduct in areas of contemporary life.

Each quarter. Staff.

41. THE FIELDS OF PHILOSOPHY: A SYSTEMATIC INTRODUCTION (5).

A survey of the chief philosophic fields, their interrelations and typical problems, as a basis for further courses and for independent reading.

Each quarter. Staff.

42. THE DEVELOPMENT OF PHILOSOPHY: AN HISTORICAL INTRODUCTION (5).

An introduction to philosophy through an historical survey of Western thought. Emphasis on the leading figures and on theories of epistemology, ethics, and metaphysics.

Each quarter. Staff.

56. THE DEVELOPMENT OF ANCIENT PHILOSOPHY (5).

The growth of philosophic thought from the dawn of Greek philosophy to the beginning of the Christian era. Special attention to Plato and Aristotle.

Fall quarter. Mr. Krzywicki.

58. THE DEVELOPMENT OF MODERN PHILOSOPHY (5).

The growth of philosophic thought from the end of the Middle Ages through the nineteenth century. Chief emphasis on the seventeenth and eighteenth centuries.

Winter quarter. Mr. Emery.

63. CONTEMPORARY PHILOSOPHY (5).

A study of representative recent philosophies both as outgrowths of important movements in the history of philosophy and as interpretations of twentieth-century culture.

Spring quarter. Mr. Emery.

76. AESTHETICS (5).

Classical and contemporary theories of beauty and aesthetic experience. A brief analysis of architecture, painting, poetry, and music as distinct media of expression.

Spring quarter. Mr. Cavarinos.

96. PHILOSOPHY OF RELIGION (5).

Analysis of elements of religious thought and practice with reference to chief philosophers from Descartes through Dewey. Problems of knowledge and faith; the existence and nature of God.

Fall quarter. Mr. Poteat.

100a, 100b, 100c. COURSES FOR HONORS (5 each).

See the programs for Honors Work in the various divisions.

Courses for Graduates and Advanced Undergraduates

121. KANT (5). Prerequisite, Philosophy 58 or special permission.

A study of Kant's critical philosophy as rooted in eighteenth-century rationalism and empiricism and as initiating German idealism. Lectures, readings, and discussion.

Spring quarter. Mr. Emery.

122. PLATO AND ARISTOTLE (5). Prerequisite, Philosophy 56 or special permission.

A study of the ethical and aesthetic theories of Plato and Aristotle and the foundations of these in their philosophy of man and the universe.

Fall quarter. Mr. Cavarnos.

123. CONTINENTAL RATIONALISM (5). Prerequisite, Philosophy 58 or special permission.

The metaphysical systems of Descartes, Spinoza, and Leibniz as seventeenth-century attempts to reconcile the mediaeval tradition and the early developments of modern natural science.

Winter quarter. Mr. Krzywicki.

124. PHILOSOPHY OF THE NINETEENTH CENTURY (5). Prerequisite, Philosophy 58 or special permission.

German idealism, materialism, and voluntarism; French positivism and its opponents; English empiricism and its idealistic critics. Mutual influences and bearings on the twentieth century.

(1951-1952 and alternate years.) *Winter quarter.*

125. BRITISH EMPIRICISM (5). Prerequisite, Philosophy 42 or 58 or special permission.

An epistemological study of Locke, Berkeley, and Hume in relation to the preceding continental rationalism and the subsequent Kantian synthesis.

Fall quarter.

126. CONTEMPORARY AMERICAN PHILOSOPHY (5). Prerequisite, Philosophy 22 or 41 or 58 or special permission.

A survey course of American thought from John Dewey to the present in terms of the major fields: philosophy of science, metaphysics, ethics, etc.

(Not offered in 1951-1952.) *Spring quarter.* Mr. Kattsoff.

127. AUGUSTINE AND AQUINAS (5). Prerequisite, Philosophy 56 or 122 or special permission.

A study of the philosophy of Augustine and Aquinas: their theories of God, Nature, Man, and the State; their significance for modern man.

(1951-1952 and alternate years.) *Fall quarter.* Mr. Cavarnos.

128. PROBLEMS IN CONTEMPORARY PHILOSOPHY (5).

Careful discussion of a few selected topics especially important in current philosophical literature (e.g. meaning, verification, valuation, etc.).

(1951-1952 and alternate years.) *Winter quarter.* Mr. Emery.

131. HEGEL (5). Prerequisite, Philosophy 58 or special permission.

Hegel's Absolute Idealism: Its roots in Kant's critical philosophy and its influence on nineteenth- and twentieth-century thought in Europe and America.

(Not offered in 1951-1952.) *Spring quarter.* Mr. Emery.

134. INTRODUCTION TO SYMBOLIC LOGIC (5).

The new symbolic approach to the logic of classes, propositions, propositional functions, and the nature of implication.

Fall quarter. Mr. Krzywicki.

141. PHILOSOPHY OF MATHEMATICS (5). Prerequisite, a fair degree of mathematical maturity.

Basically a course in foundations of mathematics. An attempt is made to infer some of the implications for the nature of reality from the general structure of mathematics.

(1951-1952 and alternate years.) *Winter quarter*. Mr. Kattsoff.

142. FOUNDATIONS OF THE SOCIAL SCIENCES (Sociology 142) (5). Prerequisites, two courses in philosophy, psychology, or sociology.

An attempt to establish an approach to the social sciences based on the notion of purposive behavior. The course seeks to construct a theoretical framework for modern social science and a possible science of man.

Spring quarter. Mr. Kattsoff.

143. BASIC CONCEPTS OF THE NATURAL SCIENCES (5).

Reason and nature. Scientific method. The concepts of physics, biology, and psychology. The implications of contemporary science for the nature of reality, religion, and man.

Fall quarter. Mr. Kattsoff.

163. PHILOSOPHY OF THE STATE (5).

A survey of the conceptions of the just state from Plato to contemporary times with especial attention to the relations between theories of government and more general philosophical problems such as the nature of man, theory of knowledge, ontology, ethics, and the basis and meaning of law.

Winter quarter. Mr. Poteat.

182. PHILOSOPHY OF SOCIAL ETHICS (5). Prerequisites, two courses in philosophy, psychology, or sociology, or special permission.

A critical study of the possibility of objective ethical criticism of social institutions, movements, and conditions as a basis for scientific social planning.

Fall quarter. Mr. Adams.

235. ADVANCED TOPICS IN LOGIC (5). Prerequisites, Philosophy 21 and 134. Special topics in both modern and classical logic. Such topics as the logic of modality, the logic of probability, the nature of inference, etc., will be considered.

(Not offered in 1951-1952.) *Spring quarter*. Mr. Kattsoff.

263. CONCEPTS IN POLITICAL PHILOSOPHY (5). Prerequisite, Philosophy 191 or its equivalent.

An examination of the basic concepts of political philosophy such as the state, law, right, power, authority, in relation to metaphysics and ethics.

(Not offered in 1951-1952.) *Winter quarter*. Mr. Poteat.

301. SEMINAR IN METAPHYSICS (5).

Fall quarter. Mr. Kattsoff.

302. SEMINAR IN EPISTEMOLOGY (5).

Winter quarter.

303. SEMINAR IN PHILOSOPHY OF VALUES (5).

Spring quarter. Mr. Adams.

304, 305, 306. SEMINARS IN THE HISTORY OF PHILOSOPHY (5 each).

Topics will be decided in personal conference.

Each quarter. Staff.

307. SEMINAR IN PHILOSOPHY OF RELIGION (5). Prerequisite, Philosophy 96 or its equivalent.

A consideration of advanced topics in the philosophy of religion with an emphasis upon the explication of constructive positions on such topics as the relation of faith and reason, the nature of God, the nature of man and related subjects.

(1951-1952 and alternate years.) *Spring quarter.* Mr. Poteat.

311. SPECIAL READINGS (5).

Each quarter. Staff.

DEPARTMENT OF PHYSICAL EDUCATION AND ATHLETICS

Director: R. A. FETZER

Professors: O. K. CORNWELL, R. E. JAMERSON, G. E. SHEPARD

Associate Professors: RUTH WHITE FINK, H. C. HOUSE, JR., C. E. MULLIS, W. H. PEACOCK

Assistant Professors: E. M. ALLEN, W. W. RABB, RUTH PRICE, DORIS HUTCHINSON

Instructors: BUNN HEARN, J. F. KENFIELD, M. D. RANSON, R. A. WHITE, M. Z. RONMAN, J. R. MURPHY, C. P. ERICKSON, G. J. RADMAN, *L. R. CASEY, TOM SCOTT, MARY FRANCES KELLAM, JOSEPH HILTON, JAMES CAMP, HAMMOND STRAYHORN, CARL BLYTH, WALTER PUPA, THEODORE HAZELWOOD, ROY STRAIGHT, R. B. COX, W. T. MEADE, R. D. MAXWELL

Graduate Assistants: DONALD BORING, J. W. GURTIS, E. G. HOOKS, A. C. MOORE, DAN NYIMICZ, W. K. PERRY, W. T. PLANT, J. P. SIFFORD, C. R. TAYLOR, COLLINS BENNETT, TANNYE BURNETT, SALLY SOUTHERLAND, JOHN CLEMENTS, HAYWOOD FOWLE, JOSEPH RAMANO, JOHN BARNHILL, EUGENE KENNEY, O. W. GUPTON, ERVIN STRAUB

The purpose of the work can be stated as follows: (1) to examine thoroughly each student and provide him with essential information concerning his health status; (2) to teach him the elements of personal hygiene and public health; (3) to give special attention by way of corrective exercises to all students with physical handicaps; (4) to teach outdoor sports and leisure time recreations to all students in line with their capacities and interests; (5) to provide the necessary training for teachers in the field of health and physical education and thus help to meet the need in North Carolina for knowledge about individual and public health and to promote widespread participation in wholesome recreation.

Students who choose a major in health and physical education will take the following courses: Physical Education 75, 76, 77, 78, 79,

* Absent on leave, 1950-1951.

86, 87. In addition men will take Physical Education 65, 66, 67, 68, 69, 70; women will take Physical Education 54, 55, 56, 57, 58, 59, 83a. For teacher certification both men and women will take Education 41, 71, 99, 63, 64. Those who choose a minor will select twenty hours of work from Physical Education 77, 78, 86, Education 63, and electives from Physical Education 65, 66, 67, 68, 69, and 70 for men, and Physical Education 54, 55, 56, 57, 58, and 59 for women.

All majors in health and physical education must have ten hours in biological science to satisfy state certification standards.

Courses for Undergraduates

HYGIENE 11. PERSONAL HYGIENE (3). Required of freshmen.

Three hours a week, fall, winter, or spring quarter. Staff.

HYGIENE 11W. PERSONAL HYGIENE (3). Required of freshmen women.

Three hours a week, fall or winter quarter. Miss Hutchinson.

HYGIENE 12W. HYGIENE (3). For women.

Three hours a week, fall, winter, or spring quarter. Miss Hutchinson.

1, 2, 3. PHYSICAL EDUCATION (1 each). Required of freshmen men.

Three hours a week, fall, winter, and spring quarters. Staff.

4, 5, 6. PHYSICAL EDUCATION (1 each). Required of sophomore men.

Three hours a week, fall, winter, and spring quarters. Staff.

11W, 12W, 13W. PHYSICAL EDUCATION (1 each). Required of freshmen women.

Two hours a week, fall, winter, and spring quarters. Staff.

21W, 22W, 23W. PHYSICAL EDUCATION (1 each). Required of sophomore women.

Two hours a week, fall, winter, and spring quarters. Staff.

31W, 32W, 33W. PHYSICAL EDUCATION (1 each). Required of junior women. (See 31E.)

Two hours a week, fall, winter, and spring quarters. Staff.

31E, 32E, 33E. PHYSICAL EDUCATION (1 each). Required of all junior women majoring in elementary education.

Two hours a week, fall, winter, and spring quarters. Staff.

For Women Who Are Majoring in Physical Education:

54. PHYSICAL EDUCATION (2).

This course includes the fundamental skills, techniques, and teaching methods in field hockey, soccer, speedball, field ball, and volleyball. Opportunity is given for students to take National Officials' Rating examinations.

Six hours a week, fall quarter. Misses Kellam, Hutchinson.

55. PHYSICAL EDUCATION (3).

This course presents methods and materials in the teaching of basketball, stunts and tumbling, and conditioning exercises. Opportunity is given for students to take the National Officials' Rating Test in basketball.

Nine hours a week, winter quarter. Mrs. Fink, Misses Kellam, Hutchinson.

56. PHYSICAL EDUCATION (3).

This course includes the methods and materials in the conduct of camping, including experience in the planning and execution of camping and other outing trips.

Nine hours a week, spring quarter. Miss Hutchinson.

57. PHYSICAL EDUCATION (3).

This course presents the fundamental skills and teaching methods in archery, swimming, tennis, and recreational games. Opportunity is given for students to take National Officials' Rating examinations in tennis.

Nine hours a week, fall quarter. Miss Kellam, Mrs. Fink, Miss Hutchinson.

58. PHYSICAL EDUCATION (2).

This course includes the methods and materials in the teaching of folk, square, social, and modern dance.

Six hours a week, winter quarter. Miss Price.

59. PHYSICAL EDUCATION (3).

This course presents the fundamental skills and teaching methods in badminton, golf, lifesaving, softball, and track and field activities. Opportunity is given for students to take National Officials' Rating examinations.

Nine hours a week, spring quarter. Misses Kellam, Hutchinson.

For Men Who Are Majoring in Physical Education:

65. PHYSICAL EDUCATION (3).

This course includes theory, technics, and skills in the coaching of basketball and tennis.

Nine hours a week, fall and spring quarters. Messrs. Scott, Kenfield.

66. PHYSICAL EDUCATION (3).

This course includes technics and skills in the coaching of football; technics and skills in teaching handball.

Nine hours a week, winter and spring quarters. Messrs. House, Strayhorn.

67. PHYSICAL EDUCATION (3).

Methods, materials, and practice in tumbling, boxing, and wrestling for prospective teachers in public schools and colleges.

Nine hours a week, fall and winter quarters. Messrs. Meade, Ronman, Peacock.

68. PHYSICAL EDUCATION (3).

This course includes theory, technics, and skills in the coaching of baseball and track.

Nine hours a week, fall and spring quarters. Messrs. Rabb, Ranson, Hilton.

69. PHYSICAL EDUCATION (2).

Methods, materials, and practice in rhythmic and recreational games for teachers in public schools and colleges.

Six hours a week, fall and winter quarters. Mr. Rabb, Miss Price.

70. PHYSICAL EDUCATION (2).

Methods, materials, and practice in swimming, speedball, soccer, volleyball.

Six hours a week, winter and spring quarters. Messrs. Allen, Jamerson, Casey.

For All Undergraduate Majors in Physical Education:

75. ANATOMY (5).

This course is designed to teach the fundamentals of anatomy as they apply functionally to the area of health and physical education.

Fall and winter quarters. Mr. Blyth.

76. PHYSIOLOGY (5). Prerequisite, Physical Education 75 or the equivalent of Zoology 41, 42.

A lecture course in elementary physiology covering the various systems of the body.

Winter and spring quarters. Mr. Blyth.

77. PRINCIPLES OF PHYSICAL EDUCATION (3).

A study of the relationship and contribution of physical education to general education; historical backgrounds, basic biological, physiological, psychological, and sociological backgrounds of the modern program.

Three hours a week, winter and spring quarters. Mr. Shepard.

78. PERSONAL AND COMMUNITY HYGIENE (5).

The purpose of this course is to give the student an understanding of the principles and problems of personal, school, and community health as they apply to everyday living.

Fall and spring quarters. Mr. Mullis.

79. TESTS AND MEASUREMENTS IN PHYSICAL EDUCATION (3).

This course is designed to acquaint students with tests and measurements in the fields of health and physical education, test construction, scoring and methods of using results.

Three hours a week, fall and spring quarters. Mr. House.

83a. PHYSICAL EDUCATION FOR THE ELEMENTARY SCHOOL (3).

This course deals with the selection of material and methods of physical education in the elementary school. Required of women majoring in physical education and of elementary education majors.

Three hours a week, fall and spring quarters. Miss Southerland.

84. HEALTH EDUCATION FOR THE ELEMENTARY SCHOOL (3).

This course includes principles, practices, and procedures in health at the elementary level. The course is required of all majors in elementary education.

Three hours a week, winter quarter. Mr. Jamerson.

86. ORGANIZATION AND ADMINISTRATION OF HEALTH AND PHYSICAL EDUCATION (5).

This course deals with the policies and problems of organization and administration of health and physical education programs in schools.

Fall and winter quarters. Mrs. Fink, Mr. Jamerson.

87. INDIVIDUAL PHYSICAL EDUCATION (3).

This course is a study of problems relating to body mechanics, the needs of the physically handicapped student, and the prevention and treatment of athletic injuries.

Three hours a week, winter and spring quarters. Mr. Rabb, Mrs. Fink.

Courses for Graduates and Advanced Undergraduates

120. PRINCIPLES OF PHYSICAL EDUCATION (3). Prerequisite, undergraduate work in education and psychology.

Three hours a week, fall quarter. Mr. Jamerson.

121ab. ADMINISTRATION OF PHYSICAL EDUCATION (5).

Fall quarter. Mr. Shepard, Mrs. Fink.

123. PERSONAL HYGIENE (3). Prerequisite, basic courses in science.

Three hours a week, winter quarter. Mr. Jamerson.

126ab. INDIVIDUAL PHYSICAL EDUCATION (5). Prerequisite, anatomy and physiology, or equivalent.

Spring quarter. Mr. Jamerson, Mrs. Fink.

127. INTRAMURAL AND EXTRAMURAL ACTIVITIES FOR SCHOOLS AND COLLEGES (3).

Three hours a week, fall quarter. Mr. Jamerson.

173. COMMUNITY RECREATION (Sociology 173) (5). Mr. Meyer.

175. EXTRACURRICULAR ACTIVITIES (Education 175) (5). Mr. Plemmons.

Courses for Graduates

220. TESTS AND MEASUREMENTS IN HEALTH AND PHYSICAL EDUCATION (3).

Three hours a week, spring quarter. Messrs. Cornwell, Peacock.

221. PHYSIOLOGY OF EXERCISE (5). Prerequisites, zoology, anatomy, and physiology.

Three lecture and four laboratory periods a week, winter quarter. Laboratory fee, \$5.00. Mr. Miller.

222. PRINCIPLES OF HEALTH EDUCATION (3). Prerequisite, adequate background in science.

Three hours a week, spring quarter.

224. SCHOOL AND COMMUNITY HYGIENE (3). Prerequisite, adequate background in science.

Three hours a week, spring quarter. Mrs. Fink, Mr. Cornwell.

225. MODERN PROBLEMS IN PHYSICAL EDUCATION (3). Prerequisites, experience and advanced work in physical education and education.

Three hours a week, winter quarter. Messrs. Cornwell, Peacock, Shepard.

320. RESEARCH IN PHYSICAL EDUCATION (5). Prerequisites, experience and advanced work in the field.

Winter quarter. Messrs. Cornwell, Peacock, Mrs. Fink.

341abc. SEMINAR COURSE (3 each). Prerequisites, adequate training and experience, and consent of the instructor.

Three hours a week, fall, winter, or spring quarter. Messrs. Cornwell, Jamerson, Shepard, Peacock.

DEPARTMENT OF PHYSICS

Professors: P. E. SHEARIN, OTTO STUHLMAN, JR., K. H. FUSSLER, NATHAN ROSEN

Associate Professors: J. W. STRALEY, W. A. BOWERS, A. V. MASKET

Assistant Professor: E. D. PALMATIER

Instructor: LANGDON BERRYMAN

Part-time Instructors: R. J. BLACKWELL, A. H. FUTCH, RAYMOND HARWELL, L. C. HECK, W. G. JOHNSON, F. E. KINARD, ARTHUR LINZ, JR., G. C. MARTIN, J. T. MEERS, HERBERT ROSENSTOCK, ROSS SCROGGS, MELVIN STEINBERG

Teaching Fellow: J. E. KUPPERIAN, JR.

Technician: NESTORE DICOSTANZO

Apparatus Custodian: W. D. HARRELL

Requirements for Bachelor of Science in Physics

GENERAL COLLEGE

English 1, 2, 3, 4 (See p. 140)

German or French (See p. 140)

Mathematics 7, 8; 31, 32, 33
(or 31, 34-35-36)

Social Science 1-2

Physics 34, 35 (or 24-25), 54 or 52

Physical Education 1, 2, 3, 4, 5, 6
Hygiene 11

JUNIOR YEAR

Chemistry 1-2, 31 (Chem. 3 may
be substituted for 31)

Mathematics 141

Physics 52 or 54, 53, 56, 61, 62

SENIOR YEAR

*English 59

Three courses from group A:

A. Physics 91, 92, 99, 101, 102, 103,
120, 141, 150, 158, 160, 161, 162, 163

B. Mathematics 110, 111, 131, 147, 171,

172, 176, 191, 193

Chemistry 31, 41, 42, 61, 62, 181,
182, 183

Two courses from group B:

Three non-divisional electives

Requirements for graduation, at least 188 quarter hours.

Courses for Undergraduates

20. TWENTIETH-CENTURY PHYSICS (6). No prerequisite.

An introductory course dealing with modern developments in physics. Includes such topics as X-rays, structure of atoms and molecules, the neutron, radioactivity, the atomic bomb, and cosmic rays.

Five lecture and two laboratory hours a week, any quarter. Laboratory fee, \$4.00.
Staff.

24-25. GENERAL PHYSICS (12). Prerequisite or corequisite, Mathematics 7 or equivalent.

Note: Both parts must be completed in order to receive any credit.

Five lecture and two laboratory hours a week, any quarter. Laboratory fee, \$4.00.
Staff.

*A non-divisional elective may be substituted if permission be granted by the physics department.

34-35. GENERAL PHYSICS (12). Prerequisites, Mathematics 7, 8.

Similar to Physics 24-25 but at a more advanced level. Recommended primarily for physics majors and others who plan to take advanced courses in physics.

Five lecture and two laboratory hours a week, any quarter. Laboratory fee, \$4.00 a quarter. Staff.

45. PHOTOGRAPHY (5).

Four lecture and three laboratory hours a week, fall quarter. Laboratory fee, \$3.00. Mr. Scroggs.

51. X-RAY TECHNIQUE: BIOPHYSICS (5). Prerequisite, one year of general college physics.

Radiographic theory and technique, primarily for premedical students, pre-dental students, and medical technologists. May be used as a third or fourth year elective for S.B. in Medical Technology.

Three lecture and six laboratory hours a week, spring quarter. Laboratory fee, \$15.00. Mr. Stuhlman.

52. MECHANICS (5). Prerequisite, Physics 35 or 25 with permission of the instructor; prerequisite or corequisite, integral calculus.

Four lecture and three laboratory hours a week, fall and spring quarters. Laboratory fee, \$3.00. Mr. Fussler.

53. OPTICS (5). Prerequisite, Physics 35 or 25 with permission of the instructor; prerequisite or corequisite, integral calculus.

Four lecture and three laboratory hours a week, winter quarter. Laboratory fee, \$3.00. Mr. Stuhlman.

54. MODERN DEVELOPMENTS IN PHYSICS (5). Prerequisite, Physics 35 or 25 with permission of the instructor; prerequisite or corequisite, differential calculus.

Fall and spring quarters. Mr. Shearin.

56. HEAT (5). Prerequisite, Physics 35 or 25 with permission of instructor, and integral calculus.

Four lecture and three laboratory hours a week, spring quarter. Laboratory fee, \$3.00. Mr. Straley.

57. BIOPHYSICS (5). Prerequisite, Physics 25 or 35. For biophysicists, pre-medical or pre-dental students, and medical technologists.

Four lecture and three laboratory hours a week, fall quarter. Laboratory fee, \$3.00. Mr. Stuhlman.

61. ELECTRICITY AND MAGNETISM (5). Prerequisite, Physics 35 or 25 with permission of the instructor; prerequisite or corequisite, integral calculus.

Four lecture and three laboratory hours a week, winter quarter. Laboratory fee, \$3.00. Mr. Palmatier.

62. ALTERNATING CURRENT CIRCUITS (5). Prerequisite, Physics 61.

Four lecture and three laboratory hours a week, spring quarter. Laboratory fee, \$3.00. Mr. Masket.

91, 92. RESEARCH FOR SENIORS (3 each).

Laboratory fee, \$5.00 each quarter. Staff.

99. **INTRODUCTORY MATHEMATICAL PHYSICS (5)**. Prerequisites, Physics 52, 56, 61, 62, Mathematics 141.

This course will stress the application of mathematical techniques such as vector analysis, Fourier Series, and Green's Functions to physical problems. It is intended primarily for seniors who do not take Physics 101, 102, 103.

Five hours a week, fall quarter. Mr. Masket.

NOTE: Courses in Directed Teaching of High School Science and in Materials and Methods of Teaching High School Science will be found under the Department of Education.

Courses for Graduates and Advanced Undergraduates

101, 102, 103. **INTRODUCTION TO THEORETICAL PHYSICS (5 each)**. Prerequisites, Physics 52, 56, 62, Mathematics 141; Mathematics 171 highly desirable but may be taken concurrently.

Five hours a week, fall, winter, and spring quarters. Mr. Bowers.

120. **HEAT AND THERMODYNAMICS (5)**. Prerequisite, Physics 56, or by permission.

Four lecture and three laboratory hours a week, fall quarter. Laboratory fee, \$3.00. Mr. Straley.

141. **ELECTRICITY AND MAGNETISM (5)**. Prerequisites, Physics 52 and 62, Mathematics 141.

Four lecture and three laboratory hours a week, winter quarter. Laboratory fee, \$3.00. Mr. Masket.

150. **PHYSICAL OPTICS (5)**. Prerequisites, Physics 53, Mathematics 141.

(1950-1951 and alternate years.) *Five hours a week, winter quarter.* Mr. Shearin or Mr. Bowers.

158. **SOUND (5)**. Prerequisites, Physics 52 and Mathematics 141.

(1951-1952 and alternate years.) *Four lecture and three laboratory hours a week, spring quarter. Laboratory fee, \$3.00.* Mr. Shearin.

160. **ELECTRONICS AND ATOMIC PHYSICS (5)**. Prerequisites, calculus and two of the following: Physics 52, 53, 54, 61.

(1950-1951 and alternate years.) *Five hours a week, spring quarter.* Mr. Stuhlman.

161. **NUCLEAR PHYSICS (5)**. Prerequisites, Physics 54, and one of the following: Physics 52, 53, 56, 61; Mathematics 141.

Five hours a week, fall quarter. Mr. Shearin.

162. **ATOMIC SPECTROSCOPY (5)**. Prerequisite, Physics 54.

Four lecture and three laboratory hours a week, spring quarter. Laboratory fee, \$3.00. Mr. Straley.

163. **MOLECULAR SPECTROSCOPY (5)**. Prerequisite, one of the following: Physics 53, 54, 56.

(1951-1952 and alternate years.) *Five hours a week, winter quarter.* Mr. Straley.

Courses for Graduates

201. **BOUNDARY PROBLEMS IN CLASSICAL PHYSICS (5)**. Prerequisites, Mathematics 141, 172, Physics 103; Mathematics 193 is desirable.

(1950-1951 and alternate years.) *Five hours a week, winter quarter.* Mr. Rosen.

210. ELASTICITY AND HYDRODYNAMICS (6). Prerequisites, Mathematics 141, Physics 103.

Summer session only. Mr. Rosen.

221. KINETIC THEORY AND STATISTICAL MECHANICS (5). Prerequisites, Mathematics 141, Physics 120, except by permission.

(1950-1951 and alternate years.) *Five hours a week, spring quarter.* Mr. Bowers.

240. ADVANCED ELECTROMAGNETIC THEORY (5). Prerequisites, Physics 103 or 141 and Mathematics 141.

(1951-1952 and alternate years.) *Five hours a week, fall quarter.* Mr. Rosen.

260, 261, 262. QUANTUM MECHANICS (5 each). Prerequisites, Physics 103 and 162; Mathematics 193 is desirable.

Five hours a week, fall, winter, and spring quarters. Mr. Rosen.

264. SPECTROSCOPY OF THE INFRA-RED (5). Prerequisites, Physics 53 and 260.

(1950-1951 and alternate years.) *Five hours a week, spring quarter.* Mr. Straley.

267. CURRENT ADVANCES IN PHYSICS (5). Prerequisite, permission of the instructor.

Five hours a week, fall, winter, or spring quarter. Any of the graduate professorial staff.

268. ADVANCED THEORETICAL NUCLEAR PHYSICS (5). Prerequisites, Physics 161 and 262, except by permission.

(1950-1951 and alternate years.) *Five hours a week, fall quarter.* Mr. Rosen.

269. ADVANCED EXPERIMENTAL NUCLEAR PHYSICS (5). Prerequisites, Physics 161, 261.

(1951-1952 and alternate years.) *Five hours a week, spring quarter.* Mr. Masket.

271. THEORY OF THE SOLID AND LIQUID STATES (5). Prerequisite, Physics 260.

(1951-1952 and alternate years.) *Five hours a week, winter quarter.* Mr. Bowers.

275. THEORY OF RELATIVITY (5). Prerequisites, Mathematics 141, Physics 103.

(1951-1952 and alternate years.) *Five hours a week, spring quarter.* Mr. Rosen.

280. COSMIC RAYS (5). Prerequisites, Physics 103 and 161.

(1951-1952 and alternate years.) *Four lecture and three laboratory hours a week, winter quarter. Laboratory fee, \$5.00.* Mr. Palmatier.

301. RESEARCH (5 or more).

Ten or more laboratory or computation hours a week, any quarter. Any member of the graduate professorial staff.

Note: Advanced instruction in dynamics is provided by Mathematics 192 (Professor Hobbs), which may be taken for credit in either mathematics or physics.

DEPARTMENT OF PHYSIOLOGY

Professors: J. H. FERGUSON, A. T. MILLER

Associate Professor: E. P. HIATT

Assistant Professor: J. H. BROWN

Part-time Instructors: P. W. BOYLES, P. H. MUEHLKE, N. B. JAVITT

Technicians: R. S. SPARROW, D. C. WHITTINGHILL

Courses for Undergraduates

51. GENERAL COURSE IN PHYSIOLOGY (5). Prerequisites, general courses in zoology and chemistry. *Elective.

Three lecture and four laboratory hours a week, spring quarter. Laboratory fee, \$5.00. Messrs. Ferguson, Hiatt, Brown, Muehlke.

106. PHYSIOLOGY A (9). Prerequisite, approval of the Head of the Department and the Dean of the Graduate School.

This general course covers the physiology of the blood, circulation, respiration, digestion, metabolism, excretions, body fluids, body temperature, endocrines, neuromuscular system, the autonomic, and central nervous system. It is required of all dental students and is available to graduate students as part of a minor in physiology.

Five lecture and eight laboratory hours a week, winter quarter. Laboratory fee for non-dental students, \$7.50. Messrs. Ferguson, Miller, Hiatt, Brown, and staff.

141. PHYSIOLOGY OF NERVOUS SYSTEM I (3). Prerequisite, consult the instructors. *Elective.

Three lecture hours a week, winter quarter. Fee for non-medical students, \$5.00. Messrs. Ferguson, Miller, Hiatt, Brown, and staff.

142. GENERAL COURSE IN PHYSIOLOGY II (15). Prerequisite, consult the instructors. *Elective.

Seven lecture and sixteen laboratory hours a week, spring quarter. Laboratory fee for non-medical students, \$10.00. Messrs. Ferguson, Miller, Hiatt, Brown, and staff.

Courses for Graduates

201. ENDOCRINOLOGY (5). Available to selected students.

Three lecture and four laboratory hours a week, fall or winter quarter. Laboratory fee, \$10.00. Mr. Brown.

202. BLOOD (5). Available to selected students.

Three lecture and four laboratory hours a week, fall or winter quarter. Laboratory fee, \$10.00. Mr. Ferguson.

211. EXERCISE AND STRESS PHYSIOLOGY (5). Prerequisites, Physiology 141, 142, Biological Chemistry 101 and 102.

Three lecture and four laboratory hours a week, fall or winter quarter. Laboratory fee, \$10.00. Mr. Miller.

212. RENAL PHYSIOLOGY AND WATER BALANCE (5). Prerequisites, Physiology 141, 142, Biological Chemistry 101 and 102.

Three lecture and four laboratory hours a week, fall or winter quarter. Laboratory fee, \$10.00. Mr. Hiatt.

*Before registering for this work the academic student must secure the permission of his dean.

301, 302, 303. RESEARCH IN PHYSIOLOGY (5 or more).

Hours to be arranged with instructor. Fall, winter, and spring quarters. Laboratory fee, \$5.00. Messrs. Ferguson, Miller, Hiatt, Brown, and staff.

DEPARTMENT OF POLITICAL SCIENCE

Professors: C. B. ROBSON, W. W. PIERSON, E. J. WOODHOUSE, K. C. FRAZER, P. W. WAGER, W. S. JENKINS, J. W. FESLER, *F. W. COKER, *W. A. ROBSON

Associate Professors: F. G. GIL, D. G. MONROE, G. A. HEARD

Instructors: T. W. AIKEN, MARY S. ALBERT, G. B. CLEVELAND, R. L. DUNCAN, F. K. GIBSON, D. V. GUTHRIE, J. I. MASON, M. T. ORR, W. W. THOMAS

Teaching Fellow: R. L. HOUGH

The requirements for the A.B. with a major in political science are Political Science 41 (or the equivalent), at least two additional exclusively undergraduate courses (selected from Political Science 42, 52, 53, 81, 86, and 87), and a sufficient number of other political science courses to make a total of eight. The courses must be distributed among at least three of the several fields of political science: (1) local, state, and federal government in the United States; (2) public administration; (3) foreign and comparative government; (4) international law and relations; and (5) political theory and jurisprudence. There must, however, be a certain degree of concentration in one of these fields.

Also, in choosing allied courses, selections should be made which support the field of concentration. These requirements can be met and still allow an assembly of courses dealing with a specific geographic area such as Latin America.

Students who have shown exceptional competence are permitted to pursue a reading program in lieu of two regular courses. This modified course of study, if completed satisfactorily, leads to the A.B. with Honors in Political Science.

Training for Public Administration

Professional training for such positions in the public service as general administrators (including city managers), public personnel specialists, and public financial administration specialists is offered by the department at the graduate, rather than the undergraduate, level. However, the student may obtain through an undergraduate major

*Burton Craige Visiting Professor of Jurisprudence, winter quarter, 1951.

in political science the necessary foundation for the United States Civil Service Commission's annual examination for positions as Junior Management Assistants. He may also obtain the foundation for graduate professional training in public administration.

Because government requires many kinds of skills in its staff, students may prepare for entry into the public service through many departments of the University. In recognition of this, and regardful of the special needs of the public official, the Division of Social Sciences of the College of Arts and Sciences has recommended that students planning to enter the public service, regardless of undergraduate major, incorporate the following courses in their programs, consistently, of course, with other College requirements: Political Science 41, Economics 31-32 (or 61), Psychology 24-25, Political Science 101, History 22 or 72 or 114, Economics 170, Business Administration 71, and English 52.

The department will be glad to advise students interested in preparing for the public service.

Courses for Undergraduates

41. INTRODUCTION TO GOVERNMENT IN THE UNITED STATES (5).

The nature of the "state," the role of the government, Colonial heritages, framing of the U. S. Constitution, principles underlying constitutional government, citizenship, civil rights, political parties and the national electoral process, the national executive, congressional organization and the process of law making, the federal judiciary, with some references to intergovernmental relations, areas of national action and the administrative process.

Each quarter. Materials fee, \$1.00. Mr. Monroe, Chairman.

42. THE PROCESSES AND PROBLEMS OF GOVERNMENT IN THE UNITED STATES (5). Prerequisite, Political Science 41.

Designed as complementary to Political Science 41, especially for students not majoring in political science. The course deals chiefly with the efforts made by government in the United States to solve internal public problems. It treats particularly government policies toward agriculture, labor, and business. The opening phase of the course discusses the nature of politics and the role played by politicians, certain characteristics of political behavior in the United States, and the functions of political parties and pressure groups—all as an aid in understanding how government policies are formed.

Each quarter. Materials fee, \$1.00. Mr. Heard, Chairman.

52. THE GOVERNMENTS OF EUROPE (5). Prerequisite, Political Science 41.

The government and politics of Great Britain, France, and Russia; a survey of constitutional development, but with emphasis upon organization and methods of government.

Winter and spring quarters. Materials fee, \$1.00. Mr. Heard.

53. THE FAR EAST IN WORLD POLITICS (5). Prerequisite, Political Science 41.

A survey of the international relations of the Far East and an examination of

postwar developments, with emphasis on the occupation of Japan, Communist China, the rise of the United States of Indonesia and the Philippine Republic.

Winter quarter. Materials fee, \$1.00. Mr. Orr.

81. STATE GOVERNMENT IN THE UNITED STATES (5). Prerequisite, Political Science 41.

The organization and administrative methods of state government, with some examination of the relationships between the state government and the counties, cities, and towns.

Each quarter. Materials fee, \$1.00. Messrs. Monroe, Jenkins.

86. INTERNATIONAL RELATIONS AND WORLD POLITICS (5). Prerequisite, Political Science 41.

Analysis of politics among nations: imperialism, balance of power, international morality, sovereignty, diplomacy; analysis of the problem of peace: disarmament, international organizations, world government, diplomacy.

Each quarter. Materials fee, \$1.00. Mr. C. B. Robson.

87. INTERNATIONAL RELATIONS OF THE LATIN AMERICAN REPUBLICS (5). Prerequisite, Political Science 41.

Historical survey of diplomatic relations of the Latin American republics with the rest of the world with special emphasis upon relations with the United States.

Fall and spring quarters. Materials fee, \$1.00. Mr. Gil.

91-92. HONORS COURSES (10). Required of all students reading for Honors in Political Science.

Courses for Graduates and Advanced Undergraduates

101. PUBLIC ADMINISTRATION (5). Prerequisite, Political Science 41.

A study of the basic principles of organization, location of authority, fiscal management, personnel management, and forms of administrative action in the public service.

Fall and spring quarters. Materials fee, \$1.00. Mr. Wager.

105. PUBLIC PERSONNEL ADMINISTRATION (5). Prerequisites, Political Science 41 and 101 or equivalent.

A study of the civil service—its recruitment, training, classification, promotion, restrictions, immunities, compensation and morale; and of the machinery which has been developed for handling personnel matters.

Winter quarter. Materials fee, \$1.00. Mr. Wager.

121. THE GOVERNMENT OF ENGLAND (5). Prerequisite, Political Science 41.

The development and operation of British government in its local, national, and imperial aspects and an examination of current developments in social and economic policy.

Winter quarter. Materials fee, \$1.00. Mr. W. A. Robson.

123. COMPARATIVE GOVERNMENT (5). Prerequisite, Political Science 41.

A comparative study of the principles, structure, and operation of contemporary governmental systems with special attention to those of continental Europe.

Spring quarter. Materials fee, \$1.00. Mr. C. B. Robson.

126. THE HISPANIC EMPIRES IN AMERICA (5). Prerequisite, Political Science 41.

A study of the political and social institutions in the Spanish and Portuguese colonial systems and their development.

Fall quarter. Materials fee, \$1.00. Mr. Gil.

127. GOVERNMENT OF LATIN AMERICAN STATES (5). Prerequisite, Political Science 41.

The forms of organization, the functions and operations of government in Latin America with emphasis on present conditions, tendencies, and peculiar types of institutions.

Winter quarter. Materials fee, \$1.00. Mr. Pierson.

132. MUNICIPAL GOVERNMENT IN THE UNITED STATES (5). Prerequisite, Political Science 41.

Chartered city and town government, its origins, history, forms and relations to national, state, and county governments.

Fall quarter. Materials fee, \$1.00. Mr. Woodhouse.

133. MUNICIPAL ADMINISTRATION IN THE UNITED STATES (5). Prerequisite, Political Science 41.

Administrative organization, procedure, and problems of cities and towns.

Spring quarter. Materials fee, \$1.00. Mr. Woodhouse.

134. COUNTY GOVERNMENT AND ADMINISTRATION (5). Prerequisite, Political Science 41.

A review of the historical antecedents of American counties and townships; the present organization, powers, functions, and intergovernmental relations of these units; and significant trends.

Fall quarter. Materials fee, \$1.00. Mr. Wager.

141. INTRODUCTION TO INTERNATIONAL LAW (5). Prerequisite, Political Science 41.

Treatises, documents, and cases are studied to acquaint the student with the history and the principles of the law of nations, and the organization and procedure of international tribunals.

Fall quarter. Materials fee, \$1.00. Mr. Frazer.

142. INTERNATIONAL ORGANIZATION AND INSTITUTIONS (5). Prerequisite, Political Science 41.

The organization and work of the United Nations and other international institutions are studied in connection with the general principles of international organization.

Winter quarter. Materials fee, \$1.00. Mr. Frazer.

144. THE ORGANIZATION AND CONDUCT OF THE FOREIGN RELATIONS OF THE UNITED STATES (5). Prerequisite, Political Science 41.

Principal consideration is given to the organization of the government of the United States for the conduct of its foreign relations, e.g., the Department of State, the Foreign Service, etc.

Spring quarter. Materials fee, \$1.00. Mr. Frazer.

145. CONTEMPORARY INTERNATIONAL RELATIONS OF THE UNITED STATES (5). Prerequisites, Political Science 41 and permission of the instructor.

The course is suited to undergraduates and graduates with some knowledge of international relations who wish to study the contemporary foreign policy of the United States.

Spring quarter. Materials fee, \$1.00. Mr. Frazer.

147. INTER-AMERICAN REGIONAL ORGANIZATIONS (5). Prerequisite, Political Science 41.

The evolution of the inter-American security system, recent Pan-American conferences and the activities and problems of the various continental agencies.

Winter quarter. Materials fee, \$1.00. Mr. Gil.

151. THE ELEMENTS OF POLITICAL SCIENCE (5). Prerequisite, Political Science 41.

A study of the principles of political science and of the important theories respecting the nature, origin, forms, and ends of the state and of government.

Fall quarter. Materials fee, \$1.00. Mr. Pierson.

154. DEVELOPMENT OF THE ENGLISH CONSTITUTION (History 141) (5). Prerequisite, Political Science 41.

Emphasis upon the major constitutional documents and the development of the national political institutions with considerable attention to the leading constitutional cases and principles of law.

Fall quarter. Mr. Godfrey.

155. THE CONSTITUTION OF THE UNITED STATES (History 175) (5). Prerequisite, Political Science 41.

A study of the fundamental principles of constitutional interpretation and practice in the United States by means of lectures, textbooks, and cases.

Each quarter. Materials fee, \$1.00. Mr. Monroe.

156. CONTEMPORARY PROBLEMS IN GOVERNMENT (5). Prerequisite, Political Science 41.

Laboratory problems in international, national, state, and local government and administration based on general comparison of United States, British, and Canadian governments.

Winter quarter. Materials fee, \$1.00. Mr. Woodhouse.

157. HISTORICAL JURISPRUDENCE, ANCIENT AND MEDIEVAL (5). Prerequisite, Political Science 41.

Babylonian, Egyptian, Greek, and Hebrew Law; intensive study of evolution of Roman Law, of its revival under Justinian, and a survey of its influence in the medieval and the modern worlds.

Winter quarter. Materials fee, \$1.00. Mr. Woodhouse.

158. HISTORICAL JURISPRUDENCE, ANGLO-AMERICAN (5). Prerequisite, Political Science 41.

Evolution of English Law to the American Revolution, its adaptation to colonial conditions, the development of branches of it in forty-seven states of the United States.

Spring quarter. Materials fee, \$1.00. Mr. Woodhouse.

159. THE BRITISH EMPIRE (History 159) (5). Prerequisite, Political Science 41.

From the old colonial system to the constitutional development of the Commonwealth; special attention to Canada and to the important documents of Commonwealth growth, including the most recent ones.

Spring quarter. Mr. Godfrey.

162. AMERICAN POLITICAL THOUGHT (5). Prerequisite, Political Science 41.

An analysis of the ideas underlying government and politics in the United States.

Fall quarter. Materials fee, \$1.00. Mr. C. B. Robson.

165. POLITICAL THOUGHT OF THE EIGHTEENTH CENTURY (5). Prerequisite, Political Science 41.

The development of liberal and democratic political thought, with emphasis on the ideas of the American and the French Revolutions.

Spring quarter. Materials fee, \$1.00. Mr. Pierson.

166. RECENT AND CONTEMPORARY POLITICAL THOUGHT (5). Prerequisite, Political Science 41.

The theory of constitutional democracy together with an examination of the principal lines of criticism of this form of government and of the ideologies antagonistic to it.

Winter quarter. Materials fee, \$1.00. Mr. Coker.

167. POLITICAL THOUGHT IN LATIN AMERICA (5). Prerequisite, Political Science 41.

An analysis of the development of political philosophy in Latin America with an examination of the evolution of democratic thought.

Spring quarter. Materials fee, \$1.00. Mr. Gil.

175. POLITICAL PARTIES AND ELECTORAL PROBLEMS IN THE UNITED STATES (5). Prerequisite, Political Science 41.

Development of political parties and of nomination and election machinery and procedure. Intensive study of present organization, procedure, and problems of parties and of national, state, and local election laws.

Fall quarter. Materials fee, \$1.00. Mr. Woodhouse.

181. RECENT NATIONAL POLICY AND ADMINISTRATION (5). Prerequisites, Political Science 41 and Economics 31-32 or equivalent.

Analytical and critical survey of basic national policies affecting business, labor, agriculture, special groups and industries, and the economy in general. Foreign policy is excluded.

Spring quarter. Materials fee, \$1.00. Mr. Fesler.

185. FINANCIAL ADMINISTRATION (5). Prerequisite, Political Science 41.

An analysis of the fiscal agencies in federal, state, and local government; and of the principles and practices of budgeting, accounting, auditing, purchasing, tax administration, and treasury management.

Spring quarter. Materials fee, \$1.00. Mr. Wager.

191. PUBLIC FINANCE (Economics 141) (5). Prerequisite, Economics 31-32 or equivalent.

Every quarter. Messrs. Heer, Ashby.

192. PROBLEMS IN FEDERAL FINANCE (Economics 142) (5). Prerequisite, Economics 141.

Winter quarter. Mr. Heer.

193. PROBLEMS IN STATE AND LOCAL FINANCE (Economics 143) (5). Prerequisite, Economics 31-32 or equivalent.

Spring quarter. Mr. Heer.

197. GOVERNMENT AND BUSINESS (Economics 197) (5). Prerequisite, Economics 31-32 or equivalent.

Spring quarter. Messrs. Hobbs, Carter.

Courses for Graduates

209. PLANNING AND GOVERNMENT (5).

Survey of nature and scope of government planning, its relation to other governmental activities, and its administrative and organizational problems.

Fall quarter. Mr. Fesler.

210. PUBLIC ADMINISTRATION OF RESOURCES (5). Prerequisites, Political Science 41 and 101 or equivalent.

A study of the agencies, principles, and procedures which have been evolved by the national and state governments in regulating or administering natural resources.

Spring quarter. Materials fee, \$1.00. Mr. Wager.

221. ADMINISTRATIVE LAW (5). Prerequisites, Political Science 41 and 101 or equivalent.

Legal setting of public administration, emphasizing governmental regulatory activities. Administrative legislation, administrative adjudication, procedural restrictions, judicial review of administrative decisions, government and official liability.

(1951-1952 and alternate years.) *Fall quarter. Materials fee, \$1.00. Mr. Fesler.*

225. ADMINISTRATIVE ORGANIZATION AND MANAGEMENT (5). Prerequisites, Political Science 41 and 101 or equivalent.

A study of the structural and management aspects of public administration. Organization theory and practice, policy formation processes, techniques of administrative improvement, field administration.

Winter quarter. Materials fee, \$1.00. Mr. Fesler.

231. THE LEGISLATIVE PROCESS (5). Prerequisite, Political Science 41.

Winter quarter. Materials fee, \$1.00. Mr. Jenkins.

235. THE JUDICIAL PROCESS (5). Prerequisites, Political Science 41 and 155 or equivalent.

Spring quarter. Materials fee, \$1.00. Mr. Jenkins.

241. INTERNATIONAL LAW (5). Prerequisites, Political Science 41 and 141 or equivalent.

A study of the law of nations chiefly as interpreted and applied by the courts, and other organs of the government of the United States.

Fall quarter. Materials fee, \$1.00. Mr. Frazer.

286. PRINCIPLES AND PRACTICES IN MODERN WORLD POLITICS (5). Prerequisites, Political Science 41 and 86 or equivalent.

It is intended to study the international policies of the nations particularly as these are reflected in their activities in the principal international organizations.

Winter or spring quarter. Materials fee, \$1.00. Mr. Frazer.

Seminar Courses for Graduates

Prerequisite, a political science major or the equivalent.

301abc. MODERN INTERNATIONAL RELATIONS (9).

Conferences, two hours a week, fall, winter, and spring quarters. Materials fee, \$1.00. Mr. Frazer.

305. SEMINAR IN COUNTY ADMINISTRATION (5).

Winter or spring quarter. Materials fee, \$1.00. Mr. Wager.

311abc. SEMINAR IN AMERICAN POLITICAL THEORY (9).

Conferences, three hours a week, fall, winter, and spring quarters. Materials fee, \$1.00. Mr. Pierson.

321abc. STATE AND LOCAL GOVERNMENT (9).

Conferences, three hours a week, fall, winter, and spring quarters. Materials fee, \$1.00. Mr. Woodhouse.

331. PROBLEMS IN PUBLIC ADMINISTRATION (5).

Individual and group research projects on particular administrative agencies and significant problems of administrative theory and practice.

Winter and spring quarters. Materials fee, \$1.00. Messrs. Fesler, W. A. Robson.

341. SEMINAR COURSE (5).

A research course in a special field under the direction of a member of the department.

361. PROBLEMS IN RECENT AND CONTEMPORARY POLITICAL THEORY (5).

Fall, winter, or spring quarter. Materials fee, \$1.00. Messrs. Robson, Pierson, Coker.

PORTUGUESE

(See Romance Languages)

DEPARTMENT OF PSYCHOLOGY

Professors: DOROTHY C. ADKINS, J. F. DASHIELL, H. W. CRANE, ENGLISH BAGBY, *J. W. LAYMAN, †L. P. CRESPI

Associate Professors: W. J. DANIEL, I. S. WOLF, H. G. MCCURDY, J. G. DAWSON

Assistant Professors: E. R. LONG, DOROTHY TERRY

Lecturer: S. B. LYERLY

Instructors: OLGA LYERLY, HAROLD VAN COTT, W. E. ORGANIST, WINIFRED MELDRIM, HARRY LEONHARDT, HANS SCHMIDT, EDWIN GOLIN

Teaching Fellow: WILLIAM PAPANESTOR

Graduate Assistants: EDITH T. CHEN, J. M. THOMAS

Psychiatric Consultant, Clinical Training Program: ANGUS C. RANDOLPH, M.D.

Undergraduate students intending to major in psychology are advised to include courses in biology, physics, mathematics, sociology, and anthropology in their studies. Programs for majors with varying directions of interest should include the following. For a *liberal education*: Psychology 122 or 126 or 133, 140 or 144 as well as courses in economics, history, sociology, anthropology, and philosophy. Students who anticipate graduate training as preparation for *teaching and research* should include Psychology 122, 126, 130, 140 or 144, 146 and courses in biology, physics, and mathematics as well as in the social sciences. For a professional career in *personnel*: Psychology 130, 132, 135, 136, 148, 181 and courses in mathematics, economics, and

*Absent on leave, 1951-1952.

†Absent on leave, 1950-1951.

business administration. Students who plan to enter the profession of *clinical psychology* should include Psychology 122, 126, 130, 140 or 144, 141, 145, 146, 148 and courses in physiology, educational-vocational guidance, sociology, and anthropology.

For graduate students differentiated programs of work are likewise blocked out. Their descriptions may be obtained from the office of the department. Breadth and soundness of basic training are emphasized during the first year or two of graduate study. The student who desires to enter graduate work should bear in mind that both of the advanced degrees are essentially research degrees, and he should not delay in embarking upon research and in meeting the various other degree prerequisites.

Personnel and material facilities for graduate level professional training in clinical psychology are available both on and off the campus. The department also participates in the clinical training program sponsored by the Veterans Administration.

Courses for Undergraduates

24, 25. GENERAL PSYCHOLOGY (6 each).

Psychology is presented by lectures, demonstrations, and laboratory work, as a biological science. Practical applications are made secondary to the understanding of basic concepts and phenomena.

Five lecture and demonstration hours and two laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, \$3.00 a quarter. Lecturers: Messrs. Dashiell, Daniel, McCurdy, Wolf, Long, Lyerly. Laboratory: Messrs. Van Cott, Leonhardt, Schmidt, Golin, Papanestor, Miss Meldrim, Mrs. Lyerly.

NOTE: These courses may be elected separately, but neither may be elected as a student's first course in natural science.

33. SOCIAL PSYCHOLOGY (5). No prerequisite. May not be counted toward a major.

A general course in such topics as: cultural vs. biological determinants (customs, mores, etc.); competition vs. cooperation; discussion; leadership; public opinion and propaganda; individual differences.

Fall quarter. Mr. Bagby.

40. THE PSYCHOLOGY OF PERSONALITY (5). No prerequisite. May not be counted toward a major.

An elementary presentation of the part played by intelligence, emotionality, and modes of adjustment in personal problems. Some mention of types and traits of people.

Spring quarter. Mr. Bagby.

Courses for Graduates and Advanced Undergraduates

NOTE: Psychology 24 and 25 are prerequisite to all courses numbered above 100.

104. ADVANCED GENERAL PSYCHOLOGY (5).

A survey of recent major experiments, to serve as an intensive review, especially for first-year graduate students. Emphasis is upon methodology.

Five lecture hours, or equivalent, a week. Messrs. Daniel, Dashiell.

122. HUMAN LEARNING (5).

The many technical and theoretical problems involved in memorizing, conditioning, and problem-solving.

Five lecture hours a week. Messrs. Daniel, Dashiell, Long.

126. CHILD DEVELOPMENT (5).

Survey of development of the normal child, with particular attention to social relations. Biological and cultural factors are considered.

Five lecture hours a week. Mr. McCurdy.

130. ELEMENTARY PSYCHOLOGICAL STATISTICS (5).

Distributions and correlations, as in the conventional courses in the subject. Psychological types of problems used.

Three lecture and four laboratory hours a week, fall quarter. Laboratory fee, \$2.00. Miss Adkins, Messrs. Lyerly, Organist.

132. TEST CONSTRUCTION (5). Prerequisites, Psychology 130, 148.

Training in the techniques of constructing and planning of written tests, essay and objective, and of performance tests for aptitudes and achievement. Other types of measuring devices are given some attention.

Three lecture and four laboratory hours a week. Laboratory fee, \$2.00. Miss Adkins, Mr. Organist.

133. INTRODUCTION TO SOCIAL PSYCHOLOGY (5).

Social groupings; dynamics of person-to-person relations.

Five lecture hours a week. Messrs. Crespi, McCurdy.

135. PERSONNEL PSYCHOLOGY (5).

Methods of analyzing jobs and of selecting, training, motivating, and evaluating employees.

Four lecture and two laboratory hours a week. Laboratory fee, \$2.00. Miss Adkins, Mr. Organist.

136. INTERVIEWING TECHNIQUES (5).

Emphasis is placed upon the interview and a technical analysis of what procedures do and do not fit particular needs.

Five lecture hours a week. Mr. Dawson, Miss Terry.

140. PERSONALITY (5).

Development and modern application of the concept of personality as a more or less self-determining system of beliefs, values, and behavior tendencies.

Five lecture hours a week. Mr. McCurdy.

141. INTRODUCTION TO THE PSYCHOLOGICAL CLINIC (5). Prerequisites, Psychology 146; and any one of 140, 144, 145, or 148.

A survey of the function of the clinic, types of cases seen, various techniques utilized to understand (diagnose) and to treat maladjusted persons; functions of the various personnel.

Five lecture hours a week. Messrs. Layman, Wolf.

144. MENTAL HYGIENE (5).

A genetic approach to problems of adjustment in relation to causative factors found in infancy, preschool, school, and adult periods. Case material is used with direct application to specific problems.

Five lecture hours a week. Messrs. Crane, Wolf.

145. THE DEVIANT CHILD (5).

Causes, physical basis, and characteristics of deviant children; their part in education, delinquency, and occupations.

Five lecture hours a week. Mr. Crane, Miss Terry.

146. PSYCHONEUROSES AND PSYCHOSES (5).

Sensory, emotional, memory, etc., abnormalities; their neural bases; their groupings into the syndromes of the major and minor mental disorders.

Five lecture hours a week. Messrs. Crane, Wolf.

148. TESTS AND MEASUREMENTS (5).

Survey of principal types of psychological measuring instruments.

Four lecture and two laboratory hours a week, spring quarter. Laboratory fee, \$3.00. Mr. Crane.

151, 152, 153. ORIGINAL PROBLEMS (5 each).

One lecture and eight laboratory hours a week, fall, winter, or spring quarter. Laboratory fee, \$3.00 a quarter. Staff.

181. LABORATORY ANALYSIS IN PERSONNEL WORK (5). Advised prerequisite, Psychology 135 or Business Administration 155.

A laboratory course in personnel techniques, as applied practically to job analysis, constructing application blanks, rating scales, etc.

Ten laboratory hours a week. Laboratory fee, \$3.00. Miss Adkins, Messrs. Lyerly, Organist.

Courses for Graduates

201, 202. EXPERIMENTAL METHODS AND PROCEDURES (5 each). Prerequisite, Psychology 130.

Laboratory working over of the principal problems of classic experimentation: psychophysics, sensory qualities, perception, reaction time, feeling, work and fatigue, conditioning, etc. Intensive study of principles of experimental design.

One lecture and eight laboratory hours a week. Laboratory fee, \$3.00. Messrs. Daniel, Dashiell, Long.

205. NEUROPHYSIOLOGICAL PSYCHOLOGY (5).

The neural bases of behavior, with emphasis upon structural character of cord, brain, and sense organs. Laboratory work with slides and specimens.

Three lecture and four laboratory hours a week. Laboratory fee, \$3.00. Mr. Crane.

206. PHYSIOLOGICAL BASIS OF BEHAVIOR (5).

Functioning of various organs and organ-systems as determinants of over-all behavior.

Five lecture hours a week. Messrs. Long, Dashiell.

211. HISTORICAL SURVEY OF PSYCHOLOGY (5).

Most emphasis is upon developments of the eighteenth and nineteenth centuries in German experimental, French clinical, British biological, and Russian objective movements.

Five lecture hours a week. Messrs. Dashiell, McCurdy.

212. CONTEMPORARY PSYCHOLOGICAL TRENDS (5).

Readings in the original writings of structuralism, behaviorism, gestalt, psychoanalysis, and other recent movements.

Five lecture hours a week. Messrs. Dashiell, McCurdy.

225. ANIMAL BEHAVIOR (5).

Survey of experimental work in motivation and development, sensory capacities, learning, and other basic psychological concepts. Laboratory work to familiarize the student with simple research procedures.

Four lecture and two laboratory hours a week. Laboratory fee, \$2.00. Mr. Daniel.

226. METHODS IN CHILD DEVELOPMENT (5).

A survey of research contributions to the field of development, as regards both aspects (physical, emotional, etc.) and age periods (neonate, preschool, adolescent, etc.). Methodology in research to be emphasized. Experiments and controlled observations.

Four lecture and two laboratory hours a week. Laboratory fee, \$2.00. Mr. Dashiell.

230. ADVANCED PSYCHOLOGICAL STATISTICS (5). Prerequisite, Psychology 130.

Extends the concept of correlation to include multivariate analysis, including partial and multiple correlation, reliability, factor analysis; also curve fitting, sampling, etc.

Three lecture and four laboratory hours a week. Laboratory fee, \$2.00. Miss Adkins, Mr. Organist.

232. TEST THEORY AND ANALYSIS (5). Prerequisite, Psychology 130; 132 and 230 desirable.

Principles of mental measurement; theoretical bases of analyzing tests; selection and weighting of composite tests; scaling theory.

Three lecture and four laboratory hours a week. Laboratory fee, \$2.00. Miss Adkins, Mr. Organist.

233. METHODS OF SOCIAL PSYCHOLOGY (5).

An analysis of methods of investigation in social psychology with their application to the social sciences. Major attention will be focused upon survey methodology with particular emphasis upon the techniques, contributions, and limitations of public opinion polling.

Five lecture hours a week. Messrs. Crespi, Demerath, Noland.

234. MATHEMATICAL PSYCHOLOGY (5). Prerequisite, permission of the instructor.

Illustrations of psychology as a quantitative rational science. Topics from a wide range: vision, nervous system, learning, war psychology, attention, fatigue, and others.

Five lecture hours a week, offered as demand warrants. Miss Adkins.

240. PSYCHODYNAMICS OF BEHAVIOR (5). Prerequisites, Psychology 140, 201 or 202.

Laboratory-lecture study of selected topics in the general area of emotion and motivation.

Three lecture and four laboratory hours a week. Mr. McCurdy.

246. ADVANCED ABNORMAL PSYCHOLOGY (5). Prerequisites, 140, 146 or 212.

Consideration of major current personality theories with special reference to their interpretation of the principal abnormal behavior syndromes.

Five lecture hours a week. Messrs. Layman, Wolf.

247. METHODS OF MENTAL EXAMINATION (5).

Methods of securing information pertinent to adequate evaluation of the problems leading to case referral, procedures to be utilized in case study, and interpretation of test data.

Four lecture and two laboratory hours a week. Laboratory fee, \$3.00. Mr. Crane.

249. CLINICAL PRACTICES, INDIVIDUAL TESTS (CHILDREN) (5). Prerequisites, Psychology 148 and permission of the instructor.

Emphasis is upon the acquisition of skill in the administration, scoring, and interpretation of psychological tests most frequently used in the examination of children but with some reference to the testing of adults.

Ten laboratory hours a week. Laboratory fee, \$3.00. Miss Terry.

250. CLINICAL PRACTICES, INDIVIDUAL TESTS (ADULTS) (5). Prerequisites, Psychology 148 and permission of the instructor.

Emphasis is upon the acquisition of skill in the administration, scoring, and interpretation of psychological tests most frequently used in the examination of adults but with some reference to the testing of children.

Ten laboratory hours a week. Laboratory fee, \$3.00. Miss Terry.

251, 252, 253. RESEARCH IN PSYCHOLOGY (5 each). Prerequisite, permission of the instructor under whom research is to be conducted.

Ten laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, \$3.00 a quarter. Staff.

255. THEORY OF PROJECTIVE TECHNIQUES (5). Prerequisites, Psychology 141, 146, 249, 250.

As clearly distinguished from other psychometric methods, projective methods of examination as now widely employed, their psychological assumptions, validity, and reliability.

Three lecture and four laboratory hours a week. Mr. Layman.

256-257. CLINICAL PRACTICES IN PROJECTIVE TECHNIQUES (5 each). Prerequisites, Psychology 255 and permission of the instructor.

256: To develop competence in the scoring and interpretation of projective tests administered to normal subjects. 257: To obtain experience in examining clinical cases.

Ten hours a week, winter and spring quarters. Messrs. Layman, Dawson.

258. METHODS OF PSYCHOTHERAPY (5). Prerequisite, Psychology 255.

An intensive survey of the theories and techniques of the most frequently employed methods of psychotherapy.

Five lecture hours a week. Mr. Wolf.

259-261. CLINICAL PRACTICES IN PSYCHOTHERAPY (5 each). Prerequisites, Psychology 258 and permission of the instructor.

Supervised training in psychotherapeutic procedures with clinical subjects, further study of the literature, and participation in clinical staff conferences.

Ten hours a week. Messrs. Dawson, Crane, and Wolf. (Dr. Angus C. Randolph, psychiatric consultant).

271. BEHAVIOR THEORIES (5).

Contemporary theories of behavior and learning taken up critically and comparatively. Student to design problems within each.

Five lecture hours a week. Mr. Daniel.

325. SEMINAR IN THEORETICAL-EXPERIMENTAL PSYCHOLOGY (3).

The topic will vary with the interests of students and staff members.

Three hours a week, fall or winter or spring quarter, to be specially announced. Staff.

326. SEMINAR IN CLINICAL PSYCHOLOGY (3).

Systematic surveys of research in (a) personality dynamics; (b) techniques currently employed with specific traits; (c) techniques employed in personality analysis; and (d) techniques with maladjusted persons as shock, drug, hypnotic, etc. *Each quarter. Staff.*

327. SEMINAR IN ABNORMAL PSYCHOLOGY (3).

Systematic reviews of theoretical and experimental studies in psychopathology, animal neuroses, and related topics. *Offered as needed. Staff.*

341, 342. ADVANCED RESEARCH (5 each).

Five laboratory hours a week, any quarter. Laboratory fee, \$3.00 for each course. Staff.

NOTE: The student is referred also to courses in educational psychology, statistics, neurology, physiology, sociology, and anthropology listed in other departments of the University.

SCHOOL OF PUBLIC HEALTH

Professors: E. G. MCGAVRAN, *H. G. BAITY, S. S. CHIPMAN, RUTH W.

HAY, LUCY S. MORGAN, A. H. BRYAN, J. E. LARSH, JR., J. J. WRIGHT

Research Professors: H. J. MAGNUSON, W. P. RICHARDSON

Associate Professors: MARGARET BLEE, E. T. CHANLETT, G. O. DOAK,

B. G. GREENBERG, C. FRANCES MACKINNON, JEAN I. REBENTISCH,

C. G. SHEPS, HENRY TAUBER, EUNICE N. TYLER

Visiting Professor: J. J. HINMAN, JR.

Visiting Associate Professors: M. H. GREENHILL, J. W. R. NORTON

Assistant Professors: MARGARET B. DOLAN, L. D. FREEDMAN, WARFIELD

GARSON, M. L. GRANSTROM, CHARLOTTE P. MCLEOD, ELTA MAE

MAST, EVELYN ELIZABETH JOHNSON, J. D. THAYER

Visiting Assistant Professors: O. D. GARVIN, R. J. MURPHY

Instructors: IDA H. FRIDAY, W. C. GIBSON, HANS JAFFE, ALPHA K.

KENNY

Part-time Instructors: C. H. CAMPBELL, J. R. HENDRICKS

Courses for Graduates and Advanced Undergraduates

Students other than those in schools of the Division of Health Affairs must obtain permission from their deans before registering for any course in public health. Students in schools of the Division of Health Affairs are exempted from the payment of the laboratory fees listed in the following course descriptions.

*Absent on leave, fall quarter, 1950.

For further information see the special catalogue of the School of Public Health.

P.H. 101. EPIDEMIOLOGY (3).

Three lecture and demonstration hours and one seminar a week, winter quarter. Dr. McGavran.

P.H. 106. VENEREAL DISEASE CONTROL PROBLEMS (2).

Two lecture hours a week, fall quarter. Drs. Magnuson, Garson.

P.H. 111. PUBLIC HEALTH ADMINISTRATION (3).

Three lecture hours and one seminar a week, winter quarter. Drs. Wright, Richardson, Sheps, Garvin.

P.H. 114. MENTAL HEALTH (2).

Two lecture hours a week. Dr. Greenhill.

P.H. 115. INTRODUCTION TO PUBLIC HEALTH EDUCATION (2).

Two lecture and demonstration hours a week, fall or winter quarter. Miss Morgan; staff.

P.H. 118. HEALTH AND SICKNESS IN MODERN SOCIETY (3).

Three lecture hours a week, fall and summer quarters. Dr. Sheps.

P.H. 121. PUBLIC HEALTH STATISTICS (3½).

Two lecture and three laboratory hours a week, fall quarter. Laboratory fee, \$3.00. Mr. Greenberg.

P.H. 131. PARASITISM AND HUMAN DISEASE (3½). Prerequisites, Zoology 41, 42 or equivalent.

Two lecture and three laboratory hours a week, fall quarter. Laboratory fee, \$4.00. Messrs. Larsh, Hendricks; assistants.

P.H. 135. HUMAN PARASITOLOGY (3½). Prerequisite, P.H. 131 or equivalent.

Two lecture and three laboratory hours a week, winter quarter. Laboratory fee, \$3.00. Messrs. Larsh, Hendricks; assistants.

P.H. 140. PUBLIC HEALTH PROBLEMS (2½-5). Prerequisite, consult the department concerned; hours to be arranged.

Five to ten hours a week, each quarter. Staff of the School of Public Health.

P.H. 141. PUBLIC HEALTH NUTRITION (3).

Two lecture and two laboratory hours a week, fall quarter. Miss MacKinnon.

P.H. 153. PROBLEMS IN MATERNAL AND CHILD HEALTH (2½-5). Prerequisites, in each individual case to be arranged with the faculty.

Five to ten seminar hours a week, each quarter. Dr. Chipman, Miss Rebentisch.

P.H. 158. GROWTH AND DEVELOPMENT OF THE CHILD (3).

Three seminar hours a week, fall quarter. Dr. Chipman, Miss Rebentisch.

P.H. 161. THE PRINCIPLES OF SANITATION (4).

Three lecture and two laboratory hours a week, fall quarter. Mr. Chanlett.

P.H. 162. SANITARY CHEMISTRY AND BIOLOGY I (3). Prerequisite, general chemistry.

Three lecture hours a week, fall quarter. Mr. Granstrom.

P.H. 163. SANITARY CHEMISTRY AND BIOLOGY II (5). Prerequisite, P.H. 162.

Two lecture and six laboratory hours a week, winter quarter. Laboratory fee, \$5.00. Mr. Granstrom.

P.H. 164. SANITARY CHEMISTRY AND BIOLOGY III (5). Prerequisites, P.H. 162, 163.

Two lecture and six laboratory hours a week, spring quarter. Laboratory fee, \$5.00. Mr. Granstrom.

P.H. 165. ENVIRONMENTAL SANITATION METHODS (3½). Prerequisites or corequisites, P.H. 101, 131, 161.

Two lecture and three laboratory hours a week, winter quarter. Laboratory fee, \$3.50. Mr. Chanlett.

P.H. 181. PUBLIC HEALTH PROBLEMS IN INDUSTRY (3). Corequisite or prerequisite, P.H. 101.

Three lecture hours a week, winter quarter. Mr. Chanlett.

P.H. 190. PRINCIPLES AND PRACTICES OF PUBLIC HEALTH NURSING (4).

Four lecture hours a week, fall quarter. Miss Hay, Mrs. Dolan.

P.H. 191. PUBLIC HEALTH NURSING ORGANIZATION AND ADMINISTRATION (4).

Four lecture hours a week, winter quarter. Miss Hay, Mrs. Dolan.

P.H. 192. GROUP WORK: ITS INTERPRETIVE FACTORS (3).

Three lecture hours a week, winter quarter. Miss Blee.

P.H. 193. APPLIED PUBLIC HEALTH NURSING FIELD PRACTICE (15). Special programs will be arranged with consideration of the experience and particular needs of the students.

Five and one-half days a week. Misses Hay, Blee, and Mrs. Dolan.

P.H. 194. VENEREAL DISEASE CONTROL (2).

Two lecture hours a week, winter quarter. Drs. Magnuson, Garson.

P.H. 195. THE PUBLIC HEALTH NURSE IN A MATERNAL HEALTH PROGRAM (3).

Three lecture hours a week, fall quarter. Miss Blee.

P.H. 196. SPECIAL FIELDS IN PUBLIC HEALTH NURSING (10). Prerequisites, two of the following P.H. Nursing courses: P.H. 190, 191, 192, 195, or with permission of the instructor.

Twenty lecture hours a week, summer quarter. Misses Hay, Blee.

P.H. 199. PUBLIC HEALTH NURSING: AN INTERPRETATION (2).

Two lecture hours a week, winter quarter. Miss Hay.

Courses for Graduates

P.H. 201. EPIDEMIOLOGY II (5).

A continuation of Epidemiology 101.

Five lecture, demonstration, and seminar hours a week, spring quarter. Dr. McGavran.

P.H. 202. TUBERCULOSIS CONTROL METHODS (3). Prerequisite, medical degree.

Two lecture hours and two clinic demonstrations a week. Dr. Wright.

P.H. 203. EPIDEMIOLOGY III (2½). Prerequisites, P.H. 121, Epidemiology I or equivalent.

One lecture and three laboratory hours a week, spring quarter. Dr. Wright.

P.H. 206. VENEREAL DISEASE CONTROL METHODS (2½). Prerequisite, medical degree.

Two lecture hours and one clinic demonstration a week, fall quarter. Drs. Magnuson, Garson.

P.H. 211. PUBLIC HEALTH ADMINISTRATION (5). Prerequisite, P.H. 111.

Three lecture and four or more field-trip hours a week, spring quarter. Drs. Wright, Richardson, Sheps.

P.H. 212. THE PLANNING OF ENVIRONMENTAL SANITATION PROGRAMS (3). Prerequisites, P.H. 101, 161.

Two lecture and two laboratory hours a week, spring quarter. Mr. Chanlett.

P.H. 213. MEDICAL CARE (2).

Two seminar hours a week, spring quarter. Dr. Sheps.

P.H. 215. COMMUNITY ORGANIZATION FOR HEALTH EDUCATION (3).

Three lecture hours a week, fall and winter quarters. Miss Morgan and visiting lecturers.

P.H. 216. FIELD WORK IN PUBLIC HEALTH EDUCATION (15).

This course is open only to students majoring in health education.

Spring quarter. Miss Morgan, Mrs. Tyler, Miss Mast and health education consultants of training centers.

P.H. 217abc. PROBLEMS IN HEALTH EDUCATION (2½-5).

Fall, winter, and summer quarters. Mrs. Tyler.

P.H. 218. METHODS IN PUBLIC HEALTH EDUCATION (3).

Three lecture hours a week, fall or winter quarter. Miss Morgan, Mrs. Tyler.

P.H. 219. SCHOOL HEALTH EDUCATION (3).

Three lecture and demonstration hours a week, fall or winter quarter. Miss Mast and visiting lecturers.

P.H. 220. INTRODUCTION TO SPECIAL FIELDS IN PUBLIC HEALTH EDUCATION (10). Prerequisite, P.H. 115 or 215.

Ten lecture and laboratory hours a week, summer quarter. Miss Morgan, Mrs. Tyler and visiting lecturers.

P.H. 221. THE ROLE OF VITAL STATISTICS IN ADMINISTRATION (3).

Prerequisite, P.H. 121.

Three lecture hours a week, spring quarter. Mr. Greenberg.

P.H. 222. FIELD WORK IN PUBLIC HEALTH STATISTICS (15).

Open only to students majoring in this field.

Summer quarter. Mr. Greenberg and statistical consultants in state health departments.

P.H. 232. PARASITOLOGICAL METHODS (5). Prerequisite, P.H. 135.

Three lecture and six laboratory hours a week, spring quarter. Laboratory fee, \$8.00. Mr. Larsh; assistants.

P.H. 233. MALARIOLOGY (5). Prerequisite, P.H. 131 or Zoology 41, 42, or equivalent.

Three lecture and four laboratory hours a week, spring quarter. Laboratory fee, \$4.00. Messrs. Larsh, Baity, Hendricks; assistants.

P.H. 234. MEDICAL ENTOMOLOGY AND INSECT CONTROL (3½). Prerequisites, Zoology 41, 42, and P.H. 131 and 135 or equivalent.

Two lecture and three laboratory hours a week, spring quarter. Laboratory fee, \$4.00. Mr. Larsh and assistants.

P.H. 241. PRINCIPLES OF PUBLIC HEALTH NUTRITION (3).

Three lecture hours a week, winter quarter. Dr. Bryan, Miss MacKinnon.

P.H. 242. ADVANCES IN HUMAN NUTRITION (3). Prerequisite, a major in nutrition or equivalent courses in biochemistry and physiology.

Three lecture hours a week, fall quarter. Dr. Bryan.

P.H. 243. PROGRAMS IN PUBLIC HEALTH NUTRITION (5). Prerequisite, P.H. 242.

A course for students majoring in the field.

Two lecture and six laboratory hours a week, winter quarter. Miss MacKinnon.

P.H. 244. FIELD WORK IN PUBLIC HEALTH NUTRITION (15). Prerequisite, P.H. 243.

Open only to students majoring in this field.

Spring quarter. Miss MacKinnon and nutrition consultants in state health departments.

P.H. 245. SEMINAR IN PUBLIC HEALTH NUTRITION (3). Prerequisite, P.H. 242, 243, or equivalent.

Open only to students majoring in this field.

Three laboratory hours a week, summer quarter. Miss MacKinnon.

P.H. 246. THE NUTRITION SURVEY (3). Prerequisite, P.H. 242 or equivalent.

Two lecture and two seminar hours a week, summer quarter. Dr. Bryan, Miss MacKinnon.

P.H. 249. WORKSHOP IN PUBLIC HEALTH NUTRITION (3-9).

Open by special permission to a limited number of qualified graduate students.

Any quarter. Dr. Bryan, Miss MacKinnon.

P.H. 254. MATERNAL AND CHILD HEALTH (3). Prerequisite, medical degree.

Three lecture hours a week, spring quarter. Dr. Chipman, Miss Rebentisch.

P.H. 261. MILK AND FOOD CONTROL (3). Prerequisites, P.H. 101, 131, and 161.

Two lecture and three laboratory hours a week, spring quarter. Laboratory fee, \$3.50. Mr. Chanlett.

P.H. 262. LIMNOLOGY AND STREAM POLLUTION (5). Prerequisites, P.H. 162 and 163.

Three lecture and four laboratory hours a week, spring quarter. Laboratory fee, \$4.00. Mr. Baity.

P.H. 271. HYDROLOGY (3). Prerequisite, Hydraulics (Mathematics 124).

Three lecture hours a week, fall quarter. Mr. Granstrom.

P.H. 272. WATER SUPPLY AND SEWERAGE (5). Prerequisites, Hydraulics (Mathematics 124), Strength of Materials (Mathematics 123).
Three lecture and four laboratory hours a week, fall quarter. Laboratory fee, \$4.00. Mr. Baity.

P.H. 273. WATER PURIFICATION (5). Prerequisites, P.H. 162 and 272; co-requisite, P.H. 163.
Four lecture and two laboratory hours a week, winter quarter. Laboratory fee, \$4.00. Mr. Baity.

P.H. 274. SEWAGE TREATMENT AND WASTE DISPOSAL (5). Prerequisite, P.H. 273; corequisite, P.H. 164.
Four lecture and two laboratory hours a week, spring quarter. Laboratory fee, \$4.00. Mr. Baity.

P.H. 275. INDUSTRIAL WASTES (3). Prerequisite, P.H. 163; corequisite, P.H. 164.
Three lecture hours a week, spring quarter. Mr. Granstrom.

P.H. 276. INDUSTRIAL WATER SUPPLIES (3). Corequisites, P.H. 163, 273.
Three lecture hours a week, winter quarter. Mr. Granstrom.

P.H. 281. INDUSTRIAL HYGIENE AND SANITATION (5). Prerequisites, P.H. 162 and 181.
Three lecture and four laboratory hours a week, spring quarter. Laboratory fee, \$3.00. Mr. Chanlett.

Research Courses

The courses described below, with the exception of P.H. 317abc and Ed. 376ab, may be continued for several quarters and for more than one academic year. Credit of two and a half quarter hours or more may be earned each quarter in any course.

P.H. 301. RESEARCH IN EPIDEMIOLOGY (2½ or more).
Five or more laboratory hours a week. Drs. McGavran, Wright.

P.H. 306. RESEARCH IN VENEREAL DISEASES (2½ or more).
Five or more laboratory hours a week. Drs. Magnuson, Garson.

P.H. 311. RESEARCH IN PUBLIC HEALTH ADMINISTRATION (2½ or more).
Five or more laboratory hours a week. Drs. Wright, Richardson, Sheps.

P.H. 315. RESEARCH IN HEALTH EDUCATION (2½ or more).
 Open by special arrangement to students doing advanced graduate work in public health education.
Five or more laboratory hours a week. Miss Morgan, Mrs. Tyler.

P.H. 317abc. SEMINAR IN HEALTH EDUCATION (3).
 Open by special arrangement to students doing advanced graduate work in public health education.
Three hours a week, any quarter. Miss Morgan, Mrs. Tyler.

P.H. 318. SEMINAR IN PUBLIC HEALTH ADMINISTRATION (2).
Two hours a week, spring quarter and by special arrangement. Dr. Wright and staff of the School of Public Health.

P.H. 321. RESEARCH IN STATISTICS (2½ or more).

Individual arrangements may be made by the advanced student to spend part or all of his time in supervised investigation of selected problems in statistics.

Five or more laboratory hours a week. Mr. Greenberg.

P.H. 331. RESEARCH IN PREVENTIVE MEDICINE (2½ or more).

Five or more laboratory hours a week. Dr. McGavran.

P.H. 332. RESEARCH IN PARASITOLOGY (2½ or more).

Five or more laboratory hours a week. Laboratory fee, \$15.00. Mr. Larsh.

P.H. 341. RESEARCH IN PUBLIC HEALTH NUTRITION (2½ or more).

Ten or more laboratory hours a week. Dr. Bryan.

P.H. 361. RESEARCH IN SANITARY SCIENCE (2½ or more). Prerequisites or corequisites, P.H. 101, 131, 161, 162, 163, 164.

Five or more laboratory hours a week. Laboratory fee, \$10.00. Messrs. Baity, Chanlett, Granstrom.

P.H. 371. RESEARCH IN SANITARY ENGINEERING (2½ or more). Prerequisites or corequisites, P.H. 162, 163, 164, 272, 273, 274.

Five or more laboratory hours a week. Laboratory fee, \$10.00. Messrs. Baity, Chanlett, Granstrom.

P.H. 381. RESEARCH IN INDUSTRIAL SANITATION (2½ or more). Prerequisite or corequisite, P.H. 281.

Five or more laboratory hours a week. Laboratory fee, \$10.00. Mr. Chanlett.

Ed. 376ab. SEMINAR IN EDUCATION (3-5). Prerequisite, two courses in graduate education.

Three or five hours a week, any quarter. Members of the graduate faculty.

DEPARTMENT OF RADIO

Professor: EARL WYNN

Assistant Professors: J. L. MORRISON, R. F. SCHENKKAN, EDWARD FREED,
A. V. BRISKIN, RHODA HUNTER

Instructor: JOHN YOUNG

Interests of students pursuing a radio major fall under the following categories: (1) writing for radio; (2) speaking or acting for radio; (3) the planning and production of radio programs; (4) adapting and performing music for radio; (5) the utilization of radio in the classroom; (6) the business side of radio*; and (7) technical aspects of radio. Because of these diversified interests each student majoring in radio will be required to plan his curriculum carefully with the Department of Radio.

The course work, laboratories, and extracurricular activities of the Department of Radio are planned with three objectives in mind: to

*The student interested in the business side of radio will major in the School of Business Administration and take his non-divisional electives in the Department of Radio. See the special bulletin of the School of Business Administration.

give the student a broad educational background; to provide him with a survey of radio broadcasting; and to offer him an opportunity to explore those phases of radio in which he is most interested.

Certain aptitudes on the part of the student are necessary to his successful pursuit of the radio major as an undergraduate. An attempt to discover these aptitudes will be made by means of a qualifying examination, observation of his extracurricular activities in radio during his freshman and sophomore years, and most careful observation of his classroom and laboratory work during his first quarter as a major in the Department of Radio.

Except for Radio 70 (Introduction to Radio) all courses are restricted to majors in radio; double-listed courses are available to majors in those departments in which the courses are double-listed.

The student should apply for entrance to the Department of Radio before the end of his sophomore year.

Requirements for an undergraduate with a major in radio consist of a minimum of eighteen courses distributed as follows:

Required: Introduction to Radio (70) and Laboratory (70A); Speaking and Acting for the Microphone (71); Continuity Writing for Radio (72); Radio Production (75).

Two to three courses from the following, at least one of which must be 80, 81, or 83: News Writing for Radio (73); Dramatic Script Writing for Radio (74); Advanced Dramatic Script Writing for Radio (80); Advanced Dramatic Production (81); Program Planning for Radio (83).

Additional courses in allied fields which the student may elect upon the advice and consent of the chairman of the department: Elementary Motion Picture Production (85); Motion Picture Laboratory (86); Elementary Television Writing and Production (90).

Upon the advice of the chairman of the department, the student shall elect *four to seven courses in allied departments of the Division of the Humanities; and four to seven courses from other divisions.*

Courses for Undergraduates

70. INTRODUCTION TO RADIO (Dramatic Art 70) (5).

A survey course covering the organization and operation of stations and networks, participating organizations, the audience, the program, the servicing of programs, and broadcasting to schools. Prerequisite to all courses in radio broadcasting leading to a major in radio.

Fall and winter quarters. Miss Hunter and guest lecturers.

70A. INTRODUCTION TO RADIO (Dramatic Art 70A). Laboratory (1).

Small group instruction in the use of the basic radio equipment. Required of and limited to all radio majors and dramatic art majors planning to enroll in Radio 71 and/or Radio 75.

Fall and winter quarters. Fee for materials, \$2.00. Mr. Young.

71. SPEAKING AND ACTING FOR THE MICROPHONE (Dramatic Art 71)

(5). Prerequisites, Radio 70, 70A, and English 40 (taught by Mr. Wynn) or permission of the instructor.

An introduction to speaking and acting for an aural medium: lectures, discussion, and laboratories.

Three lecture and four laboratory hours a week, winter and spring quarters. Fee for materials, \$2.00. Mr. Wynn.

72. CONTINUITY WRITING (Journalism 72).

A study of the principles and methods of writing for an aural medium; application will be made in the writing of all kinds of continuity except news and dramatic forms.

Fall and winter quarters. Fee for materials, \$2.00. Mr. Schenkkan.

73. NEWS WRITING FOR RADIO (Journalism 73) (5).

A study of the principles of newscasting and the methods involved in editing and writing the news program.

Winter and spring quarters. Fee for materials, \$2.00. Mr. Morrison.

74. DRAMATIC SCRIPT WRITING FOR RADIO (Dramatic Art 74) (5).

A study of some basic forms of radio unit drama, including dramatic-narrative and documentary drama, both original and in adaptation.

Winter and spring quarters. Mr. Schenkkan.

75. RADIO PRODUCTION (Dramatic Art 75) (5). Prerequisites, Radio 70, 70A, and 71 or 72.

A study of the principles and methods of direction and production of talk, musical, and variety programs with emphasis on those basic principles which underlie all radio directing.

Four lecture and two laboratory hours a week, fall and spring quarters. Fee for materials, \$2.00. Mr. Young.

75S. RADIO PRODUCTION WORKSHOP (5). Open to Air Science and Tactics students only. (See AFROTC, p. 210.)

A study of the principles and methods of writing, directing, and producing talk, musical, and simple dramatic programs with emphasis upon radio as a public relations medium.

Four lecture and two laboratory hours a week, winter quarter. Fee for materials, \$2.00. Mr. Young and radio staff.

80. ADVANCED DRAMATIC SCRIPT WRITING FOR RADIO (5). Prerequisite, Radio 74.

A study of more complex forms of radio dramatic writing. Open to seniors only.

Fall quarter. Mr. Schenkkan.

81. ADVANCED DRAMATIC PRODUCTION (5). Prerequisite, Radio 75.

A study of complex program types with emphasis on advanced methods of dramatic production. Permission of the instructor must be secured.

Three lecture and four laboratory hours a week, winter quarter. Fee for materials, \$2.00. Mr. Briskin.

83. PROGRAM PLANNING FOR RADIO (5).

An intensive study of programming, traffic, and station problems. Audiences and markets will be analyzed, and the building and promotion of individual programs will be considered. Open to seniors only.

Spring quarter. Mr. Briskin.

85. ELEMENTARY MOTION PICTURE PRODUCTION (Dramatic Art 85) (5).

Registration is limited to fifteen and restricted to radio and dramatic art majors. Before registering for this course, students must secure the permission of Professor Freed.

An elementary course dealing with the basic principles of writing, producing, and directing the sound screen play.

Three lecture and four laboratory hours a week, fall quarter. Fee for materials, \$5.00. Mr. Freed.

86. MOTION PICTURE LABORATORY (Dramatic Art 86) (3). Prerequisite, Radio 85.

Registration is limited to fifteen and restricted to radio and dramatic art majors who have completed Radio 85 with distinction. Students must secure the permission of Professor Freed before registering.

This course is a laboratory continuation of Radio 85, designed for those students who have shown outstanding promise. It will require actual participation on the part of the student in writing and directing films produced by the Communication Center.

Six laboratory hours a week, winter quarter. Fee for materials, \$10.00. Mr. Freed.

90. ELEMENTARY TELEVISION WRITING AND PRODUCTION (5).

Registration is limited to ten and restricted to senior radio and dramatic art majors. Students must secure the permission of Professor Wynn before registering.

This course will survey the television industry and will emphasize specifically current and experimental methods of television writing and production.

Three lecture and four laboratory hours a week, spring quarter. Fee for materials, \$10.00. Department of Radio staff.

DEPARTMENT OF RELIGION

Professors: A. S. NASH, B. H. BOYD, J. P. HARLAND, A. C. HOWELL,
P. H. EPPS

Assistant Professors: CONSTANTINE CAVARNOS, W. H. POTEAT

Lecturer: M. A. KIDDER

PROVISIONAL STATEMENT

The first function of this department is to help students to understand the origin, the development, and the significance of the Judaic-Christian tradition. In other words, the department is concerned with:

- (1) Biblical literature, history, and theology;
- (2) the history of religion in Western civilization;
- (3) the implications of Christianity for the thought and practice of today.

It is from such an angle that Christianity (or any other religion) can be regarded as a separate subject for study, and that is why the University has an independent department devoted to the study of religion.* However, just as Christianity is relevant to the whole of life, so Christian thought has a bearing on the whole of knowledge. Thus the second function of the department is to relate the study of religion to other fields of learning and so help to integrate, in terms of Christian insights, the knowledge that a student acquires in the various subjects of study described in the University curriculum. It is for this reason (among others) that courses in religion are given not only by teachers from within the department but by teachers from other departments.

Any student planning to take religion as the field of his major in studying for the degree of A.B. is advised to consult with Dr. Nash as early as possible. By early and proper arrangement of his course of study, it is possible for a student who intends to enter the ministry to achieve two advantages. The first is that arising from taking a major in religion at the undergraduate level and the second is that of taking those courses in the humanities, the natural and the social sciences that are recommended by the American Association of Theological Schools as the appropriate foundation for professional training for the ministry in a seminary or a university divinity school. Similarly it is possible for a student in the School of Education to take courses that produce accreditation for high school teaching in religion in addition to another subject, such as history or chemistry. There is no fixed set of courses, therefore, for an undergraduate major in religion. Each student after taking the basic courses, Religion 28, Religion 30, and Philosophy 22, builds on this foundation a program of study appropriate to his present needs and future expectations. For example, a major in religion for a student whose primary interest is in education, whether in school or church, will consist of the following courses in the department: 31, 45, 80, 81, 92, 103 and 195. A student majoring in religion may take the course Marriage (Sociology 62) for credit in religion.

Programs of study leading to the degrees of A.M. and Ph.D. will be proposed in the future. The former degree is normally sought by those students who wish to specialize in the teaching of religion in public schools or to take up student work with the different re-

*The specific study of other religions will soon be represented in the curriculum; the present plan is to invite as visiting professor for one quarter each year a scholar from abroad whose major field of interest lies in one of the non-Christian religions.

ligious foundations. The latter degree is normally taken by those students who wish to teach in institutions of higher education.

Plans have already been made for courses of study which provide a minor in religion for A.M. students and for Ph.D. students whose major field of study lies elsewhere. The purpose of such courses is to furnish future teachers of, for example, education or philosophy or sociology with a context of study that will enable them to see the place of their special field of interest in a Christian view of man, history, and society. Such a course of study can be a valuable first step towards the achievement of a conscious philosophy of higher education that every college or university teacher should possess.

Courses for Undergraduates

28. THE ORIGIN AND SIGNIFICANCE OF THE BIBLE (5).

An introduction to the literature of the Bible, with special consideration of the impact of the Hebrew-Christian faith upon modern man as he seeks a religious orientation in the contemporary situation.

Any quarter. Mr. Boyd.

30. THE RELIGIOUS BACKGROUND OF WESTERN CIVILIZATION (5).

A historical study of the impact of the faith of the Old Testament, Graeco-Roman religion, Teutonic religion, and Christianity upon the life and thought of the Western world.

Spring quarter. Mr. Nash.

31. CHRISTIAN ETHICS AND MODERN PROBLEMS (5).

A consideration of the relevance of the Christian faith to problems of war and peace, economic enterprise, marriage and the family, and the function of the state and international organizations in the contemporary scene.

Fall and spring quarters. Mr. Kidder.

45. CHRISTIANITY AND THE RELIGIONS OF THE WORLD (5).

A study of the Christian faith as compared to and contrasted with classical religions, such as Hinduism, Confucianism, Buddhism, Mohammedanism, and also the new political religions, such as Communism and Nationalism.

Winter quarter. Mr. Nash.

80. THE MAKING AND MEANING OF THE OLD TESTAMENT (5). Pre-requisite, Religion 28.

A study of the beginnings of Hebrew religion in the Mosaic period, the rise of classical prophecy, and the emergence of Judaism.

Winter quarter. Mr. Boyd.

81. THE MAKING AND MEANING OF THE NEW TESTAMENT (5). Pre-requisite, Religion 28.

A course designed to help the student gain an appreciation of both the newness of the Christian religion and its continuity with Israel's historic faith.

Spring quarter. Mr. Boyd.

85. ARCHAEOLOGY AND THE BIBLE (Classics 85) (5).

The results of the exploration and excavations in Palestine will be studied for the light they throw on Biblical history. Attention will be given to the art and

civilization of the peoples of the Old Testament, particularly of the pre-exilic period.

Fall quarter. Mr. Harland.

87. LITERARY ASPECTS OF THE BIBLE (English 87) (5).

A study of the literary aspects of the Bible in English translation, with discussion of types and forms of literature, historical development of the Bible, the principal translations, and the influence of the Bible on English literature and on the language.

Spring quarter. Mr. Howell.

92. THE VARIETIES OF RELIGION IN AMERICAN LIFE AND CULTURE (5).

A study of Judaism, Roman Catholicism, and the chief forms of Protestantism; their respective beliefs, forms of worship, polity, and moral and social teachings.

Fall quarter. Mr. Kidder.

96. PHILOSOPHY OF RELIGION (Philosophy 96) (5). This course can be taken for credit in religion only by students majoring in religion.

An analysis will be made of the essential elements of religious thought and practice. Problems of knowledge and faith, the existence and nature of God, and the significance of religion for the individual and society will be considered.

Fall quarter. Mr. Poteat.

97. THE CHRISTIAN INTERPRETATION OF HISTORY (5).

The course, beginning with a study of the nature of history and the development of historiography, goes on to consider the attempts made by thinkers like Nicolas Berdyaev, Reinhold Niebuhr, Christopher Dawson, and Arnold Toynbee to arrive at a Christian interpretation of the historical process, in so far as it sheds light on the contemporary crisis.

At times to be arranged. Mr. Nash.

99. THE INFLUENCE OF THE BIBLE ON WESTERN THOUGHT (5). Prerequisite, Religion 28 or 30.

A historical study of the influence of the Bible on the thought and imagination of Western civilization as expressed in its philosophy, art, political theory, and literature.

At times to be arranged. Mr. Boyd.

Courses for Graduates and Advanced Undergraduates

103. CHRISTIANITY AND EDUCATION (5). Prerequisite, Religion 28 or 30 or special permission.

This course, which is primarily but not exclusively intended for students of education, will consist of a historical and comparative study of the relations between Christianity and education since the Reformation.

At times to be arranged. Mr. Kidder.

121. THE BIBLICAL PERSPECTIVE (5). Prerequisite, Religion 28 or special permission.

A systematic consideration of the central themes of the Bible, such as revelation, sin, judgment, salvation, in relation to an understanding of man, society, ethical obligation, and history. The tension between the Biblical *Weltanschauung* and other world-wide views will be considered in terms of various contemporary problems.

At times to be arranged. Mr. Boyd.

127. ST. AUGUSTINE AND THOMAS AQUINAS (Philosophy 127) (5). Prerequisite, Philosophy 56, 122 or special permission.

A study of the philosophy of Augustine and Aquinas; their theories of God, Nature, Man, and the State; their significance for modern man.

Spring quarter. Mr. Cavarinos.

158. GREEK NEW TESTAMENT (Classics 158) (5). Prerequisite, Greek 21-22 or equivalent.

One or more of the Gospels will be read, with attention to the grammar, diction, and style of the New Testament writers.

Spring quarter. Mr. Epps.

195. THE RELATIONS BETWEEN SCIENCE AND RELIGION (5). Prerequisite, at least three courses in the natural sciences or psychology or philosophy.

This course will be concerned with the mutual influence of natural science and religion upon each other in Western civilization from 1500 to the present day. The course is intended primarily for students specializing in one of the natural sciences or philosophy or psychology.

Spring quarter. Mr. Nash.

Course for Graduates

270. SOCIOLOGY OF RELIGION (Sociology 270) (5).

Analysis of tensions between the scientific, ethical, and theological study of society; the role of religion in social change; the social origins of the denominations; the sociological significance of the Reformation; "sect" and "church" in sociological theory.

At times to be arranged. Mr. Nash.

DEPARTMENT OF ROMANCE LANGUAGES

Professors: S. A. STOUDEMIRE, *W. M. DEY, S. E. LEAVITT, †U. T.

HOLMES, N. B. ADAMS, H. R. HUSE, J. C. LYONS, *Secretary*, W. L.

WILEY, ‡H. GIDUZ

Associate Professors: §H. H. STAAB, R. W. LINKER, A. G. ENGSTROM

Assistant Professors: ||D. H. WALTHER, J. HARDRÉ, J. E. KELLER, F. M.

DUFFEY

Instructors: J. E. CARROLL, W. D. CREECH, W. A. MCKNIGHT, J.

MIRANDA, E. T. DRAPER-SAVAGE, E. F. MOYER, J. S. PATTY, E. W.

BROCKMAN, L. A. SHARPE, M. ELSTUN, ¶H. L. BALLEW, H. L. KING,

W. A. HOVER, W. W. RITTER, H. T. STURCKEN, W. R. HEILMAN,

J. H. JOHNSON, F. C. MARTIN, P. P. ROTHMAN, B. A. SUMMERLIN,

W. R. BRANDON, J. H. PEAK, C. L. NELSON, O. C. BEESON, W. H.

BASKIN, H. N. SEAY, J. R. PRINCE, D. D. STANLEY, C. B. BROCK-

MANN, M. L. KOCHER, P. N. TRAKAS, E. B. HAMER, E. W. NAJAM,

S. M. BRYANT, G. L. COOK, J. D. CHARRON

*Kenan Professor Emeritus.

†Absent on leave, fall quarter, 1950.

‡Chairman of French 1, 2, 3, 4.

§Associate Professor Emeritus.

||Absent on leave, winter and spring quarters, 1951.

¶Resigned, January 1, 1951.

Teaching Fellows: MARIAN H. WALTER, MABEL L. HENRY, G. W. HUDSON

Research Assistant: DOROTHY M. MULBERRY

FRENCH

Students interested in having a major in French will please consult Mr. J. C. Lyons, Departmental Adviser.

Those students who plan to teach in public high schools should read the statement on pages 156-57.

Courses for Undergraduates

1-2. ELEMENTARY FRENCH (10).

Five hours a week, through two quarters. Messrs. Giduz, Carroll, Draper-Savage, and staff.

NOTE: No student is permitted to take French 1, 2, 3, or 4 and Spanish 1, 2, 3, or 4 at the same time.

Attention is called to French 14-15, designed for advanced students who have fulfilled the requirements in another foreign language.

*3-4. INTERMEDIATE FRENCH (10).

Five hours a week, through two quarters. Messrs. Giduz, Hardré, Carroll, Creech, Draper-Savage, and staff.

14-15. BEGINNING COURSE FOR ADVANCED STUDENTS (10). Elective.

Five hours a week, fall and winter quarters. Messrs. Huse, Hardré.

*21-22. ADVANCED FRENCH (10). Sophomore elective.

Introduction to French literature.

Five hours a week, through two quarters. Messrs. Lyons, Wiley, Linker, Engstrom, Hardré, Carroll.

25. COMMERCIAL FRENCH (5). Prerequisite, intermediate French.

Spring quarter.

50. ADVANCED COMPOSITION, SYNTAX, AND THEME WRITING (5).

Prerequisite, intermediate French.

Winter quarter. Mr. Giduz.

51. FRENCH CONVERSATION AND COMPOSITION (5).

Any quarter. Messrs. Lyons, Hardré, Creech.

52. FRENCH CIVILIZATION I (5). Prerequisite, French 51.

Any quarter. Messrs. Lyons, Hardré.

53. FRENCH CIVILIZATION II (5). Prerequisite, French 52.

French Revolution to the present.

Spring quarter. Mr. Hardré.

71. SURVEY OF FRENCH LITERATURE I (5). Prerequisite, French 21-22.

Open to juniors and seniors.

Fall quarter. Messrs. Lyons, Wiley, Engstrom.

*Either of these courses may be taken separately for elective credit if the language requirement has already been satisfied.

72. SURVEY OF FRENCH LITERATURE II (5).

This course is a continuation of French 71. Open to juniors and seniors.

Winter quarter. Messrs. Lyons, Wiley, Engstrom.

83a) 83. MATERIALS AND METHODS IN HIGH SCHOOL FRENCH (Education (5)).

Winter quarter. Mr. Giduz.

84. DIRECTED TEACHING OF HIGH SCHOOL FRENCH (Education 84a) (5).

Any quarter. *Laboratory fee, \$10.00.* Mr. Giduz.

97. HONORS COURSE (5).

Required of all students reading for honors in French.

Courses for Graduates and Advanced Undergraduates

109. THE FRENCH NOVEL (5). Prerequisites, French 71, 72.

Spring quarter. Mr. ———.

115. FRENCH LYRIC POETRY (5). Prerequisites, French 71, 72.

Spring quarter. Mr. Huse.

120. FRENCH LITERATURE OF THE TWENTIETH CENTURY (5). Prerequisites, French 71, 72.

Spring quarter. Mr. Hardré.

126. HISTORY OF THE FRENCH LANGUAGE (5). Prerequisites, French 71, 72.

Winter quarter. Mr. Holmes.

131. THE FRENCH DRAMA PRIOR TO 1700 (5). Prerequisites, French 71, 72.

Fall quarter. Mr. Wiley.

132. THE FRENCH DRAMA SINCE 1700 (5). Prerequisites, French 71, 72.

Winter quarter. Mr. Wiley.

145. FRENCH PHONETICS (5). Prerequisites, French 71, 72.

Fall quarter. Mr. Wiley.

171. FRENCH LITERATURE OF THE SEVENTEENTH CENTURY I (5). Prerequisites, French 71, 72.

Fall quarter. Mr. Lyons.

172. FRENCH LITERATURE OF THE SEVENTEENTH CENTURY II (5). Prerequisites, French 71, 72.

Winter quarter. Mr. Lyons.

181. FRENCH LITERATURE OF THE EIGHTEENTH CENTURY (5). Prerequisites, French 71, 72.

Fall quarter. Mr. Huse.

191. FRENCH ROMANTICISM (5). Prerequisites, French 71, 72.

Winter quarter. Mr. Engstrom.

192. FRENCH LITERATURE SINCE 1850 (5). Prerequisites, French 71, 72.

Spring quarter. Mr. Engstrom.

CELTIC 105. OLD IRISH (5).

Winter quarter. Mr. Holmes.

CELTIC 106. OLD WELSH (5).

One quarter. Mr. Holmes.

Courses for Graduates

201. MATERIALS AND METHODS OF RESEARCH (2½).

Two and one-half hours a week, winter quarter. Mr. Holmes.

211. LITERARY CRITICISM IN FRANCE: THE CLASSICAL PERIOD (5).

(1951-1952 and alternate years.) *Winter quarter.* Mr. Wiley.

212. LITERARY CRITICISM IN FRANCE: THE MODERN PERIOD (5).

(1950-1951 and alternate years.) *Spring quarter.* Mr. Engstrom.

220. VULGAR LATIN (5).

(1951-1952 and alternate years.) *Spring quarter.* Mr. Holmes.

221-222-223. OLD FRENCH (15).

Five hours a week, fall, winter, and spring quarters. Mr. Holmes.

225. PROVENÇAL (5).

(1951-1952 and alternate years.) *Spring quarter.* Mr. Holmes.

231. FRENCH SYNTAX (5).

Spring quarter. Mr. _____.

248. FRENCH LITERATURE OF THE FOURTEENTH AND FIFTEENTH CENTURIES (5). Prerequisite, French 221 or 265.

(1950-1951 and alternate years.) *Spring quarter.* Mr. Holmes.

265-266. FRENCH LITERATURE OF THE RENAISSANCE (10).

(1950-1951 and alternate years.) *Winter and spring quarters.* Mr. Lyons.

324. ROMANCE PALEOGRAPHY (5).

(1950-1951 and alternate years.) *Five hours a week, winter quarter.* Mr. Linker.

331. HISTORY OF FRENCH LITERATURE PRIOR TO 1300 (5). French 221 is desired, though not prerequisite.

(1950-1951 and alternate years.) *Fall quarter.* Mr. Holmes.

370. SEMINAR IN MINOR ROMANCE TONGUES (5).

(1951-1952 and alternate years.) *Spring quarter.* Mr. Holmes.

395. RESEARCH (5).

Research in a special field under the direction of a member of the department.

ITALIAN

Courses for Undergraduates

51. ELEMENTARY COURSE (5). Prerequisite, intermediate French or Spanish.

Fall quarter. Mr. Lyons.

52. MODERN ITALIAN LITERATURE (5). Prerequisite, Italian 51.

Winter quarter. Mr. Lyons.

Courses for Graduates and Advanced Undergraduates

131. DANTE I (5). Prerequisites, Italian 51, 52.

(1951-1952 and alternate years.) *Spring quarter.* Mr. Huse.

132. DANTE II (5). Prerequisite, Italian 131.

(1950-1951 and alternate years.) *Spring quarter*. Mr. Huse.

156. DANTE IN ENGLISH TRANSLATION (Comparative Literature 156) (5).

Winter quarter. Mr. Huse.

161. ITALIAN LITERATURE OF THE RENAISSANCE (5). Prerequisites, Italian 51, 52.

Spring quarter. Mr. Huse.

181. THE ITALIAN SETTECENTO (5). Prerequisites, Italian 51, 52.

A survey of the literature of the eighteenth century in Italy, with an intensive study of Goldoni and Alfieri.

(1951-1952 and alternate years.) *Spring quarter*. Mr. Lyons.

Courses for Graduates

221. OLD ITALIAN (5).

(1951-1952 and alternate years.) *Fall quarter*. Mr. Holmes.

245. THE ITALIAN TRECENTO: PETRARCH AND BOCCACCIO (5). Prerequisites, Italian 51, 52.

(1950-1951 and alternate years.) *Spring quarter*. Mr. Lyons.

PORTUGUESE

Courses for Undergraduates

51. ELEMENTARY PORTUGUESE (5). Prerequisite, intermediate French or Spanish.

Fall quarter. Mr. Walther.

52. READINGS IN BRAZILIAN LITERATURE (5). Prerequisite, Portuguese 51.

Winter quarter. Mr. Walther.

Courses for Graduates and Advanced Undergraduates

101. MASTERPIECES OF PORTUGUESE LITERATURE (5). Prerequisite, Portuguese 52 or its equivalent.

(1951-1952 and alternate years.) *Spring quarter*. Mr. Walther.

102. MODERN BRAZILIAN LITERATURE (5). Prerequisite, Portuguese 52 or its equivalent.

Spring quarter. Mr. Walther.

Course for Graduates

221. OLD PORTUGUESE (5).

(1950-1951 and alternate years.) *Fall quarter*. Mr. Holmes.

SPANISH

Students interested in having a major in Spanish will please consult Mr. S. A. Stoudemire, Departmental Adviser.

Those students who plan to teach in public high schools should read the statement on pages 156-57.

Courses for Undergraduates

1-2. ELEMENTARY SPANISH (10).

Five hours a week, through two quarters. Messrs. Duffey, McKnight, Miranda, and staff.

NOTE: No student is permitted to take Spanish 1, 2, 3, or 4, and French 1, 2, 3, or 4 at the same time.

Attention is called to Spanish 14-15, designed for advanced students who have fulfilled the requirements in another foreign language.

*3-4. INTERMEDIATE SPANISH (10).

Five hours a week, through two quarters. Messrs. Adams, Walther, Duffey, Keller, McKnight, Miranda, and staff.

14-15. BEGINNING COURSE FOR ADVANCED STUDENTS (10). Elective.

Five hours a week, fall and winter quarters. Messrs. Stoudemire, McKnight.

*21-22. ADVANCED SPANISH (10). Sophomore elective.

Introduction to Spanish literature.

Five hours a week, through two quarters. Messrs. Leavitt, Adams, Stoudemire, Walther, Duffey, Keller, McKnight.

25. COMMERCIAL SPANISH (5). Prerequisite, intermediate Spanish.

Fall quarter. Mr. McKnight.

50. ADVANCED COMPOSITION, SYNTAX, AND THEME WRITING (5).

Prerequisite, intermediate Spanish.

Winter quarter. Messrs. Stoudemire, McKnight.

51. SPANISH CONVERSATION AND COMPOSITION (5).

Any quarter. Mr. Duffey.

52. SPANISH CIVILIZATION (5). Prerequisite, Spanish 51.

Any quarter. Mr. Duffey.

53. LATIN AMERICAN CIVILIZATION (5). Prerequisite, Spanish 51.

A survey in Spanish of the history and culture of Latin America.

Spring quarter. Mr. Duffey.

71. SURVEY OF SPANISH LITERATURE TO 1700 (5). Prerequisites, Spanish 21-22.

Open to juniors and seniors.

Fall quarter. Mr. Stoudemire.

72. SURVEY OF SPANISH LITERATURE SINCE 1700 (5).

This course is a continuation of Spanish 71. Open to juniors and seniors.

Winter quarter. Mr. Stoudemire.

73. SURVEY OF SPANISH-AMERICAN LITERATURE (5). Prerequisite, Spanish 71-72. Open to juniors and seniors.

Spring quarter. Mr. Walther.

83. MATERIALS AND METHODS IN HIGH SCHOOL SPANISH (Education 83b) (5).

Winter quarter. Mr. Giduz.

*Either of these courses may be taken separately for elective credit if the language requirement has already been satisfied.

84. DIRECTED TEACHING OF HIGH SCHOOL SPANISH (Education 84b) (5).

Any quarter. Laboratory fee, \$10.00. Mr. Giduz.

97. HONORS COURSE (5).

Required of all students reading for honors in Spanish.

Courses for Graduates and Advanced Undergraduates

109. EARLY SPANISH PROSE FICTION (5). Prerequisites, Spanish 71, 72. (1950-1951 and alternate years.) *Fall quarter. Mr. Adams.*

110. THE SPANISH NOVEL, 1605-1898 (5). Prerequisites, Spanish 71, 72. (1950-1951 and alternate years.) *Winter quarter. Mr. Adams.*

111. MODERN SPANISH NOVELISTS (5). Prerequisites, Spanish 71, 72. (1950-1951 and alternate years.) *Spring quarter. Mr. Adams.*

112. THE NOVEL IN SPANISH AMERICA (5). Prerequisites, Spanish 71, 72. (1951-1952 and alternate years.) *Spring quarter. Mr. Leavitt.*

115. EARLY LYRIC POETRY (5). Prerequisites, Spanish 71, 72. (1951-1952 and alternate years.) *Fall quarter. Mr. Adams.*

116. MODERN LYRIC POETRY (5). Prerequisites, Spanish 71, 72. (1951-1952 and alternate years.) *Winter quarter. Mr. Adams.*

117. CERVANTES (5). Prerequisites, Spanish 71, 72. *Spring quarter. Mr. Stoudemire.*

131. LOPE DE VEGA AND HIS CONTEMPORARIES (5). Prerequisites, Spanish 71, 72. *Fall quarter. Mr. Leavitt.*

132. CALDERÓN AND HIS CONTEMPORARIES (5). Prerequisites, Spanish 71, 72. *Winter quarter. Mr. Leavitt.*

134. SPANISH DRAMA OF THE NINETEENTH CENTURY (5). Prerequisites, Spanish 71, 72. (1950-1951 and alternate years.) *Spring quarter. Mr. Leavitt.*

135. MODERN SPANISH DRAMA (5). Prerequisites, Spanish 71, 72. (1951-1952 and alternate years.) *Spring quarter. Mr. Leavitt.*

145. SPANISH PHONETICS (5). Prerequisites, Spanish 71, 72. *Spring quarter. Mr. Adams.*

Courses for Graduates

201. BIBLIOGRAPHY AND METHODOLOGY (5). Required of all candidates for the Ph.D. degree. *Fall quarter. Mr. Stoudemire.*

209. NON-FICTIONAL PROSE OF THE SIGLO DE ORO (5).

A study of the critical, historical, scientific, and philosophical writings of the sixteenth and seventeenth centuries. (1951-1952 and alternate years.) *Winter quarter. Mr. Stoudemire.*

221-222. OLD SPANISH (10).

Five hours a week, fall and winter quarters. Mr. Keller.

241. STUDIES IN SPANISH-AMERICAN LITERATURE (5).

(1950-1951 and alternate years.) *Spring quarter.* Mr. Leavitt.

291. EARLY SPANISH LITERATURE (5). Prerequisite, Spanish 221-222.

Spring quarter. Mr. Keller.

393. SPANISH ROMANTICISM (5). Seminar course.

(1950-1951 and alternate years.) *Spring quarter.* Mr. Adams.

395. RESEARCH (5).

Research in a special field under the direction of a member of the department.

DEPARTMENT OF SOCIOLOGY AND ANTHROPOLOGY

Professors: H. W. ODUM, H. D. MEYER, S. H. HOBBS, JR., R. B. VANCE,
G. B. JOHNSON, KATHARINE JOCHER, G. W. BLACKWELL, L. M.
BROOKS, *W. B. SANDERS, *J. P. GILLIN, N. J. DEMERATH, REUBEN
HILL, E. W. NOLAND, †L. P. CRESPI

Associate Professors: HARRIET L. HERRING, D. O. PRICE

Instructor: J. L. COE

Part-time Instructors: G. H. FISHER, RAYMOND MACK, G. L. SIMP-
SON, JR.

Teaching Fellow: WINFRED L. GODWIN

Graduate Assistants: E. J. MURPHY, R. J. PELLEGRIN

Undergraduate major in sociology: Sociology 51 and Anthropology ‡41, usually taken in the sophomore year, and six elective courses in general sociology and rural sociology. If courses equivalent to Sociology 51 and Anthropology 41 have been successfully completed elsewhere with a grade of C or better, only six additional courses are required. A student majoring in sociology may take as many as three courses in anthropology as an allied field. Double-listed courses must count in the field of the major.

Through proper selection of courses in the major, allied, and non-divisional fields, students may prepare for positions in public school teaching of social studies, in personnel work, as social case work aides, and in other related lines of endeavor; or for graduate study in sociology, rural sociology, social work, personnel, and other specialties.

*Absent on leave, fall quarter, 1950.

†Absent on leave, 1950-1951.

‡Beginning with the academic year 1950-1951, Sociology 52, the former requirement with Sociology 51, is an elective for students not majoring in this department; Sociology 52 is not creditable within the six-course major in sociology-anthropology. Transfer majors will usually lack Anthropology 41. It is creditable in the allied field when taken by sociology majors; likewise Sociology 51 is allied for anthropology majors.

A major in sociology may also prepare for recreation leadership. Other departments contributing to this specialization are Physical Education, Dramatic Art, Art, Music, and Psychology. The major interest functions on both undergraduate and graduate levels.

Undergraduate major in anthropology: Anthropology 41 and Sociology 51, usually taken in the sophomore year, and six elective courses in anthropology. If courses equivalent to Anthropology 41 and Sociology 51 have been successfully completed elsewhere with a grade of C or better, only six additional courses in anthropology are required. A student majoring in anthropology may take as many as three courses in sociology as an allied field. Double-listed courses must count in the field of the major.

Majors in anthropology can prepare for positions as museum assistants, as research assistants in cultural anthropology and prehistoric archaeology, and for other lines of endeavor, as well as for graduate work in anthropology.

Undergraduate split major in sociology-anthropology: Sociology 51 and Anthropology 41, usually taken in the sophomore year, and three additional courses in sociology and three additional courses in anthropology. This split major is designed primarily for prospective public school teachers in the social studies and for students interested in a broad liberal education with no special vocational purpose.

Electives: Students desiring one or more undergraduate elective courses in the department may take Sociology 51, 52, 53, 62, or Anthropology 41. Sociology 51 or its equivalent is prerequisite for all other courses in sociology except where otherwise indicated. Anthropology 41 or its equivalent is prerequisite for all other courses in anthropology except where otherwise indicated.

Graduate degrees: Except in special cases, the following courses or their equivalents are required for those majoring in sociology for a graduate degree: 152, History of Social Thought; 191, Social Statistics; and 208, Methods in Social Research. Candidates for the doctorate should also have Sociology 212, American Sociologists; and Sociology 262, European Sociological Theory.

Candidates for the A.M. or Ph.D. degrees in general sociology may minor in rural sociology, anthropology, any of the other social sciences or related fields such as statistics, planning, public health, or

social work. A split minor in two fields for the Ph.D. in sociology is possible with special permission of the Graduate School.

The A.M. degree in rural sociology is offered and candidates for this degree may minor in general sociology, anthropology, or any of the other social sciences.

The A.M. degree in anthropology is offered and candidates for this degree may minor in general sociology, rural sociology, or any of the other social sciences.

Students in other departments may take a minor for the A.M. or Ph.D. degrees in general sociology, rural sociology, or anthropology.

Courses in rural sociology and anthropology are grouped separately following the courses in general sociology, with anthropology courses carrying the designation "Anthropology" on registration forms.

GENERAL SOCIOLOGY

Courses for Undergraduates

51. INTRODUCTION TO SOCIOLOGY (5).

An analysis of the natural, cultural, and institutional bases of society; the processes and trends underlying problems and adjustments.

Any quarter. Materials fee, \$1.00. Messrs. Brooks, Vance, Blackwell, Noland, Price, Godwin, Pellegrin, Mack.

52. SOCIAL PROBLEMS (5).

Introductory course in social problems with primary emphasis on positive features and secondary consideration to social pathology—background of social problems, social change, group conflict, social attitudes, social adjustment, and proposed ways out.

Any quarter. Materials fee, \$1.00. Messrs. Meyer, Sanders, Simpson.

56. HOW TO STUDY SOCIETY (5). Prerequisites, three courses in sociology.

An introduction to the quantitative methods of studying society with special emphasis upon the tools of research in sociology; examination and analysis of current research projects, governmental and private.

(Not offered in 1950-1951.) *Spring quarter.*

62. MARRIAGE (5). No prerequisite. Open to General College students, juniors, and seniors.

Analysis of courtship, marriage, and family relationships. Integration of the social sciences, biology, psychology, and religion along with literature and the arts as they each contribute to the understanding of current marital and familial problems.

Any quarter. Messrs. Hill, Nash.

95, 96, 97. HONORS READING COURSES (5 each quarter). Prerequisite, for Honors Program, approval of the chairman of the department.

Special reading for honors in a selected field under the direction of a member of the department. A student may take only two courses in the Honors Program.

Any quarter. Members of the department.

99. CULTURES AND SOCIETIES OF CHINA AND INDIA (Anthropology 99) (5).

Analysis of the culture patterns (kinship, religion, economy, government) and social structures (class, caste, status) of modern China and India and in relation to pertinent geographic, racial, and historical considerations.

(Not offered in 1950-1951.) *Winter quarter*. Mr. Demerath.

Courses for Graduates and Advanced Undergraduates

122. CULTURAL ANTHROPOLOGY (Anthropology 122) (5).

A systematic survey of the customs and modes of life of mankind based on scientific explanation of the ways of culture. Special attention to relating the materials of comparative ethnology to problems of cultural adjustment in our own society.

Winter quarter. *Materials fee, \$1.00*. Messrs. Gillin, Johnson.

123. PRIMITIVE RELIGIONS (Anthropology 123) (5).

Survey and analysis of a representative series of religious systems and beliefs of the so-called primitive peoples; approached from the point of view of cultural anthropology; attention is given to the development of religious forms leading to the world religions, and to the relation of religion to other aspects of culture and human activity.

(Not offered in 1950-1951.) *Spring quarter*. Mr. Gillin.

125. THE NEGRO (Anthropology 125) (5).

A study of the American Negro, with particular reference to the South; the historical and cultural backgrounds of the Negro in Africa and in America; development since emancipation; biracial system; problems of race relations.

Fall quarter. Mr. Johnson.

128. FOLK CULTURES IN THE MODERN WORLD (Anthropology 128) (5).

The folk culture is viewed as a way of life which stands midway between that of the "primitive" tribal native and that of the urbanized city-dweller. Consideration is given to this design for living in various parts of the world, with particular reference to the folk culture of southeastern United States.

(1951-1952 and alternate years.) *Fall quarter*. *Materials fee, \$1.00*. Mr. Gillin.

133. INTRODUCTION TO SOCIAL PSYCHOLOGY (Psychology 133) (5). Prerequisites, Psychology 24 and 25.

Social groupings; dynamics of person-to-person relations.

Four lecture and two laboratory hours a week, winter quarter. *Laboratory fee, \$1.00*. Messrs. McCurdy and Crespi.

142. FOUNDATIONS OF SOCIAL SCIENCES (Philosophy 142) (5). Prerequisites, two courses in philosophy, psychology, or sociology.

An attempt to establish an approach to the social sciences based on the notion of directed behavior. The course seeks to construct a theoretical framework for modern social science and a possible science of man.

Spring quarter. Mr. Kattsoff.

152. HISTORY OF SOCIAL THOUGHT (5). Prerequisite, introductory course in one of the social sciences or philosophy.

A survey of social thought antecedent to the development of scientific sociological theory, paralleling the development of Western and Oriental society and culture. Leading figures from Confucius to Marx treated historically and comparatively. Required of all candidates for graduate degrees in sociology.

Spring quarter. Messrs. Vance, Demerath.

153. SOCIAL STRUCTURE (5). Prerequisite, Sociology 152.

Social structure and stratification are analyzed in terms of class, status, prestige, rank, and function. Type societies and institutions are studied to determine (1) the distribution of authority, (2) the integration of functions, and (3) the hierarchy of rank. Special attention is given to the social role of the elite, bureaucracies, and professional and middle classes.

(1951-1952 and alternate years.) *Winter quarter*. Mr. Vance.

154. CONTEMPORARY SOCIETY (5). Prerequisites, three courses in sociology.

The study of the cultural evolution of society from the viewpoint of the folk regional development: folkways, stateways, geographic factors, regions, states, modern technology and change, the application to contemporary American society.

Fall quarter. Mr. Odum.

160. THE FIELD OF SOCIAL WORK (5).

An orientation course based on the description and analysis of the historical development of social work and the operation in contemporary society of the many specialized social work services.

Winter quarter. Mr. Fink.

161. SOCIOLOGY OF THE FAMILY (5).

Analysis of contemporary family institutions as they vary in historical time and social space as a background for interpreting American family life in its societal contexts.

Winter or spring quarter. Mr. Hill.

162. DYNAMICS OF FAMILY DEVELOPMENT (5). Prerequisites, Sociology 51 and general psychology.

Analysis of the natural history of families, how they form, function, and grow to maturity. Focus on the developmental growth of children and parents in interaction in seven stages of the family life cycle—from engagement planning to family dissolution.

(1950-1951 and alternate years.) *Winter quarter*. Mr. Hill.

167. HOUSING AND COMMUNITY DEVELOPMENT (5). Prerequisites, Sociology 51 and Economics 31-32 or Economics 61.

Housing problems and policies in Europe and the United States in relation to family living, community, the institution of property and contract, and the house-building process. Housing as a field for joint social science and architectural study. Field trips.

Spring quarter. Materials fee, \$1.00. Mr. Demerath.

168. THE CITY (5).

The city as a social phenomenon in various cultures. Analysis of urban trends, characteristics, and functions of cities with special reference to ecology and social organization. Sociological elements in urban planning and guided development.

Fall quarter. Materials fee, \$1.00. Mr. Demerath.

169. THE INDUSTRIAL COMMUNITY (5).

Development of the industrial community since the Industrial Revolution; effect of changing conditions and differences in surrounding society; paternalism, labor laws, economic and labor problems as they affect the industrial community.

Winter quarter. Miss Herring.

170. INDUSTRIAL SOCIOLOGY (5).

A study of human relations in industry from the standpoint of the sociological and socio-psychological factors involved. The basic human problems in an indus-

trial situation and the methods of approaching them; status and role in the work situation; sources of friction and problems of maintaining morale and cooperation; structural characteristics of industrial hierarchies; interrelations between industry and community.

Fall quarter. Mr. Noland.

171. EDUCATIONAL SOCIOLOGY (5).

Education as a process of social control and achievement. The social resources of the school and other educational resources. Social problems of the teacher.

(Not offered in 1950-1951.) *Winter quarter.* *Materials fee, \$1.00.* Mr. Blackwell.

173. COMMUNITY RECREATION (5).

Foundations of organized recreation; backgrounds and theories; objectives and principles; social and economic factors; public, private, and commercial interests; recreation and the social institutions—family, church, school, and community; recreation and camping; programs for the defective, delinquent, and dependent; youth serving agencies and industrial interests, international aspects; inequalities and future opportunities.

Fall quarter. Mr. Meyer.

174. COMMUNITY ORGANIZATION (5).

Within the theoretical framework of structure-function, the course analyzes dimensions of community, variation and change, integration and disorganization, techniques and principles of community development.

Spring quarter. *Materials fee, \$1.00.* Mr. Blackwell.

176. PROGRAM PLANNING FOR COMMUNITY RECREATION (5).

An investigation of research possibilities; surveys and studies; immediate and long-range planning; the fields of activity; types, correlations, and program activities; principles and methods of program planning; schedules according to time basis, special activities and feature events; areas and facilities; types and functions; equipment and maintenance.

Winter quarter. Mr. Meyer.

180. STATE AND REGIONAL PROBLEMS AND PLANNING (5).

A survey of the field of state and regional problems and planning with special reference to the basic theory of regionalism. Includes case studies of selected state and regional planning programs and agencies.

(1950-1951 and alternate years.) *Winter quarter.* Messrs. Odum, Blackwell.

181. REGIONAL SOCIOLOGY OF THE SOUTH (5).

A sociological analysis of the southern region of the United States. Emphasis on facts, factors, and policies pertaining to geography, population, and culture; resources and waste; social institutions and planning.

Fall quarter. *Materials fee, \$1.00.* Mr. Blackwell.

182. THE COOPERATIVE MOVEMENT (5). Not open to students credited with Rural Sociology 54.

The sociology of cooperation; analysis and interpretation with emphasis upon the origins and functioning of cooperation in nations and regions, and in connection with the basic social institutions.

(1950-1951 and alternate years.) *Spring quarter.* *Materials fee, \$1.00.* Mr. Brooks.

183. SOCIAL CONTROL AND PUBLIC OPINION (5).

The bases of social control; psychological, cultural, and institutional factors conditioning the management of public opinion. Special emphasis on techniques of social persuasion and control.

Winter quarter. Mr. Brooks.

186. POPULATION (5).

A study of problems of quality and quantity of population including theories of population increase, and problems of composition, distribution, differential fertility, population pressure, and internal migration.

Fall quarter. Materials fee, \$1.00. Mr. Vance.

190. DIAGNOSIS OF JUVENILE DELINQUENCY (5). Not open to students credited with Sociology 198 prior to fall quarter, 1950.

After a brief historical background this course traces the development of case study and diagnosis of juvenile delinquency through various approaches.

Winter quarter. Materials fee, \$1.00. Mr. Sanders.

191. SOCIAL STATISTICS (5). Prerequisites, three courses in sociology.

The topics usually covered in an elementary course in statistics are treated with emphasis on those best adapted to sociological research. Required of all candidates for graduate degrees in sociology.

Four lecture and four laboratory hours a week, winter quarter. Laboratory fee, \$2.00. Mr. Price.

192. CRIMINOLOGY (5).

The principles of criminology and penology with emphasis on psycho-sociological factors; study of historical and contemporary theory and practice.

Fall and winter quarters. Messrs. Brooks and Sanders.

193. SOCIAL PATHOLOGY (5).

Emphasis on poverty and relief with coordinate study of delinquency, vagrancy, prostitution, alcoholism, crime, mental defects, and other pathological conditions. Analysis of therapeutic measures. Field trips to county and state institutions.

Spring quarter. Mr. Sanders.

194. QUANTITATIVE TREATMENT OF MASS DATA (3). Prerequisite, Sociology 191 or an equivalent introductory course in statistics.

Consideration of research problems in the quantitative treatment of mass data, including formulation of hypotheses susceptible to testing with available mechanical tabulation and analysis techniques.

Spring quarter. (This course is given at State College, Raleigh, as Statistics 302.)

195. SOCIAL INSTITUTIONS (5). Prerequisites, three courses in sociology.

A comprehensive and systematic study of the essential components of social institutions; their origin and development; the inter-play between the individual and institutions; the factors involved in the progressive adaptability of institutions.

(Not offered in 1950-1951.) *Spring quarter. Mr. Blackwell.*

196. SURVEY TECHNIQUES (3). Prerequisites, three courses in sociology.

This course includes: planning a field survey, construction of questionnaire and schedule, instructions for enumerators, interviewing, supervision of enumeration, and editing schedules.

(Replaces the former Sociology 196 which was cross-listed with Mathematical Statistics 126.)

(Not offered in 1950-1951.) *Winter quarter. Messrs. Price, Crespi.*

197. POPULATION STATISTICS (5).

Training in techniques for quantitative research with population data. Description of composition characteristics, making of population estimates, computation and standardization of birth and death rates, construction and application of life tables, measurement of migration.

(1952-1953 and alternate years.) *Four lecture and four laboratory hours a week, fall quarter. Laboratory fee, \$2.00. Mr. Price.*

198. TREATMENT OF JUVENILE DELINQUENCY (5).

Emphasis on the juvenile court and various means of prevention and treatment of juvenile delinquency. Primarily for seniors and graduate students majoring in sociology.

Spring quarter. Materials fee, \$1.00. Mr. Sanders.

199. MODERN PENOLOGY (5). Prerequisite, Sociology 192 or equivalent.

Specialized study of trends, legislation, experiments, and accomplishments in correctional programs. Such topics as parole, classification, and personnel will be emphasized.

(1951-1952 and alternate years.) *Spring quarter. Mr. Brooks.*

Courses for Graduates

208. METHODS IN SOCIAL RESEARCH (5).

An analysis of social research planned to give the student acquaintance with the scientific method and the interrelationship of the social sciences, the role of theory in scientific research, the training of research personnel, and methods of procedure in working with source materials. Required of first-year graduate students in sociology.

Fall quarter. Materials fee, \$1.00. Mr. Blackwell, Miss Jocher.

210. FOLK SOCIOLOGY (5).

An approach to a new general sociology, utilizing the folk-regional society and regionalism as a study of natural societal evolution in contrast with modern artificial society and technology. Contributions are sought to sound social theory as it relates to the understanding of cultures and the direction of civilization.

Winter quarter. Mr. Odum.

212. AMERICAN SOCIOLOGISTS (5).

An analysis of the work and personalities of living American sociologists projected on the background of the sociology of the earlier American sociologists. Required of all candidates for the Ph.D. degree in sociology.

Spring quarter. Mr. Odum.

215. EXPERIMENTAL SOCIOLOGY (5). Prerequisite, Sociology 191 or equivalent plus some knowledge of analysis of covariance.

A study of the experiment as a research method in sociology. The choice and statement of hypotheses suitable for testing with social experiments, methods of measuring variables and of controlling extraneous variables, types of stimuli, measurement of results, accuracy and generality of conclusions.

(1951-1952 and alternate years.) *Fall quarter. Materials fee, \$1.00. Mr. Price.*

218. HUMAN ECOLOGY (SEMINAR) (5).

Consideration of theory and research emerging around the concept of human ecology. A review of the background of human ecology is followed by readings, reports, and research on its contemporary development.

(1950-1951 and alternate years.) *Winter quarter. Materials fee, \$1.00. Mr. Vance.*

220. THEORIES OF CULTURE (Anthropology 220) (5).

A systematic survey of the history of theory in cultural anthropology leading to the development of a system of operational principles which the student may apply in his own field work and further studies involving cultural problems.

(1951-1952 and alternate years.) *Spring quarter. Materials fee, \$1.00. Mr. Gillin.*

229. CULTURE AND PERSONALITY (Anthropology 229) (5).

A scientific analysis of the influence of cultural forms on the individual in our own and other societies, considered from the anthropological, psychological, and clinical points of view.

(1950-1951 and alternate years.) *Spring quarter. Materials fee, \$1.00.* Mr. Gillin.

230. RACE AND CULTURE CONTACTS (Anthropology 230) (5).

This course describes and analyzes the problems of acculturation arising from the contacts of peoples of different racial or cultural heritages, with particular reference to Negro, white, and Indian relations in the New World.

(1950-1951 and alternate years.) *Spring quarter.* Mr. Johnson.

233. METHODS OF INVESTIGATION IN SOCIAL PSYCHOLOGY (Psychology 233) (5).

Analysis of selected research problems from the standpoint of theory and techniques; intensive study of public opinion research.

(1950-1951 and alternate years.) *Winter quarter.* Messrs. Crespi, Demerath, Noland.

240. SOCIAL RESEARCH IN INDUSTRIAL RELATIONS (5). Prerequisite, Sociology 170 or Economics 191.

A critical appraisal of recent and current research in human relations in industry with emphasis upon methodology and research opportunities. Systematic analysis of theories and procedures of sociology, anthropology, and social psychology bearing upon research in labor and industrial relations. Analysis of industrial research from the standpoint of an appropriate conceptual framework, financial support, public relations, and research techniques.

Spring quarter. Mr. Noland.

253. ADVANCED SOCIAL STATISTICS (5). Prerequisite, Sociology 191.

Multiple and partial correlation, analysis of variance and covariance, sampling, and other topics applicable to specific research projects of the students.

Four lecture and four laboratory hours a week, spring quarter. Laboratory fee, \$2.00. Mr. Price.

262. EUROPEAN SOCIOLOGICAL THEORY (SEMINAR) (5).

Social organization, change, and social action as interpreted by Pareto, Marx, Durkheim, Max Weber, Karl Mannheim, and other European theorists, together with consideration of their influence currently in the United States. Required of all candidates for the Ph.D. degree in sociology.

Fall quarter. Mr. Demerath.

270. SOCIOLOGY OF RELIGION (Religion 270) (5).

Analysis of tensions between the scientific, ethical, and theological study of society; the role of religion in social change; the social origins of the denominations; the sociological significance of the Reformation; "sect" and "church" in sociological theory.

(1951-1952 and alternate years.) *Winter quarter.* Mr. Nash.

276. ADMINISTRATION OF RECREATION (5).

Analysis of recreation from the standpoint of organization; administration; finances; budget; reports and records; leadership and training; legislation; publicity and public relations; coordination of community resources; program operation.

Spring quarter. Mr. Meyer.

301, 302, 303. GRADUATE RESEARCH SEMINAR (5 each quarter). Registration by permission of instructor.

Advanced reading, library research or field research on a selected topic under guidance of the instructor.

Any quarter. Members of the department.

315, 316, 317. GRADUATE SEMINAR IN RESEARCH METHODOLOGY (5 each quarter). Registration by permission of the instructor.

Special work on selected problems of research methodology.

Any quarter. Members of the department.

327, 328, 329. GRADUATE RESEARCH SEMINAR (5 each quarter). Registration by permission of the instructor.

Research on selected topics.

Any quarter. Mr. Odum.

331. THE FAMILY AND ITS SOCIAL FUNCTIONS (5).

Graduate research seminar. An interpretation of important contributions of social thought concerning marriage and the family from Plato to the present.

(Not offered in 1950-1951.) *Winter quarter.* Mr. Hill.

333. EDUCATION FOR MARRIAGE AND FAMILY LIFE (5).

A graduate seminar on educational programs for the conservation of marriage and the family. Students electing this seminar should audit Sociology 62 for observation of content and techniques in a course designed as preparation for marriage and family life.

(1950-1951 and alternate years.) *Spring quarter.* Mr. Hill.

334. CRITIQUE OF RESEARCH IN MARRIAGE AND THE FAMILY (5).

This seminar reviews the basic conceptual frameworks used in family research in the past; identifies changing emphasis in family study; and evaluates current studies in the major fields of family research.

(1951-1952 and alternate years.) *Winter quarter.* Mr. Hill.

341. SEMINAR (5).

Individual research (thesis or dissertation) in a selected field under the direction of a member of the department.

Any quarter.

*RURAL SOCIOLOGY

Courses for Undergraduates

53. RURAL SOCIAL ECONOMICS (5). No prerequisite.

A general introductory course in the principles and problems of rural social economics, with attention to the relationship between economic and social conditions, especially in the South.

Fall quarter. Mr. Hobbs.

54. RURAL COOPERATION (5). Not open to students credited with Sociology 182.

Historical background of rural cooperation abroad and at home; principles of cooperation; fields of rural cooperative activity, both economic and social. Lectures and research.

(1951-1952 and alternate years.) *Spring quarter.* Mr. Hobbs.

*Courses in rural sociology carry regular designation "Sociology" on registration forms. Sociology 174, 181, and 218 may be counted as rural sociology courses in a graduate program. Additional graduate courses in rural sociology are available at North Carolina State College in Raleigh.

Courses for Graduates and Advanced Undergraduates

101. NORTH CAROLINA: ECONOMIC AND SOCIAL (5).

This course is designed to familiarize the student with North Carolina: population, agriculture, resources, social life, economic development, industry, wealth, taxation, education, public welfare.

Fall quarter. Mr. Hobbs.

102. RURAL SOCIOLOGY (5).

Topics include rural society and rural sociology, socio-economic aspects of agriculture, conditions and movements of rural population, rural social institutions and agencies, bio-social conditions, socio-cultural conditions, rural-urban relations.

Winter quarter. Mr. Hobbs.

103. HISTORY OF AGRICULTURE AND RURAL INSTITUTIONS (5).

This course traces the development of agriculture from its earliest beginnings to the present: early developments; Greece and Rome; later agriculture in Europe; American agricultural institutions.

(1950-1951 and alternate years.) *Spring quarter.* Mr. Hobbs.

110. RURAL LAND PLANNING AND LAND ECONOMICS (5). Prerequisite or corequisite, general economics or Sociology 53.

A course covering the broad field of land economics, with special attention to utilization and conservation of farm and forest land resources in the United States.

Winter quarter. Mr. Hobbs.

166. THE RURAL COMMUNITY (5).

The rural community as a sociological group, evolution of the rural community, village-community economy, social institutions, social organization, social control, sociological significance, the future of the rural community.

Spring quarter. Mr. Hobbs.

Courses for Graduates

311, 312, 313. RURAL SOCIAL PROBLEMS (5 each quarter). Prerequisites, approved courses in general sociology and rural sociology and permission of the instructor.

Research, seminars, and field investigations in selected topics from the following: rural social problems; rural social surveys, research techniques and field work; rural social statistics, interpretation and use; rural social engineering.

Any quarter. Mr. Hobbs; assistant.

*ANTHROPOLOGY

Courses for Undergraduates

41. GENERAL ANTHROPOLOGY (5).

A basic introduction to man as a species and as a producer of customs and culture. The evolution of mankind, physical anthropology, modern varieties and races, and human capabilities. The fundamental cultural developments of human history with a general study of the functioning principles of culture. Study of selected culture areas.

Any quarter. Materials fee, \$1.00. Messrs. Gillin, Johnson, Murphy, Fisher.

*As indicated, certain courses in anthropology also carry credit in general sociology.

74. ARCHAEOLOGY OF NORTH AMERICA (5).

A study of the growth of American Indian cultures north of the Rio Grande as interpreted by archaeological research. Special emphasis on the prehistory of North Carolina and the eastern woodlands.

Winter quarter. Laboratory fee, \$1.00. Mr. Coe.

79. RESEARCH METHODS IN ARCHAEOLOGY (5).

A study of the basic principles underlying archaeological study of prehistoric sites, with discussion of methods employed at various outstanding excavations; a study of laboratory methods, problems of analysis and interpretation, integration, and application to cultural history. Field trips and laboratory work.

Spring quarter. Laboratory fee, \$3.00. Mr. Coe.

95, 96, 97. HONORS READING COURSES (5 each quarter). Prerequisite, for Honors Program, approval of the chairman of the department.

Special reading for honors in a selected field under the direction of a member of the department. A student may take only two courses in the Honors Program.

Any quarter. Members of the department.

99. CULTURES AND SOCIETIES OF CHINA AND INDIA (Sociology 99) (5).

Analysis of the culture patterns (kinship, religion, economy, government) and social structures (class, caste, status) of modern China and India and in relation to pertinent geographic, racial, and historical considerations.

(Not offered in 1950-1951.) *Winter quarter. Mr. Demerath.*

Courses for Graduates and Advanced Undergraduates

122. CULTURAL ANTHROPOLOGY (Sociology 122) (5).

A systematic survey of the customs and modes of life of mankind based on scientific explanation of the ways of culture. Special attention to relating the materials of comparative ethnology to problems of cultural adjustment in our own society.

Winter quarter. Materials fee, \$1.00. Messrs. Gillin, Johnson.

123. PRIMITIVE RELIGIONS (Sociology 123) (5).

Survey and analysis of a representative series of religious systems and beliefs of the so-called primitive peoples; approached from the point of view of cultural anthropology; attention is given to the development of religious forms leading to world religions, and to the relation of religion to other aspects of culture and human activity.

(Not offered in 1950-1951.) *Spring quarter. Mr. Gillin.*

125. THE NEGRO (Sociology 125) (5).

A study of the American Negro, with particular reference to the South; the historical and cultural backgrounds of the Negro in Africa and in America; development since emancipation; biracial system; problems of race relations.

Fall quarter. Mr. Johnson.

126. RACES AND PEOPLES OF AFRICA (5).

A survey of the native peoples and cultures of Africa, with special emphasis on the Negroid peoples south of the Sahara and with some attention to the African background of the American Negro.

(1951-1952 and alternate years.) *Spring quarter. Materials fee, \$1.00. Mr. Johnson.*

127. NATIVE PEOPLES AND CULTURES OF MEXICO AND CENTRAL AMERICA (5). Not open to students credited with Anthropology 127 prior to fall quarter, 1950.

Modern Mexico and Central America seen against the background of archaeology, physical anthropology, and aboriginal culture, including both the "high cultures" of the Aztec and Mayas and the tribal cultures of various regions; present-day mixtures and syntheses in physical types and customs, and institutions.

(This course replaces, in part, former Anthropology 127.)

(1950-1951 and alternate years.) *Winter quarter. Materials fee, \$1.00.* Mr. Gillin.

128. FOLK CULTURES IN THE MODERN WORLD. (Sociology 128) (5).

The folk culture is viewed as a way of life which stands midway between that of the "primitive" tribal native and that of the urbanized city-dweller. Consideration is given to this design for living in various parts of the world, with particular reference to the folk culture of southeastern United States.

(1951-1952 and alternate years.) *Fall quarter. Materials fee, \$1.00.* Mr. Gillin.

129. PEOPLES OF OCEANIA (5). Prerequisite, Anthropology 41.

Five hours a week, spring quarter. Professor Lebar.

130. INDIANS OF NORTH AMERICA (5).

A descriptive study of the cultural areas of North America at the time of European contact. Special emphasis is placed on the major tribes of the Southeast.

Fall quarter. Laboratory fee, \$1.00. Messrs. Johnson, Coe.

132. NATIVE PEOPLES AND CULTURES OF SOUTH AMERICA (5). Not open to students credited with Anthropology 127 prior to fall quarter, 1950.

An approach to the understanding of South America in ethnological terms; aboriginal physical types, archaeology, and cultures are surveyed. The development of modern Latin American civilization is analyzed against this background.

(This course replaces, in part, former Anthropology 127.)

(1951-1952 and alternate years.) *Winter quarter. Materials fee, \$1.00.* Mr. Gillin.

135. INTRODUCTION TO FOLKLORE (Folklore 135) (5).

Definitions and examples of folklore in general and its various categories. Collection, classification, study, and analysis of folklore materials. Bibliography.

Fall quarter. Mr. Hudson.

Courses for Graduates

220. THEORIES OF CULTURE (Sociology 220) (5).

A systematic survey of the history of theory in cultural anthropology leading to the development of a system of operational principles which the student may apply in his own field work and further studies involving cultural problems.

(1951-1952 and alternate years.) *Spring quarter. Materials fee, \$1.00.* Mr. Gillin.

229. CULTURE AND PERSONALITY (Sociology 229) (5).

A scientific analysis of the influence of cultural forms on the individual in our own and other societies, considered from the anthropological, psychological, and clinical points of view.

(1950-1951 and alternate years.) *Spring quarter. Materials fee, \$1.00.* Mr. Gillin.

230. RACE AND CULTURE CONTACTS (Sociology 230) (5).

This course describes and analyzes the problems of acculturation arising from the contacts of peoples of different racial or cultural heritages, with particular reference to Negro, white, and Indian relations in the New World.

(1950-1951 and alternate years.) *Spring quarter.* Mr. Johnson.

321, 322, 323. SEMINAR IN ANTHROPOLOGY (5 each quarter). Prerequisites, Anthropology 122 and permission of the instructor.

Advanced reading, library research, field research in anthropology under guidance of the instructor.

Any quarter. Messrs. Gillin, Johnson.

341. SEMINAR (5).

Individual research (thesis or dissertation) in a selected field under the direction of a member of the department.

Any quarter.

DEPARTMENT OF ZOOLOGY

Professors: D. P. COSTELLO, R. E. COKER, C. D. BEERS

Associate Professors: W. L. ENGELS, MAURICE WHITTINGHILL, C. S. JONES

Assistant Professors: H. E. LEHMAN, C. E. JENNER

Instructors: C. B. BLAIR, JR., E. E. JONES, JR.

Research Associate: CATHERINE HENLEY

Teaching Fellow: LILLIAN M. YOUNGS

Graduate Assistants: J. R. COLLIER, W. B. JEFFRIES, MARY C. MCMASTER, NORMA SUE SLIGH, C. W. SMITH, R. F. WILLIARD

Requirements for Undergraduate Major: For the A.B. with major in zoology, there are required six courses in zoology of the level of 41 or higher, these six courses to include Zoology 41, 42, 103, 104 and two other courses. Six courses must be taken in allied departments of the Division of Natural Sciences, including two courses in chemistry, two in physics, and Botany 41. Courses in chemistry or mathematics numbered *below* 31 will not count toward the requirements in the allied fields. Courses (at least six) necessary to complete the required number of hours for graduation must be taken in departments outside the Division of Natural Sciences.

Students who plan to major in zoology should take Zoology 41 and 42 during their sophomore year.

Those students who plan to teach in public high schools should read the statement on pages 156-57.

With the recommendation of the department and the approval of the Administrative Board of the Graduate School, special courses and direction of graduate studies may be offered by members of the staff of the Institute of Fisheries Research. (See page 425.)

Courses for Undergraduates

1. ELEMENTS OF HUMAN AND ANIMAL BIOLOGY (5). Freshman elective.

Zoology 1 and Botany 1 are offered for students who do not plan to take higher courses in the natural sciences. Zoology 1 cannot be used as a prerequisite for higher courses in zoology. For introductory or pre-professional training refer to Zoology 41, 42 and Botany 41, 42.

Basic similarities of all living organisms; organ systems and their physiology; embryology, genetics, organic evolution, ecology, survey of the major phyla.

Four lecture and two laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, \$3.00. Messrs. Lehman, Blair; assistants.

38. ANIMAL EVOLUTION (5). Prerequisites, Zoology 1 or Zoology 41 and 42. Not open to freshmen.

The principle of organic evolution as the unifying concept of the biological sciences: historical development; nature of the evidence; Darwinian and neo-Darwinian concepts; theories of the mechanism; some impacts of the evolution concept in other fields.

Five lecture and demonstration hours a week, fall and spring quarters. Messrs. C. S. Jones, Lehman.

41. INTRODUCTORY VERTEBRATE ZOOLOGY (6).

Zoology 41 and 42 are planned to serve general cultural needs for the field of zoology. They also serve to meet in part the usual pre-professional requirements.

Fundamentals of vertebrate anatomy, physiology, histology, embryology, classification, and homology.

Four lecture and two laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, \$7.50. Mr. C. S. Jones; assistants.

42. INTRODUCTORY INVERTEBRATE ZOOLOGY AND PRINCIPLES (6).

Prerequisite, Zoology 41, or special permission of the instructor.

Structure, function, relationships, and significance of invertebrate animals; and the general zoological principles of mitosis, meiosis, genetics, classification, and organic evolution.

Four lecture and four laboratory hours a week, winter and spring quarters. Laboratory fee, \$7.50. Mr. Jenner; assistants.

46. OCEANOGRAPHY (OCEANIC ECOLOGY) (5).

The course as now offered is experimental. Specific prerequisites are not set up; but enrollment is limited by consent of the instructor and the Dean of the College of Arts and Sciences, who must be satisfied as to the interest and the background of the student.

An introduction to the study of the seas with special reference to the conditions of biological productivity and fisheries. The history of oceanography; the chemical, physical, topographic, and general geographic features, and the plan of circulation, as such conditions affect life in the sea and the yield of useful products.

Four hours of lectures and reading and two hours of laboratory a week, fall or spring quarter. Mr. Coker.

NOTE: Courses in Directed Teaching in High School Science and in Materials and Methods of Teaching High School Science will be found under the School of Education.

Courses for Graduates and Advanced Undergraduates

103. COMPARATIVE VERTEBRATE ANATOMY (6). Prerequisites, Zoology 41 and 42.

Lectures on the structure and evolutionary history of the chief organ systems of vertebrates. Dissections of amphioxus, petromyzon, dogfish head, necturus, and cat.

Two lecture and nine laboratory hours a week, fall and winter quarters. Laboratory fee, \$12.50. Messrs. Engels, E. E. Jones, Jr.

104. VERTEBRATE EMBRYOLOGY (6). Prerequisites, Zoology 103, or Zoology 41, 42 and special permission of the instructor.

Development in representative vertebrates, including man; special study of cleavage, germ-layer formation, organogenesis, and extra-embryonic membranes, using frog, chick, and pig.

Two lecture and nine laboratory hours a week, winter and spring quarters. Laboratory fee, \$10.00. Mr. Whittinghill.

105. VERTEBRATE HISTOLOGY AND MICROTECHNIQUE (6). Prerequisites, Zoology 103 and 104, or Zoology 103 and special permission of the instructor. Exceptions to these prerequisites may be made for students majoring in medical technology.

The preparation of selected tissues and organs for microscopic examination; study of these to acquaint the student with the essentials of histology.

One lecture and ten laboratory hours a week, spring quarter. Laboratory fee, \$10.00. Mr. Beers or Mr. Costello.

106-107-108. MORPHOLOGY AND CLASSIFICATION OF THE INVERTEBRATES (5 each). Prerequisite, Zoology 103 or special permission of the instructor.

Dissection and microscopic study of selected types of the chief orders, with consideration of life histories and phylogeny. Basic course for all graduate work in zoology.

Ten laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, \$7.50 a quarter. Mr. Beers.

109. INTRODUCTION TO HYDROBIOLOGY (5). Prerequisites, Zoology 41 and 42.

A study of living organisms in the aquatic habitat, with special reference to the relation of animals to their environment—physical, chemical, and biological.

Ten laboratory hours a week, fall quarter. Laboratory fee, \$7.50. Mr. Jenner.

110. GENERAL PARASITOLOGY (5). Prerequisites, Zoology 41 and 42.

A study of classification, structure, and life cycles of parasites of invertebrates and vertebrates including man; consideration of the arthropods which cause or transmit disease.

Three lecture and four laboratory hours a week, winter quarter. Laboratory fee, \$7.50. Mr. Costello.

111. GENETICS (5). Prerequisites, Zoology 41 and 42.

The principles of Mendelian heredity, linkage, mutation, population mechanics, and the relation between genes and environment in development. Laboratory experiments with *Drosophila* and maize.

Three lecture and four laboratory hours a week, fall quarter. Laboratory fee, \$7.50. Mr. Whittinghill.

112. VERTEBRATE FIELD ZOOLOGY (5). Prerequisite, Zoology 103 or special permission of the instructor.

Identification, habits, and distribution of local amphibians, reptiles, birds, mammals. Special consideration of geographic variation; speciation; ecological distribution; numbers, cycles, and populations; life histories; behavior.

Two lecture and eight laboratory and field hours a week, spring quarter. Laboratory fee, \$7.50. Mr. Engels.

118. EXPERIMENTAL MORPHOGENESIS OF VERTEBRATES (5). Prerequisite, Zoology 104.

A study of problems in vertebrate development relating to determination, differentiation, organogenesis, and regeneration, including the concepts of dependent development, tissue affinities, gradients, and fields.

Five lecture or discussion hours a week, spring quarter. Mr. Lehman.

Courses for Graduates

209-210-211. EXPERIMENTAL EMBRYOLOGY (5 each). Prerequisite, Zoology 104.

The study of fertilization, cell-lineage, differentiation, and regeneration of invertebrates and vertebrates from the experimental viewpoint.

Four lecture and seminar and two laboratory hours a week, fall, winter, and spring quarters. Laboratory fee, \$7.50 a quarter. Mr. Costello.

212. HYDROBIOLOGY (5). Prerequisite, Zoology 109.

The study of aquatic organisms and environments, with attention restricted to a particular topic, as a small group of animals, a limited set of habitats, or special phenomena of behavior.

Ten laboratory hours a week, winter or spring quarter. Laboratory fee, \$7.50. Mr. Jenner.

213. HYDROBIOLOGY (5). Prerequisite, Zoology 109.

Advanced hydrobiology, having special reference to life in the sea and including general principles of oceanography. Reading, lectures, laboratory work, with one or more field trips to the coast.

Ten laboratory hours a week, fall, winter, or spring quarter. Laboratory fee, \$7.50. Mr. Coker.

215. PROTOZOOLOGY (5).

Introduction to research in protozoology. The collection, identification, and culture of selected types, chiefly free-living; microtechnical methods; survey of current literature.

Ten laboratory and seminar hours a week, fall quarter. Laboratory fee, \$7.50. Mr. Beers.

217. CELL PHYSIOLOGY (5). Prerequisite, organic chemistry.

A consideration of the physico-chemical aspects of protoplasm, including permeability, surface tension, pH, cataphoresis, viscosity changes, and other measurable properties of living cells. Lectures; student reports.

Five lecture or conference hours a week, spring quarter. Mr. Costello.

222. ADVANCED GENETICS (5). Prerequisite, Zoology 111.

Studies of the effects of chemical agents in the environment upon inheritance. Reports from the literature chiefly upon chemical mutagenesis. Laboratory experiments chiefly on the chemical induction of crossing over.

Ten laboratory hours a week, winter quarter. Laboratory fee, \$7.50. Mr. Whittinghill.

223. RADIATION GENETICS (5). Prerequisite, Zoology 111.

Study of the action upon living cells of irradiation by X-rays, neutrons, infrared, ultra-violet, and other forms of radiation. Crossing over and mutations are emphasized.

Five lecture or seminar hours a week, spring quarter. Mr. Whittinghill.

330. RESEARCH IN PROTOZOOLOGY (5 or more).

Mr. Beers.

331. RESEARCH IN INVERTEBRATE ZOOLOGY (5 or more).

Mr. Beers.

332. RESEARCH IN EXPERIMENTAL CYTOLOGY (5 or more).

Mr. Costello.

333. RESEARCH IN EXPERIMENTAL EMBRYOLOGY OF INVERTEBRATES (5 or more).

Mr. Costello.

334. RESEARCH IN CELL PHYSIOLOGY (5 or more).

Mr. Costello.

335. RESEARCH IN HYDROBIOLOGY (5 or more).

Mr. Coker or Mr. Jenner.

336. RESEARCH IN VERTEBRATE ZOOLOGY (5 or more).

Mr. Engels.

337. RESEARCH IN GENETICS (5 or more).

Mr. Whittinghill.

338. RESEARCH IN PHYSIOLOGY OF LOWER INVERTEBRATES (5 or more).

Mr. Jones.

339. RESEARCH IN EXPERIMENTAL EMBRYOLOGY OF VERTEBRATES (5 or more).

Mr. Lehman.

Courses 330 through 339 are designed for applicants for advanced degrees. The work of each of these courses may be continued for two or more quarters under the same course number. *Each course ten or more laboratory and conference hours a week, fall, winter, and spring quarters. Laboratory fee, \$7.50 per 5 quarter hours.*

Part Five

**DIVISIONS, INSTITUTES,
AND ORGANIZATIONS**

DIVISIONS, INSTITUTES, AND ORGANIZATIONS

GORDON GRAY, A.B., LL.B., LL.D., *President of the University of North Carolina*

ROBERT BURTON HOUSE, A.M., LL.D., *Chancellor of the University at Chapel Hill and Vice-President of the University of North Carolina*

The President and Chancellor head each of the divisions, institutes, and organizations listed in Part V.

THE UNIVERSITY EXTENSION DIVISION

RUSSELL MARVIN GRUMMAN, B.H., *Director*

CHARLES FREMONT MILNER, A.M. in Educ., *Associate Director*

EDGAR RALPH RANKIN, A.M., *Head, Department of School Relations*

WILLIAM JOHN MCKEE, C.E., Ph.D., *Supervisor of Correspondence Instruction*

DWIGHT CARROLL RHYNE, A.B., M.A., *Administrative Assistant*

*The Administrative Board

GORDON W. BLACKWELL, Ph.D., *Professor of Sociology and Director of the Institute for Research in Social Science*

ALBERT COATES, A.B., LL.B., *Professor of Law and Director of the Institute of Government*

GEORGE RALEIGH COFFMAN, Ph.D., *Kenan Professor of English*

NORMAN CORDON, Mus.D., *Director of the North Carolina Music Program*

OLIVER KELLY CORNWELL, M.A., Ed.D., *Professor of Physical Education and Director of Physical Education*

WESLEY CRITZ GEORGE, Ph.D., *Professor of Histology and Embryology*

SAMUEL HUNTINGTON HOBBS, JR., Ph.D., *Professor of Rural Sociology and Research Professor in the Institute for Research in Social Science*

ARNOLD KIMSEY KING, A.M., *Professor of Education and Associate Dean of the Graduate School*

STURGIS ELLENO LEAVITT, Ph.D., Litt.D., *Kenan Professor of Spanish and Director of the Institute of Latin American Studies*

*The Chancellor, the Director of Admissions and the Dean of Students are ex officio members of the Board.

- HAROLD DIEDRICH MEYER, A.M., LL.D., R.S.D., *Professor of Sociology and Director of the All-University Division of Recreation*
- CHARLES FREMONT MILNER, A.M. in Educ., *Associate Director of the Extension Division*
- GUY BERRYMAN PHILLIPS, M.A., *Professor of Education and Dean of the School of Education*
- SAMUEL SELDEN, A.B., *Professor of Dramatic Art and Director of The Carolina Playmakers*
- CORYDON PERRY SPRUILL, A.B., B.Litt. (Oxon.), *Professor of Economics and Dean of the General College*
- WILLIAM SMITH WELLS, Ph.D., *Professor of English and Dean of the College of Arts and Sciences*
- LOUIS ROUND WILSON, Ph.D., Litt.D., LL.D., L.H.D., *Professor of Library Science and Administration*
- REX SHELTON WINSLOW, Ph.D., *Professor of Economics and Director of the Bureau of Business Services and Research*
- HARRY DEMERLE WOLF, Ph.D., *Professor of Economics and Director of the Institute of Industrial Relations*
- EARL WYNN, M.S., *Professor of Radio and Communication and Director of the Communication Center*

Heads of Bureaus

- JOHN VOLNEY ALLCOTT, M.A., *Art Extension*
- JOHN WILLIAM PARKER, A.M., *Community Drama*
- GLEN HAYDON, Ph.D., *Community Music*
- GORDON W. BLACKWELL, Ph.D., *Community Organization*
- MARY LOUISA COBB, A.B., *Correspondence Instruction*
- SAMUEL HUNTINGTON HOBBS, JR., Ph.D., *Economic and Social Surveys*
- GUY BERRYMAN PHILLIPS, M.A., *Educational Information and Assistance*
- EARL HORACE HARTSELL, Ph.D., *English Extension*
- HARRY DEMERLE WOLF, Ph.D., *Institute of Industrial Relations*
- HAROLD DIEDRICH MEYER, A.M., LL.D., R.S.D., *Recreation*
- CHARLES FREMONT MILNER, A.M. in Educ., *Visual Education*

Heads of Cooperative Services

- REX SHELTON WINSLOW, Ph.D., *Director, Bureau of Business Services and Research*
- EARL WYNN, M.S., *Director, The Communication Center*
- NELLIE ROBERSON, A.B., *Head, Library Extension Department*

LINDSAY JACKSON PERRY, M.A., *Executive Secretary, North Carolina High School Athletic Association*

NORMAN CORDON, Mus.D., *Director, North Carolina Music Program*

BENJAMIN SWALIN, Ph.D., *Professor of Music in Extension and Director of the North Carolina Symphony Society*

SHELDON WHITE, B.S., *Administrative Assistant, Division of Health Affairs*

General Statement

By means of correspondence instruction, extension classes, public forums, lecture series, extension library service, reading courses, community dramatics, interscholastic activities, audio-visual aids, and a variety of publications, the University of North Carolina, through the Extension Division, is relating itself closely with the life of North Carolina. The University campus is now virtually conterminous with the boundaries of the commonwealth.

Starting as a Bureau of Extension in 1912 under the leadership of Dr. L. R. Wilson, former University Librarian, the idea of University extension was clarified and expanded under the administration of the late President Edward Kidder Graham. In 1921, in conformity with standards established by the National University Extension Association, the work was organized as a major division of the University by President Harry W. Chase.

In his inaugural address, November, 1931, President Frank Porter Graham defined the purposes of university extension thus: "It is the function of the state university not only to find its bits of truth and teach the truth gathered from scholars everywhere, but to carry the truth to the people that they may take it into their lives and help to make it prevail in world affairs. It is the ideal of the University Extension Division to make the resources of the universities, the discoveries of science, and the findings of the social scientists available for the people of the commonwealth."

The Extension Division is the administrative agency through which are conducted the extension activities of all the University's departments. Within recent years, moreover, the Division has developed a specialized program of adult general and professional education unrelated to the work of the resident departments. Other educational services are being offered men and women whose formal schooling has ended but who still desire to continue their education regardless of higher academic awards. In meeting the demands of this group, the

future of the University Extension Division as an agency for adult education holds the greatest promise of development.

Separate catalogues and announcements of the various services are published by the University Extension Division, including Correspondence Instruction, Audio-Visual Aids, etc.

Bureau of Art Extension

The Department of Art offers, through the cooperation of the Extension Division, extension class and correspondence courses in the history and appreciation of art. Institutes on art education are sponsored jointly with other state agencies and organizations. A lecture service is available. Circulating art exhibits may be secured on a loan basis. The annual North Carolina School Art Exhibition is conducted in cooperation with the Woman's College.

All of the special exhibitions in the Person Hall Art Gallery are open to the general public.

Bureau of Class Instruction

Extension courses in regular University subjects are offered in communities throughout the state. These courses are taught by members of the University faculty and, when all requirements are met, give the same credit as courses in residence. Those not wishing degree credit are also eligible to enroll in extension classes. The classes usually meet one evening a week for sixteen weeks. An individual or group wishing to organize an extension class should make written application to the University Extension Division, giving the following information: probable number of enrollments, academic qualifications of persons who wish to join the class, course desired, when and where the class wishes to meet, and who will have charge of local arrangements.

COURSES OFFERED

The Extension Division attempts to offer most of the courses listed in the University General Catalogue in any community where a sufficient number of people desire to enroll.

In order to conserve space, all other information and regulations concerning extension courses are omitted here but may be secured by sending a written request to the University Extension Division.

IN-SERVICE TEACHER EDUCATION

Working in close cooperation with the School of Education, the Division conducts a specialized and carefully arranged program for

teachers now working in the schools of the state. The aim of this program is to improve instruction in the schools and to offer opportunities for the professional growth of teachers.

Bureau of Community Drama

The services of the Bureau of Community Drama are available to all schools, colleges, and communities throughout the state. Suggestions and advice on play production and direction may be obtained from this bureau.

Assistance is given in organizing, play selecting, the designing and making of scenery, costuming, and make-up and lighting. Arrangements may be made for assistance in the direction of a chosen play.

The bureau has at its disposal more than two thousand volumes of playbooks, books on acting, play production, little theatre organization, playwriting, stagecraft, lighting, costuming, make-up, etc. These are loaned upon payment of the postage and packing charges. By giving practical assistance to those interested in writing and producing plays, the bureau is seeking to promote and encourage dramatic art in the schools and communities of North Carolina and to stimulate interest in the writing of native drama.

Bureau of Community Music

The Department of Music offers the following services: (1) leadership for community sings; (2) formation of community choruses; (3) lectures on public school and community music; (4) piano, violin, and organ recitals; (5) advisory service to schools; (6) concerts by the University Symphony Orchestra, the Symphonic Band, and the University Glee Clubs; (7) extension courses in music appreciation.

Bureau of Community Organization

The services of this bureau consist of consultation and assistance to North Carolina localities in the expanding field of community organization. Cities, towns, and rural communities alike are facing serious problems of community coordination and effective citizen action for community improvement. A number of localities already have community councils or councils of social agencies to help meet these needs.

Plans of the Bureau of Community Organization include the preparation of materials for local leaders, conferences and institutes,

assistance in local fact finding, demonstration projects, a state-wide advisory committee on Community Organization, and collaboration with national agencies and with community organization programs in other states.

Bureau of Correspondence Instruction

All information and regulations concerning correspondence courses offered by the University are contained in the Catalogue of Correspondence Instruction issued separately. This contains information regarding economical plans for college and adult education.

The University offers correspondence courses to men and women in the armed forces through the United States Armed Forces Institute, and to veterans through contract with the Veterans Administration.

Bureau of Economic and Social Surveys

For years the staff in Rural Social-Economics of the University has been collecting data on social and economic conditions in North Carolina. This material is available through loans from the library, articles in *The University of North Carolina News Letter*, and bulletins which record the results of a number of county surveys. The *News Letter*, which is edited by this department, appears fifteen times each year.

Bureau of Educational Information and Assistance

The bureau is maintained through the cooperation of the School of Education. The several members of the faculty of the School offer to the state the following lines of service: educational tests and measurements; school surveys; teachers' appointments; advice and counsel with reference to school buildings, equipment, and general administrative problems.

Bureau of English Extension

In cooperation with the Department of English, the Division conducts professional services for teachers of high school English. The North Carolina High School English Institute is held each summer. The head of the Bureau serves as executive secretary of the North Carolina English Teachers Association and managing editor of the *North Carolina English Teacher*.

Institute of Industrial Relations

Established in the spring of 1946, the Institute serves as the coordinating agency of the University and the Extension Division for the promotion and direction of educational programs in labor-management relations and programs of workers' education. Short courses, workshops, and institutes are conducted in cooperation with representatives of both management and labor organizations.

Bureau of Lectures, Short Courses, and Institutes

The University conducts a lecture bureau for the purpose of aiding schools, civic clubs, and other organizations in obtaining speakers and public forum leaders. Addresses for special occasions, such as school and college commencements, are also arranged upon application.

No fee for lecture service is charged, but the traveling and incidental expenses of the lecturer are to be defrayed by the organization for which the lecture is made. Lecture courses and public forum programs also may be arranged.

From time to time the University has held at Chapel Hill and at other places short courses or institutes for various organizations and groups. These consist of an intensive training program or course ranging in duration from one day to two weeks. The program is composed of a specialized series of lectures, discussions, and demonstrations directed by leading speakers and teachers secured from the faculty of the University and from the state and nation. Short courses have been offered to high school athletic directors, welfare workers, parents, realtors, photographers, bankers, insurance agents, members of the State Press Association, the North Carolina Medical Society, and other organizations.

In addition to those mentioned above, the Division will be glad to aid other organizations or groups in arranging for a short course, institute, special meeting, or convention.

Bureau of Recreation

This bureau offers service in public recreation and leisure time problems through the Department of Sociology. Bibliographies and reading lists on the subjects of sociology, community organizations, etc., are provided upon request. The Bureau Head serves as Consultant to the North Carolina Recreation Commission.

Bureau of School Relations

The University Extension Division, through this bureau, offers service to the high schools of the state by means of contests in debating, public speaking, and academic subjects.

The North Carolina High School Debating Union is the medium through which assistance in debate is offered. This organization was established in 1912-1913. Approximately two hundred high schools discuss some important question each year. The district winners come to the University to compete during High School Week in the final contest for the Aycock Memorial Cup.

The High School World Peace Study and Speaking Program was started during the school year 1946-1947. About two hundred schools have participated annually in the discussion of: "Is World Government the Path to Peace?"; "How Can the United Nations Be Strengthened?"; "What is the Responsibility of the United States in World Affairs?"; and "How Can We Help to Build World Peace in the Atomic Age?"

The high school contests in academic subjects are conducted jointly by this bureau and by the University departments concerned. Academic contests are conducted in English, Latin, Spanish, French, physics, mathematics, and history. High school newspaper, magazine, and essay contests also are conducted.

Bureau of Visual Education

The services of the Bureau of Visual Education are available to all schools and other educational and civic agencies on a cost basis. Primarily, the visual education services are designed to aid elementary and secondary school and college teachers to supplement classroom instruction. Consequently, material is being selected that may be integrated with the curriculum or courses of study in public schools and colleges.

The Bureau is prepared to provide a number of advisory services concerning visual aids. The educational film library loan service is described in an issue of the *University Extension Bulletin*.

COOPERATIVE SERVICES

Bureau of Business Services and Research

Extension of educational facilities of the University to business and industry is provided in cooperation with the Bureau of Business Services and Research of the School of Business Administration. (See section of catalogue on the School of Business Administration for a

description of this agency.) The Bureau, through the Extension Division, services and sponsors the annual Bankers' Conference, the Southeastern Institute for Commercial Organization Executives, the Credit Bureau and Merchants Association Management Institute, the Realtors Institute, and others.

The Division, the Bureau, and the Institute of Industrial Relations cooperate in offering a summer program of short courses and workshops in industrial relations for personnel executives. Similar courses are given from time to time off the campus at various industrial centers. Similar programs are available in the fields of production management, accounting, sales management, business English, public speaking, statistics, finance, and insurance.

The Communication Center

Through radio, motion pictures, graphic presentation, still pictures, models, film strips, recordings, illustrated publications, and eventually television, the Communication Center provides an *extension* of the University to the people of North Carolina. (See Communication Center, pp. 400-4.) By means of these communication tools much of the University's vast well of knowledge may be visualized, auralized, and distributed throughout North Carolina, providing, thus, a wider educational opportunity for those who wish to learn.

Library Extension Department

The aim of the Library Extension Department of the University Library is to encourage discussion of current political, social, and economic problems, as well as to assist in the study of good literature. Reference material is supplied for such study.

One section renders assistance with programs and reference material, usually of a literary nature, to women's clubs and study groups, for which service a small charge is made. Another section renders assistance to schools, both students and teachers, as well as to other individuals not organized in group study. This material is usually on current problems of a political, social, or economic nature.

North Carolina High School Athletic Association

The North Carolina High School Athletic Association is the agency through which assistance in athletics is offered. This association conducts state high school contests in football, basketball, baseball, track, swimming, six-man football, golf, and tennis. The high schools com-

pete in districts for the honor of representing the eastern and western sections of the state, and the teams winning the sectional contests meet in the finals to determine state championships.

North Carolina Music Program

Dr. Norman Cordon, formerly of the Metropolitan Opera Association, returned to his native state in the spring of 1948, to help in the development of good music and the general cultural life of North Carolina. He is a member of the staff of the University Extension Division and available for cooperative services with schools, churches, colleges, and other community and state organizations. Assistance has been given to the North Carolina Symphony Society, the Carolina Folk Festival, and to the productions *The Lost Colony* and *Shout Freedom!*

North Carolina Symphony Society

Dr. Benjamin Swalin, Director of the Society and Conductor of the North Carolina Symphony Orchestra, is also Professor of Music in Extension. Society headquarters are located, through the courtesy of the University, in Swain Hall. The Director of Extension serves as Executive Vice-President of the Society.

Division of Health Affairs

In cooperation with the Division of Health Affairs, the Extension Division throughout the school year conducts postgraduate medical courses for physicians in various sections of the state. It assists in the administration of the Continuation Education Program of the School of Public Health. Plans are being made to organize extension programs for the School of Dentistry, the School of Nursing, and the University Hospital.

DIVISION OF HEALTH AFFAIRS

The Division of Health Affairs of the University includes the Schools of Medicine, Dentistry, Public Health, Nursing, Pharmacy, and the University Hospital and was established for the purpose of integrating and correlating the work of all the professional schools and the hospital in their teaching and research developments within the University. Equally or more important, the Division through its Administrator and Executive Board will attempt to correlate the teaching, research, and service functions of the entire State University

Health Center with the hospital and health agencies and services throughout the state.

Administratively the Division is under the direction of a full-time medical administrator, with an Executive Board on which are representatives of the various professional schools concerned and the Director of the University Hospital.

Executive Board

HENRY TOOLE CLARK, JR., A.B., M.D., *Administrator of the Division of Health Affairs*

WALTER REECE BERRYHILL, A.B., M.D., *Dean of the School of Medicine*

JOHN CHARLES BRAUER, A.B., D.D.S., M.Sc., *Dean of the School of Dentistry*

EDWARD ARMOND BRECHT, Ph.D., *Dean of the School of Pharmacy*

ROBERT RANDALL CADMUS, A.B., M.D., *Director of the University Hospital*

ROBERT ERVIN COKER, Ph.D., *Kenan Professor of Zoology*

ELIZABETH LOUANNA KEMBLE, R.N., B.S., M.A., Ed.D., *Dean of the School of Nursing*

EDWARD GRAFTON MCGAVRAN, A.B., M.D., M.P.H., *Dean of the School of Public Health*

THE ALL-UNIVERSITY DIVISION OF RECREATION

GORDON GRAY, A.B., LL.B., LL.D., *President of the University of North Carolina*

ROBERT BURTON HOUSE, A.M., LL.D., *Chancellor of the University at Chapel Hill and Vice-President of the University of North Carolina*

JOHN WILLIAM HARRELSON, M.E., LL.D., *Chancellor of the North Carolina State College of Agriculture and Engineering and Vice-President of the University of North Carolina*

EDWARD KIDDER GRAHAM, Ph.D., *Chancellor of the Woman's College and Vice-President of the University of North Carolina*

HAROLD D. MEYER, M.A., LL.D., R.S.D., *Director*

Advisory Board

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OLIVER K. CORNWELL

THOMAS I. HINES

ETHEL L. MARTUS

HAROLD D. MEYER

MEREB E. MOSSMAN

SAMUEL SELDEN

The All-University Division of Recreation was established by the Board of Trustees in 1947. The growth of recreation throughout the nation, and the demand for recreation leaders, centered interest in the University on its responsibility to train leaders for this field. For some time in the University at Chapel Hill there has been opportunity to train for recreation leadership. At the State College of Agriculture and Engineering, curriculum interest is centered around the training of leaders for recreation in industry and rural life. The course interest at the Woman's College is in the training of community recreation leaders and workers in youth-serving agencies.

The All-University Division is designed to coordinate services, cooperate in the development of curricula, and integrate programs and activities.

The Division works in close cooperation with the North Carolina Recreation Commission and the North Carolina Recreation Society.

COMMUNICATION CENTER

EARL WYNN, M.S., *Director*

CHARLES FREMONT MILNER, A.M. in Educ., *Associate Director*

RHODA M. HUNTER, M.A., *Executive and Financial Secretary*

ROBERT FREDERIC SCHENKKAN, M.A., *Assistant Director in charge of Project Coordination and Graphics Division*

ROSS SCROGGS, B.S., *Assistant Director in charge of Technical Coordination and Photographic Division*

SARAH ROSS HAMPTON, *Production Manager, Photographic Laboratory*

MACK PRESLAR, *Electronics Engineer and Technical Assistant*

EDWARD FREED, M.A., *Assistant Director in charge of Motion Picture Division*

ARTHUR V. BRISKIN, M.A., *Assistant Director in charge of Radio Division*

JOHN E. YOUNG, B.A., *Production Associate, Radio Division*

KENNETH M. MCINTYRE, B.S., *Assistant Director in charge of Utilization and Distribution Division*

LOUISE PENDERGRAFT, *Executive Secretary, Utilization and Distribution Division*

PAUL SPARROW, *Field Representative, Utilization and Distribution Division*

JULIUS BLANCHARD, *Assistant, Utilization and Distribution Division*

ELIZABETH SHERRILL TRIPP, *Secretary, Utilization and Distribution Division*

NANCY NORTON, *Film Librarian, Utilization and Distribution Division*

Advisory Board

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WILLIAM DONALD CARMICHAEL, JR., <i>Chairman</i> <i>ex officio</i>	JOHN HAROLD LAMPE
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EDWARD KIDDER GRAHAM, <i>ex officio</i>	BESS N. ROSA
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	I. O. SCHAUB
	CLAUDE EDWARD TEAGUE
	EARL WYNN

The Communication Center, approved in 1945 as a project of the consolidated University of North Carolina, operates as an educational production service for the University and the state and as a laboratory for students in radio, motion pictures, still photography, and audio-visual education. Governed by a board of advisors representing the University at Chapel Hill, State College at Raleigh, and Woman's College at Greensboro, its main purpose is to extend* the University and other significant educational projects of community and state to the people of North Carolina. The means through which this purpose is being realized can best be described under the divisions which make up the Communication Center.

Radio Division

Radio broadcasting has been a part of the University of North Carolina's program since 1939. Since then a training program has evolved (see Department of Radio), and a well-coordinated broadcast program has been developed.

The Radio Division of the Communication Center this year is broadcasting: *The University Hour*, a thirteen-week series of dramatizations built around crucial episodes in the lives of famous University men and women—living and dead—who through their work have influenced the growth and ideals of the University of North Carolina; *The Silent Siren*, a thirteen-week series of documentary dramatizations for the North Carolina Resource-Use Education Commission depicting the conservation and wise use of all of North Carolina's natural, industrial, and human resources; and single programs

*The Communication Center is an extension of the University to the people of North Carolina. As such, though set up as an independent organization, it will continue to work closely with the Extension Division of the University. (See Extension Division, pp. 389-98.)

for many agencies such as the Roanoke Island Historical Association and the Psychosomatic Division of Duke Hospital. The Radio Division frequently produces broadcasts in connection with events of general interest to the people of North Carolina, for example, *In This Is Our Faith*, a documentary dramatization marking the inauguration of Gordon Gray, and *The Meaning of the Word*, a program commemorating the Fourth of July prepared under the auspices of the 1950 Summer Session. The Division also originates for North Carolina radio stations special broadcasts of University activities such as Commencement and the recent inauguration of the President of the University. Programs are broadcast through large North Carolina AM and FM networks and by transcriptions distributed to commercial stations.

Much of the responsibility for production is carried by students majoring in the Department of Radio. This responsibility provides the students with the opportunity to make practical application of the theories they have learned in the classroom.

Recording

The Radio Division is equipped with professional disc and tape recording equipment. This equipment is used not only to record Communication Center programs for distribution to commercial stations and for recording sound for Communication Center motion pictures and film strips, but also for general educational uses such as (a) recording music and speech programs for permanent record or for classroom use, and (b) recording for training purposes in foreign languages, English, and speech classes. Communication Center facilities are available to any University or state agency for educational purposes.

Photographic Division

The Photographic Laboratory of the Communication Center serves all departments and agencies of the University in providing these services: (a) the photographing and processing of all types of public relations and instructional materials; (b) the photographing and processing of film strips; and (c) the photographing and processing of slides.

Motion Picture Division

The Motion Picture Division of the Communication Center makes available to the departments of the University, and to colleges, schools, and non-profit organizations in the state a complete service in motion

picture production. This service includes: (a) planning and writing the picture; (b) shooting and directing; (c) recording of sound and music; and (d) titling and editing.

Last year four films were completed, bringing the total to six: *Diamond Cutting*, a ten-minute 16mm color motion picture showing the procedure in cutting diamonds; *Basic Operative Technique*, a 16mm instructional film in color demonstrating operative techniques as performed in the removal of a dog's spleen; and *In the Name of Freedom*, a forty-minute color motion picture about the University. Three color films for the State Department of Conservation and Development about North Carolina are being produced; the first of these, *North Carolina—Variety Vacationland*, a twenty-two minute 16mm color travel movie, has been completed and released. Additional films in the planning and script stage include one for the Junior Order of United American Mechanics, one for the North Carolina Industrial Commission on industrial safety, and two films for the North Carolina Ports Authority.

Students in motion picture classes have an opportunity to gain practical experience by participating in the production of these films.

Graphics Division

The Division of Graphic Arts, which includes the design and production of illustrated publications, posters, cartoons, diagrams, maps, models, schematics, film strips, and motion picture animation has now been set up as a part of the School of Design at North Carolina State College.

Utilization and Distribution Division

The Film Library, operated under the Utilization and Distribution Division, has been a part of the University since 1925. Since that time, the library has acquired one thousand 16mm educational film titles which are distributed by means of a trucking system and through the mails to over seven hundred public schools, adult study groups, and agencies in the state. Through this division, many audio-visual workshops for teachers are conducted each school year throughout the state. The division is well equipped with modern tools of audio-visual education which are used in the teacher-training program, as well as in the audio-visual courses taught by Mr. Milner for the School of Education.

Recordings, motion pictures, and film strips produced by the Communication Center are distributed through this division.

Research Division

The Research Division of the Communication Center has completed its first scientific research project set up to discover the relative effectiveness of radio in teaching and communicating on a mass scale. This project was financed by the United States Navy and was conducted in cooperation with the Institute for Research in Social Science of the University of North Carolina. In connection with this project, the Communication Center is beginning its exploration of the field of television.

As a team the tools of communication generate considerably more power for education than they do separately. It is around this idea that the Communication Center of the University of North Carolina is in operation today in its attempt to extend the University and significant educational projects of community and state to the people of North Carolina.

THE FOLKLORE COUNCIL

RUSSELL MARVIN GRUMMAN, *Chairman*
 ARTHUR PALMER HUDSON, *Vice-Chairman*
 ROBERT WHITE LINKER, *Secretary-Treasurer*

*Executive Committee

GLEN HAYDON	NORMAN CORDON
ROBERT BURTON HOUSE	JOHN VOLNEY ALLCOTT

†Advisory Board

AMOS ABRAMS	JOHN HARDEN
GORDON W. BLACKWELL	RICHARD JENTE
GERTRUDE CARRAWAY	PHILLIPS RUSSELL
JOSEPH D. CLARK	SAMUEL SELDEN
NORMAN E. ELIASON	JAMES STREET
JOHN GILLIN	CRATIS D. WILLIAMS
PAUL GREEN	GEORGE WILSON
ISAAC GARFIELD GREER	MRS. L. A. WILSON

The Folklore Council was organized in September, 1935, to promote the cooperation and coordination of all those interested in folklore and to encourage the collecting and preserving, the study and interpretation, the active perpetuation and dissemination of all phases

*The three general officers named above are members of the Executive Committee.

†All members of the full Executive Committee are members of the Advisory Board.

of folklore. Folklore is defined by the Council as embracing all cultural aspects of folk life.

The Council represents a reorganization of The Institute of Folk Music, which was started in September, 1931, and which now becomes a division of the Council. It was found that there was need for a comprehensive organization to unify and stimulate membership of the former Institute of Folk Music.

The Institute of Folk Music

GLEN HAYDON, *Director*

JAN PHILIP SCHINHAN, *Associate Director*

Advisory Board

BASCOM LUNSFORD

HELEN ROBERTS

PAUL GREEN

CHARLES SEEGER

GEORGE HERZOG

LAMAR STRINGFIELD

GEORGE PULLEN JACKSON

CHARLES G. VARDELL

JOHN POWELL

FUNCTIONS OF THE INSTITUTE

As defined by the Council, folklore embraces all cultural aspects of folk life. In all lands the latter is closely allied to, and interwoven with, music in its various manifestations: as song, dance, or religious worship.

The Institute of Folk Music has varied, though related, aims:

1. The collection and preservation of indigenous material, as found in the various regions of the state.
2. The perpetuation of traditional songs, dances, and hymns through teaching traditional music in the schools and communities, as well as organizing county folk festivals and "old-time-music" conventions.
3. The scientific study, analysis, and interpretation of all the collected material.
4. The furtherance of composition based on folk music.

The Department of Music collaborates in the accomplishment of these ends, not only indirectly through its instruction in theoretical and applied music, but more particularly through courses in folk music and comparative musicology which are designed for the training of workers in this field.

INSTITUTE OF GOVERNMENT

ALBERT COATES, A.B., LL.B., *Director of the Institute of Government*

JOHN FRIES BLAIR, B.S., LL.B., M.A., *Research Professor in Public Law and Government*

HENRY WILKINS LEWIS, A.B., LL.B., *Research Professor in Public Law and Government*

VERNON LEE BOUNDS, LL.B., *Associate Research Professor in Public Law and Government*

WILLIAM MCWHORTER COCHRANE, A.B., LL.B., *Associate Research Professor in Public Law and Government*

GEORGE HYNDMAN ESSER, JR., B.S., LL.B., *Associate Research Professor in Public Law and Government*

PHILIP PALMER GREEN, JR., A.B., LL.B., *Associate Research Professor in Public Law and Government*

DONALD BALES HAYMAN, A.B., M.A., *Associate Research Professor in Public Law and Government*

ERNEST WILLIAM MACHEN, JR., A.B., J.D., *Associate Research Professor in Public Law and Government*

JOHN ALEXANDER MCMAHON, A.B., LL.B., *Associate Research Professor in Public Law and Government*

J. SHEPARD BRYAN, JR., B.S., LL.B., *Assistant Research Professor in Public Law and Government*

WILLIAM E. POE, B.S., LL.B., *Assistant Research Professor in Public Law and Government*

BASIL LAMAR SHERRILL, B.S., J.D., *Assistant Research Professor in Public Law and Government*

Advisory Board

Chairman, WILLIAM AUGUSTUS DEVIN, *Associate Justice, Supreme Court of North Carolina*

Representing the State Government:

W. KERR SCOTT, *Governor of North Carolina*

H. P. TAYLOR, *Lieutenant Governor of North Carolina*

HARRY McMULLAN, *Attorney General of North Carolina*

BRANDON P. HODGES, *Director of Local Government Commission*

R. GRADY RANKIN, *President Pro Tem of the North Carolina State Senate*

JULIAN R. ALLSBROOK, *Member of the North Carolina State Senate*

JOSEPH C. EAGLES, JR., *Member of the North Carolina State Senate*

W. FRANK TAYLOR, *Speaker of the North Carolina House of Representatives*

ADDISON HEWLETT, JR., *Member of the North Carolina House of Representatives*

KERR CRAIGE RAMSAY, *Member of the North Carolina House of Representatives*

Representing the County Governing Boards:

F. KNOX WATSON, *President of the N. C. Association of County Commissioners*

JOHN F. LONG, *Vice-President of the N. C. Association of County Commissioners*

CLARENCE PARKS, *Past President of the N. C. Association of County Commissioners*

Representing the City and Town Governing Boards:

BENJAMIN CONE, *President of the N. C. League of Municipalities*

ROY W. WILLIAMSON, *First Vice-President of the N. C. League of Municipalities*

J. RAY SHUTE, *Past President of the N. C. League of Municipalities*

The Institute of Government grew out of the classroom of a professor in the University of North Carolina in the 1920's. It developed into a program of action supported by city, county, state, and federal officials in North Carolina during the 1930's. It became an integral part of the structure of the greater University of North Carolina in January, 1942. Its advisory board consists of three city officials representing the city and town governing boards, three county officials representing the county governing boards, three members of the North Carolina Senate, three members of the North Carolina House of Representatives, and four state officials representing the state government. This governing board functions under the chairmanship of Justice William Augustus Devin, of the Supreme Court of North Carolina, who has been chairman of the Institute of Government Executive Committee from the beginning.

The Institute of Government unites public officials, private citizens, and students and teachers of civics and government in a systematic effort to meet definite and practical needs in North Carolina.

(1) It seeks to coordinate the efforts and activities of city, county, state, and federal officials who have been working for one hundred and fifty years on the same problems, for the same people, in the same territory, in overlapping governmental units, without coming together in systematic and continued cooperative effort—in the effort to eliminate needless duplication, friction, and waste.

(2) It seeks to bridge the gap between outgoing and incoming public officials at the end of their two- or four-year terms by organizing and transmitting our steadily accumulating governmental experience to successive generations of public officials—in the effort to cut down the lost time, lost motion, and lost money involved in a rotating governmental personnel.

(3) It seeks to collect and correlate for each group of public officials the laws governing their powers and duties now scattered through a multiplicity of books to the point of practical inaccessibility in constitutional provisions, legislative enactments (including public-local and private laws), municipal ordinances, and court decisions—in the effort to make them conveniently available for practical use.

(4) It seeks to collect and compare the different methods of doing similar things arising out of the initiative and resourcefulness of officials in a hundred county courthouses, three hundred city halls, and scores of state departments and federal agencies—in the effort to raise the standards of governmental performance by lifting the poorest practices to the level of the best.

(5) It seeks to bridge the gap between government as it is taught in schools and as it is practiced in city halls, county courthouses, state departments, and federal agencies.

(6) It seeks to provide the machinery for putting the people in touch with their government and keeping them in touch with it.

(7) It seeks to build a demonstration laboratory and clearinghouse of governmental information to which successive generations of officials, citizens, and students and teachers of government may go to see demonstrated in one place the methods and practices in government they would now have to go to one hundred counties, about three hundred cities and towns, and a score or more of state departments to find—and would not find practically available for use when they had reached these sources.

The Institute of Government is working with officials and citizens and the schools to achieve the foregoing objectives through comparative studies of the structure and workings of government in the cities, counties, and state of North Carolina, by staff members going from one city hall, county courthouse, state department, and federal agency to another, collecting, comparing, and classifying the laws and practices in books and in action. It is setting forth the results of these studies in guidebooks, demonstrating them in laboratories, teaching them in training schools, keeping them up to date, and transmitting them through a clearinghouse of governmental information for officials, citizens, and teachers of civics and government in the schools.

The School of Law and the Institute of Government

The School of Law and the Institute have embarked upon a program through which the School of Law and its students will receive the benefit of the specialized experience of the members of the Institute staff. From time to time they will, as Lecturers in Law, teach significant portions of the School of Law courses which have heretofore been taught by Mr. Coates—Criminal Law and Procedure, Municipal Corporations, Legislation, and Family Law. It is believed that this marks a significant development which will contribute much to the training of students for civic leadership and public office, as well as for professional competence.

The Department of Political Science and the Institute of Government

The Department of Political Science and the Institute of Government are co-operating in a program through which the Department of Political Science and its students will receive the benefit of the specialized experience of the Institute of Government and its staff. From time to time, as Lecturers in Political Science, they will teach particular courses and conduct seminars within the field of their particular competence, under the rules and regulations of the Graduate School.

The Department of Political Science believes that this marks a significant development which will contribute much to the training of its students for civic leadership and public service as well as for professional competence.

THE INSTITUTE FOR RESEARCH IN SOCIAL SCIENCE

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The Institute for Research in Social Science was founded in 1924 by Howard W. Odum, who served as Director for the first twenty years. Its relation to the central administration of the University is somewhat analogous to that of the schools and major divisions of the institution. Its research professors and research associates have the rank of professors and associate professors in the University, with all their privileges and obligations. Approximately one-half to two-thirds of their time is allocated to research with the remainder devoted to teaching in one of the social science departments. A Board of Governors is composed of representatives from the University administration, the social science departments, and other agencies within the University with which the Institute cooperates. This body determines basic policies, with details of administration delegated to the Director and staff. An Executive Committee of five members, elected from the

Board of Governors, acts for the Board between meetings and handles certain financial details for the Board.

Regionalism and the achieving of an understanding of the state and the South have been dominant themes in the research program.

Major functions of the Institute are: (1) to encourage and stimulate research in the social sciences at the University of North Carolina and to map out and plan for a research program through which facilities may be more abundant and coordination and integration more articulate; (2) to discover and develop research personnel and to serve as a training center for research and planning personnel and for teachers, achieving this purpose in collaboration with the several social science departments of the Graduate School; (3) to use a regional framework for developing methods of empirical research within a theoretical context; (4) to serve as a center for cooperation with other agencies toward the development and testing of procedures for making this research of more functional value.

The research staff of the Institute is composed of research professors, research associates, research fellows, and research assistants in anthropology, economics, history, political science, public administration, public health, regional planning, social psychology, sociology, and statistics. Graduate research assistants serve on annual appointment and generally carry two-thirds of a regular graduate study program. They assist in Institute research projects or serve in staff capacities under supervision, thereby securing valuable experience and training. In addition, part-time arrangements are made with other individuals, usually on the University faculty, in accordance with the research programs developed from year to year.

In cooperation with the University of North Carolina Institute of Statistics, the Institute sponsors a Social Science Statistical Laboratory with Daniel O. Price as director, and George E. Nicholson, Jr., as associate director. With its services available to all social science faculty members, the Laboratory (1) advises on all phases of quantitative methodology, using consultation from the staff of the Institute of Statistics; (2) provides editing, coding, and computing services; (3) serves in a liaison capacity with the sorting and tabulating units of the Institute of Statistics; (4) conducts research designed to develop and test new quantitative concepts and techniques.

The Central Office, in charge of the Assistant Director, coordinates secretarial and clerical services, personnel policies, fiscal operations, purchasing, travel arrangements, and editing and preparation of research manuscripts for publication.

The studies and materials of the Institute may be grouped in the following fields: general regional culture and economy; population; local government and administration; historical backgrounds; communication media; social-industrial relations; crime and criminal justice; social anthropology; social institutions; housing; community organization; public welfare; human geography; regional, state, and local planning; research interpretation. The chronologically arranged lists of publications and studies presented in the special issue of *Social Forces* commemorating the Sesquicentennial of the University (March, 1945, pp. 309-28), together with supplementary listings, 1944-1947, 1948, and 1949, show a total of 130 books and monographs, 467 articles, chapters in symposia, proceedings, etc., 277 manuscripts, by a total of 289 authors. These authors include not only the regular Institute staff and assistants over the twenty-five year period, 1924-1949, but also those authors with whom the Institute has undertaken cooperative research.

The Institute is housed in the third and fourth floors of Alumni Building. Facilities for staff and graduate students include, in addition to the Central Office and individual offices, a statistical laboratory, a drafting room, the departmental library of Sociology, Anthropology, Planning, and Social Work, and the large Laboratory-Workshop. This Laboratory-Workshop serves students and others as an exhibit hall, reference room, library, and general workroom in Southern regional development. Wall exhibits depict various phases of world, American, and Southern regions, and community development. Materials are available for study and research. The room is equipped for the use of and experimentation with audio-visual aids. Classes, workshops, and conference groups meet in the Laboratory-Workshop.

Additional information and application blanks for appointment to research assistantships may be obtained by writing to the Director, Institute for Research in Social Science, The University of North Carolina, Chapel Hill, North Carolina.

THE INSTITUTE OF LATIN AMERICAN STUDIES

STURGIS E. LEAVITT, *Director; Kenan Professor of Spanish*

FEDERICO G. GIL, *Assistant Director; Associate Professor of Political Science*

MABEL BARRETT JONES, *Cataloguer of Latin American Materials*

DAVID G. BASILE, *Assistant Professor of Geography*

HAROLD A. BIERCK, *Assistant Professor of Latin American History*

JOHN PHILIP GILLIN, *Professor of Anthropology and Research Professor in the Institute for Research in Social Science*

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The Institute of Latin American Studies, made possible through a grant from the Carnegie Corporation, brings together the courses relating to Latin America offered in various departments of the University. It offers an undergraduate major, which is in effect also a major in one of the recognized departments. The Institute also offers programs in Latin American studies for the master's degree (see statement in the offerings of the Department of Political Science, p. 336).

The undergraduate program of courses is intended to provide a basis for graduate work in Spanish, history, or political science. It will be of significant value to students who wish to enter the Foreign Service of the United States or engage in Latin American trade.

In the Latin American field the University of North Carolina has a rich collection of books, many of which were secured through a grant from the Rockefeller Foundation. This collection is now being expanded through the grant from the Carnegie Corporation. With this grant a considerable amount of recording equipment has been secured for intensive language instruction in Spanish and Portuguese.

THE INSTITUTE OF STATISTICS

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- PAUL DIXON MINTON, M.A. (Southern Methodist University), *Graduate Assistant in Social Science Statistical Laboratory, Chapel Hill*

Department of Mathematical Statistics
Chapel Hill

- HAROLD HOTELLING, Ph.D. (Princeton), *Professor and Head of Department*
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- HERBERT ELLIS ROBBINS, Ph.D. (Harvard), *Professor*
- SAMARENDRA NATH ROY, M.Sc. (Calcutta), *Professor*
- WASSILY Hoeffding, Ph.D. (Berlin), *Assistant Professor*
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 PAUL NOBLE SOMERVILLE, B.Sc. (Alberta), *Graduate Assistant*
 MEYER DWASS, M.A. (Columbia), *Fellow*

Department of Experimental Statistics
Raleigh

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 JACKSON ASHCRAFT RIGNEY, M.S. (Iowa State), *Head, Department of Experimental Statistics*
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JAMES C. SENTZ, B.S. (Pennsylvania State), *Graduate Assistant*

CLINTON P. WADE, B.S. (Louisiana), *Graduate Assistant*

The Institute of Statistics began with the establishment in 1941 of the Department of Experimental Statistics at the North Carolina State College of Agriculture and Engineering at Raleigh. From the beginning this department has been occupied with research at least as much as with teaching. It has collaborated extensively with other departments and with government research agencies in the design of agricultural and other experiments, as well as in calculation and interpretation of the results. This activity has continued on an enlarged scale and has been extended to a greater variety of problems and research activities involving applied statistics. In the course of this work, as in the constantly broadening applications of statistical methods elsewhere, many problems have been encountered which pertain not merely to the particular situations which gave rise to them but to a diversity of fields. For example, the combinatorial mathematics needed for the design of a field trial for efficient discrimination among the yields of several varieties of cotton may also be applied in medical research and in the sampling of human populations to obtain, more quickly and cheaply than by a complete enumeration, information needed for proper government administration. The same statistical formulae have been used to infer pre-history from skull measurements and to distinguish between plants of similar species.

These are problems of statistical method. They are parts of the general theory of statistics, which has in recent years taken on a coherent unity superseding the earlier heterogeneous ideas and formulae adapted to scattered specific needs. The theory of statistics, as now understood, includes not merely formulae and methods for combining observations and drawing inferences from them, but also the design of suitable experiments and projects for collecting data, so far as the same considerations apply to diverse fields of application. It uses a great deal of higher mathematics and rests essentially on the theory of probability. It also has relations with philosophy through the theory of inductive inference.

The recognition that problems of general statistical theory need the attention of specialists led to the establishment of the Department of Mathematical Statistics at Chapel Hill in 1946. This is a department of the Institute of Statistics, which was at the same time established by the Trustees as an all-University organization, and is also a department of the University, offering instruction primarily to graduate students. It supplies basic preparation for students aiming to teach statistics or to become statisticians on high levels. The training of such students includes work in both departments of the Institute of Statistics, in the Department of Mathematics, and in other University departments. Research in the theory of statistics is a leading concern of this department.

An extensive mathematical research project on Multivariate Statistical Analysis, sponsored by the Office of Naval Research, is carried on at Chapel Hill. This provides employment, training, and scope for exercising mathematical ingenuity for a number of advanced students.

The Institute of Statistics has collaborated since 1949 in the work of the Department of Biostatistics at the School of Public Health at Chapel Hill. In 1950 a Social Science Statistical Laboratory was established in Chapel Hill jointly by the Institute for Research in Social Science and the Institute of Statistics.

The Institute of Statistics aims to advance the theory and technique of statistics, not only through the research of its members and academic courses of lectures, seminars, and laboratory work, but also in many other ways. Frequent opportunities arise for employment of advanced students in statistical work, under the supervision of members of the faculty of the Institute, on cooperative projects for agricultural and other research. Public lectures by distinguished leaders in the field are held from time to time.

Summer sessions are held in certain years, with prominent leaders of statistics in the temporary faculties. Informal conferences, collaboration, and discussion on statistical problems are encouraged by definite measures. Members of the Institute of Statistics faculty participate extensively in the work of national and international statistical organizations and related scientific societies as presidents, vice-presidents, council and committee members, editors of journals, and referees. At the more important statistical meetings the Institute of Statistics of the University of North Carolina is represented by members of its staff, who present original research and prepared discussion, preside over sessions, take part in deliberations, and serve as officers.

Support of the work of the Institute is provided partly by the University, partly by the sponsors of various research projects, most of which are agencies of the federal government, and partly by a grant from the General Education Board.

Courses in mathematical statistics are listed in Part IV of this catalogue. A separate and fuller announcement is published covering the work of the Institute of Statistics both at Raleigh and at Chapel Hill.

Mathematical Statistics Fellowships

Two fellowships for advanced graduate students in Mathematical Statistics are available. Applications and supporting papers, including transcripts of academic records, must be in the hands of the Dean of the Graduate School on March 1 of the year in which tenure of the fellowship is to begin. The stipend is in each case \$1350 a year, together with free tuition. These fellows must have completed substantial studies in higher mathematics and should usually have had at least a year of graduate study in mathematical statistics.

PERSON HALL ART GALLERY

JOHN VOLNEY ALLCOTT, *Director*

GEORGE KACHERGIS, *Education Director*

LYNETTE WARREN, *Curator*

ARCHIE DANIELS, REBEKAH WALSTON, GEORGE BIRELINE, *Assistants*

Person Hall was built in 1795 as the University chapel and finished in 1797 by gift of General Thomas Person. It was restored in 1937 by government agencies and through the efforts and gift of Mrs. Katharine Pendleton Arrington. It is open free daily with a program of exhibitions and gallery talks.

Exhibitions, September, 1949—September, 1950, were: Sketches of Barry Lynn; the Modern School; Exhibition of work by University of North Carolina Summer Session Art Students; Rental Collection of Facsimile Reproduction; George Kachergis; New Directors in Modern Painting; Claude Howell, North Carolina Painter; North Carolina Artists; North Carolina Architects; Elements of Design; Stanley William Hayter; Twenty-Two Painters of the Western Hemisphere; Contemporary American Painting; 14th Annual University of North Carolina Art Student Exhibition.

Gallery Talks, September, 1949—September, 1950, were given by: Harriet Sanders, John Allcott, Eric Mendlesohn, Stanley William Hayter, Emma Lu Davis, Sibyl Moholy-Nagy, Kenneth Ness.

On permanent exhibition is the W. W. Fuller Collection of American and European Painting.

Person Hall Art Reference Library is housed in the gallery. The Library includes the Weil Collection of photographs of Italian Renaissance art, the Jacocks Collection of American prints, color reproductions of old and modern masters, and the Picture Rental Collection of framed color reproductions.

The Friends of Person Hall is a public organization founded in February, 1941, to help in the development of the arts in North Carolina by working with the Department of Art. Officers for 1950-1951, are:

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Assistants

Regular work in dramatic art at the University of North Carolina was initiated by Dr. Frederick H. Koch in 1918. The same year he founded The Carolina Playmakers. The theatre building which is now their home was remodeled and dedicated to their use in 1925.

The Playmakers serves the purposes of both a laboratory organization and a community theatre. The faculty of the Department of

Dramatic Art, assisted by students, is the working staff. The busy program of activities between September and June each year includes five major productions of old and modern dramas, classical and popular, and six experimental productions of new scripts, both one-act and full-length. Two major productions and two experimental productions are given during the summer session. The acting, scenery, lighting, costuming, stage-management, as well as much of the designing and directing for these plays, are done by students, principally those enrolled in the department. During the school year the Playmakers frequently tour one of their productions through towns in North Carolina and neighboring states, and each summer a large number of students take acting and staff engagements in off-campus productions, such as *The Lost Colony* and *Unto These Hills*.

Membership in the Playmakers is open to graduate and undergraduate students from all classes and divisions of the University and to citizens of the town and neighboring communities. Any person desiring membership can earn it simply by taking part, in any capacity, in the Playmakers' activities. Roles in the plays and positions on the production staffs are assigned through competition. Playmakers who complete a specified number of work units in at least two divisions of theatre activity are eligible to receive a mask (pin) award. Persons who do outstanding work, usually over a period of two or more years, are given a Special Award. The Roland Holt Silver Cup and the Joseph D. Feldman Award are presented to students for distinctive achievements in playwriting.

ESTABLISHED LECTURES

GORDON WILLIAMS BLACKWELL, *Chairman*

The John Calvin McNair Lectures

This lectureship was founded through a bequest, made by the Reverend John Calvin McNair of the class of 1849, which became available to the University in 1906. In the year 1908 the series of lectures was inaugurated by Francis H. Smith, Emeritus Professor of Physics in the University of Virginia. The plan and purpose of the lectures are stated in the will, which reads: "They shall employ some able Scientific Gentleman to deliver before all the students then in attendance at said University a course of Lectures the object of which Lectures shall be to show the mutual bearing of Science and Theology upon each other and to prove the existence and attributes, as far as may be, of God from Nature. The Lectures, which must be prepared

by a member of some one of the Evangelic denominations of Christians, must be published within twelve months after delivery, in either pamphlet or book form."

The Weil Lectures

During the year 1914-1915 an unendowed lectureship on American Citizenship was established by the University. The first incumbent was former president William Howard Taft, who lectured on "The Presidency: Powers, Duties, Obligations, and Responsibilities." Since that time this foundation, named the Weil Lectures on American Citizenship, has been permanently established through the generosity of the families of Mr. Sol Weil and Mr. Henry Weil, of Goldsboro, North Carolina.

THE UNIVERSITY LIBRARY

CHARLES EVERETT RUSH, *Director*

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The University Library contains more than 558,000 volumes. Most of its holdings are housed in the Main Library building, which in 1951 will provide doubly increased facilities for reading, study and investigation, as well as book capacity and professional service. Approximately 25,000 titles are added annually by purchase, gift, and

exchange. General reference resources are strengthened by 107,738 bound periodicals, 5,578 current serials, and exceptional sets of federal and state publications.

Special collections of importance include: The Hanes Foundation for the Study of the Origin and Development of the Book; the Southern Historical Collection of more than 2,000,000 manuscripts; the North Carolina Collection of 125,000 items relating to the state; together with unusual collections of American drama, Spanish drama, Shakespeare, Raleigh, Johnson, Shaw, Wolfe, folklore, Latin-American studies, Southern literature, Romance languages, World War I, maps, state publications, and books by and about the Negro. The Library has extensive bibliographical facilities, including several depository catalogues of other libraries. Frequent messenger service and other cooperative relationships with the libraries of Duke University, State College, and Woman's College make the holdings of these great collections exceptionally available, and active microfilm service miraculously brings all other libraries near at hand.

Other facilities for graduate study and research include special reading rooms, seminar and discussion rooms, and 525 individual carrels located in the air-conditioned bookstack, as well as the special collections serviced in the fifteen departmental libraries assigned to Art; Botany; Chemistry; Economics and Business Administration; Geology; Institute of Government; Law; Library Science; Mathematics and Physics; Medicine and Public Health; Music; Pharmacy; Psychology; Sociology, Anthropology, and Planning; and Zoology.

THE UNIVERSITY NEWS BUREAU

ROBERT WILSON MADRY, A.B., B.Litt., *Director*

JAKE WADE, A.B., *Associate Director*

ELIZABETH DIXON NAPIER, B.S., *Associate Director*

The University News Bureau is the official news distributing agency of the University of North Carolina at Chapel Hill. It is responsible for the gathering and dissemination of town and campus news to the several press associations, to the newspapers in North Carolina and throughout the country, and to the radio stations.

In the fall of 1918 the News Bureau was established with a full-time director for the first time in the history of the University. Prior to that, news stories from Chapel Hill were sent out by the professor of journalism and student correspondents.

Robert W. Madry was the first director of the University News Bureau which, when established, consisted of a desk and typewriter in Business Manager Charles T. Woollen's office in the Alumni Building.

Mr. Madry resigned a year later to enter the Columbia University School of Journalism. After doing newspaper work in Paris and New York, following graduation from Columbia, he returned in 1923 to become director of the News Bureau for the second time and has been in charge since then. Lenoir Chambers, now editor of the *Norfolk Ledger Dispatch*, was director of the News Bureau from 1919 to 1921, and Louis Graves, now editor of the *Chapel Hill Weekly*, was director and professor of journalism from 1921 to 1923.

There has never been any censorship by the University Administration of news distributed by the News Bureau.

THE UNIVERSITY OF NORTH CAROLINA PRESS

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The University of North Carolina Press was incorporated on June 12, 1922. The objects for which it was established are (1) to publish periodicals devoted to the advancement of learning and produced at the University by or under the direction of the faculty; (2) to publish catalogues, bulletins, and other documents pertaining to the University and its various schools and departments; and (3) to promote generally, by publishing deserving works, the advancement of the arts and sciences and the development of literature.

The Press was established under the authority of the Board of Trustees of the University. It is a non-stock corporation, financed in part by the University, and its policies are determined by a Board of Governors, acting under the authority of the Chancellor and the President.

The Press has published twenty-five to thirty books per annum during recent years. The Press also publishes the following periodicals: *The Journal of the Elisha Mitchell Scientific Society*; *Studies in Philology*; *The James Sprunt Studies in History and Political Science*; *The High School Journal*; *Social Forces*; *The North Carolina Law Review*; *The University of North Carolina Extension Bulletin*; *The Library Extension Publication*; *The University of North Carolina News Letter*; *The University of North Carolina Record*.

The Press offices are located in Bynum Hall. The following agents represent the Press: W. S. Hall and Company, Continental Europe; Oxford University Press, books in the British Isles, India, and Pakistan; Cambridge University Press, periodicals in the British Isles; Henry M. Snyder and Company, world-wide representative, except in territories otherwise served; The Ryerson Press, Canada.

A complete list of publications issued by the Press will be supplied without charge to any address on request. A descriptive catalogue is also available for sale in paper and clothbound editions.

THE INSTITUTE OF FISHERIES RESEARCH

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WILLIAM ANDREW ELLISON, JR., M.A., *Director*

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*Died, January 24, 1951.

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WILLIAM ANDREW ELLISON, JR., M.A., <i>Fisheries Specialist and Associate Professor</i>
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ALFRED CARTER BROAD, A.B., <i>Scientific Assistant and Instructor</i>
EDWARD LEIGH WINSLOW, JR., B.Sc., <i>Assistant in Oyster Investigations</i>
HORACE G. LOFTIN, JR., <i>Temporary Assistant, 1950</i>
CHARLES F. POWERS, <i>Temporary Assistant, 1950</i>

The Institute of Fisheries Research was established by action of the Board of Trustees September 29, 1947. It is operated by the University with the collaboration of the Department of Conservation and Development. The function of the Institute is to make practical application of biology and other sciences, including economics and marketing, to the problems of the fisheries of North Carolina. It endeavors through scientific research to arrive at a better practical understanding of the conditions that impede development of the state's marine fisheries and of the principles that should govern the application of measures of conservation. The establishment of the Institute rests, then, on the belief that not only those engaged in fisheries and related industries but also the state as a whole could profit more from our marine resources.

It is believed that proper rules of conservation of fisheries resources are not best arrived at by mere hit-or-miss methods or by the sincerest effort to satisfy now one and now another group having special interests and necessarily limited knowledge. There is needed, as seems generally recognized, more basic knowledge concerning our resources. Facts are wanted, rather than casual theories, as to what actually governs the abundance of fishes and shellfishes, which show continual changes with decrease and increase of numbers. Understanding is wanted concerning what directs the movements of particular groups

*Died, January 24, 1951.

of fishes, so that desirable or undesirable kinds are here or there, from season to season and from year to year, in unpredictable fashions. This, in turn, means that more should be known about the underlying physical, chemical, and biological conditions and their changes, reflected in fluctuations of basic food supplies, salinities, temperatures, currents, stream discharge, and oceanic circulation. It is assumed also that properly conducted scientific and economic studies may be helpful in promoting efficient and more profitable practices in exploitation, processing, and marketing of fishery products.

The interest of the University and the state in applications of marine biology and in fisheries began more than half a century ago with the establishment of a summer laboratory at Beaufort through the Department of Biology and active cooperation from the State Geological and Economic Survey, partial predecessor of the present Department of Conservation and Development. This laboratory developed into the Fisheries Biological Laboratory operated by the federal government. Despite its services and potential usefulness, experience has proven that this laboratory cannot meet the full practical needs of the state.

More recently, the University has again interested itself in the problems of fisheries and, with the effective cooperation of the Department of Conservation and Development and its Division of Commercial Fisheries, there has been established at a favorable location near Morehead City a laboratory for fisheries research. Its inauguration was made possible by a four-year grant from the Knapp Foundation, Inc., of New York, conditioned on matching contributions from the state. The grant from the Knapp Foundation is "A tribute to Joseph P. Knapp's lifelong interest in the betterment of mankind." The matching on the part of the state for the first biennium was accomplished by giving the Institute direction of an appropriation made by the legislature of 1947 for a survey of off-shore shrimping grounds and a part of the appropriation from the same legislature for the rehabilitation of the oyster and other shellfish. The cooperation of the Commission for the Survey of Shrimping Grounds and of those concerned with the oyster industry has made this possible. The last legislature made an appropriation through the Department of Conservation and Development, to match the grant to the University from the Knapp Foundation for the biennium 1949-51.

Meantime, with financial aid from an alumnus, Mr. George Lurcy of New York, matched by a grant from the General Education Board, there had been undertaken a Survey of Marine Fisheries of North Carolina. The report of the Survey was published in January, 1951.

The Institute will contribute to the educational program of the University by offering practical training and guidance for graduate students.

Courses in hydrobiology and fishery science are described in Part IV of this catalogue under Department of Zoology (page 382).

THE MOREHEAD BUILDING AND PLANETARIUM

Gift of John Motley Morehead (Class of 1891), the Morehead Building contains the Memorial Rotunda, Faculty Lounge, University Room, and a dining room and kitchen for official functions of the University. Among the paintings from the Genevieve B. Morehead collection permanently hung in the Rotunda are Rembrandt's portrait of his sister and many other valuable works of famous artists. Two large galleries flanking the Rotunda provide space for temporary exhibitions.

The scientific portion of the building contains one of only two large orreries in the world, as well as the sixth Zeiss Planetarium installation in the Western Hemisphere, and the only one on a university campus. A realistic appearance of the sky as seen by the unaided eye is projected by the great instrument onto the sixty-eight-foot stainless steel dome of the chamber, in which are located in circular rows 490 seats for visitors. Spectacular demonstrations presented since the Morehead Planetarium opened on May 10, 1949, have included "Star of Bethlehem," "Trip to the Moon," "Easter, the Awakening," and many others. Public demonstrations are given every evening and at Saturday and Sunday matinees, and the program is changed every three or four weeks. In the first year of operation, more than 175,000 visitors saw showings of the Morehead Planetarium.

The equipment is also used for University classes in astronomy and navigation, and special week-day showings are arranged for public school children of North Carolina.

Part Six

DEGREES CONFERRED

DEGREES CONFERRED AUGUST 30, 1949

BACHELOR OF ARTS

Holcombe Chambers Adams	Mildred Cherry Hill
Blan Coolidge Aldridge	William Gilliam Hill
William Preston Allan	William Collins Hodges
William Preston Anderson	Matthew Marshall-Neil Hodgson
Wilma Clair Anderson	Katharine Lewis Holding
DeWitt Ray Austin, Jr.	Melvin Shepard Horowitz
Barry Baker	Mary Gwendolyn Howard
Samuel Ellison Belk	Randall Elizabeth Hudson
Martha Hunter Bell	Stanton Vance Huffman
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Lowell Ellis Brittain	Charles Crouch Kauffman, Jr.
Cecil Lazell Brown	Victor Julian Kelley
James Duncan Bullard	Graham Cornelius Kelly
Charles Haywood Campbell	William Joseph King
Gran Permania Childress	David Landy
Ann Clark	Ferd Olbert Lawson, Jr.
John Strother Clayton	Claudia Dykes Lee
Richard Marshall Clegg	Edwin White Litaker
Lucile Lastrapes Conly	Ann Harris Long
Joseph Raphael Cruz	Thomas Maxs Lowe
William Grandy Curtis	Joan Lucas
Alton Earl Dail	Dean Yarrell Matthews
George Edgar Dawson, Jr.	Joseph Franklin Maurice
Lucy Ellen Denny	William Marvin McCauley
Sybil Drake	Van Patrick McClellan, Jr.
William Holt Duncan	Katherine Clifton McMillan
Alan Edelman	Yancey Leonard Medlin
Nona Hackney Edge	Walter Clinton Merritt
Charles Taylor Enman	Lillian Vernell Messicks
Kent Eric Erickson	Earl Lingard Michell
Marjorie Louise Evans	Charles Rudolph Milton
Joseph Cox Fidler	Edward Clarence Mitchem, Jr.
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James Sumner Riddick Francis	James Donald Moore
Charles Frederick Fussell	Allen Duke Morgan, Jr.
Alfred Joseph Green	Emanuel Raymond Morris
Samuel Royston Greene, Jr.	Morgan Phillip Morris
William Van Grimes, Jr.	Joseph Elbert Murphy
Harry Hobart Hall	Marjorie Angela Norris
Raymond Oscar Halvorsen	Vane Curtis Parker
George Neville Harrell, Jr.	Martha Dan Payne
Joseph Wagner Harrer	Joyce Lewis Peterson
Frank Sylvester Hassell, Jr.	John Eugene Pipes
James Hedgpeth	

Robert Johnston Plumb
 Melvin Podell
 Barbara Ann Pope
 Sidney Wallace Ray
 James Clayton Rittenhouse
 Jean Robinson Roberts
 Luther Frank Rogers
 Howard Edwin Rollman
 Vernon Lupton Sawyer
 Christopher James Shay, Jr.
 Arnold Pinckney Sherrill
 Sander Albert Siegel
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 Herman Lindsey Stricklin
 Rachael DuVal Taylor
 Norris Watson Timmerman
 Jerry Frederick Tools
 Bobby Jean Vanhoy
 Theodore Raleigh Wall
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 Mildred Parker Welch
 William Bryant Wilder
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 James Byron Zalanka

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 John Wesley Gillis
 Donald Bernard Ippock

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 Albert Spencer Myrick
 Lawrence Talmadge Queen, Jr.
 Herbert Ravenel Sass, Jr.
 Heath Hartsell Wiggins

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 Alger Bryan Martin, Jr.
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 Harry Clifford Northrop, Jr.
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 Lyman Griffis Worthington
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 Margarette Campbell Davis

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 Kathryn Phelps Mitchell
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 Florence Graves Turner
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 Jenny Beatrix Blanton
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 Dina Taylor Boyles
 Roy Ingram Boyd
 Erma Louise Bridges
 Robert William Broome
 Wilbur Lloyd Carr
 Sarah Cornelia Clapp
 William King Cromartie
 Lucy Moseley Dameron
 Cyrus Melvin Edson
 Ralph Anderson Glenn
 Nellie Inez Henderson

Willie Mae Holton
 Clark Hubert Hurd
 Frances Anne Jones
 John Fawcett Kenfield, Jr.
 George B. Lester
 Eileen Stikeleather McKinney
 Thomas Vernon Moseley
 Allen Kimrey Perkins
 Rachel Sophronia Perkins
 Harold James Pope
 Rufus Leroy Rhyne
 Dallas Evelyn Sink
 Paul Newton Sowell
 Frances Baker Stone
 Sue Ratchford Suman

Anne Jackson Thatcher
 George Logan Thompson, Jr.
 Neta Bridges Wall
 Lindsay Anderson Waters

Percy Leonard Weeks
 Paul Wills
 Henry Franklin Wright

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 Geneva Shaffer Buscher
 Gay Wilson Currie
 Adeline M. Dipene
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 Mary Virginia Hayes
 Gaynelle Hogan

Lynford Llewellyn Keyes
 Ira Jewel Langley
 Salud Miravalles Rafols
 Teodora Valenzuela Tiglao
 Robert Irving Wakeley
 Phoebe Williams Witherspoon

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 Ben Ansley, Jr.
 Ethel Ashley
 Bruce Henry Farley

Charles Vincent Owens
 Sonia Jane Portchmouth
 Louise Lea Schwarcz
 Adam James Thomas

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Randy Haskell Hamilton

Daniel Sylvester Martin

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 Anna Hankin Leder

Thomas Charles McGinnis
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 James William Little

Davis Bryan Powell, Jr.

MASTER OF SCIENCE

George William Crawford
 Charles Louis Johnston, Jr.

William Johnson Sheffield

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 Blondelle Googe Antley
 Clarence William Ballard
 Hal Lackey Ballew
 Mildred Simone Bassett
 Joseph Sullivan Bolt
 Earle Wingo Brockman, Jr.
 John Caruthers Broderick
 Robert Hawes Butman
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 Sidney Mathias Baxter Coulling III
 Marilyn Crawford
 James Earl Danielely
 Judson Ross Dicks
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 Marcus Wayland Floyd
 Richard Jerome Geehern

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 Newton Hardy Henry
 Ernest Walter Hooper
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 Virginia Jenkins
 Theron Paul Jones
 Hannes Jonsson
 Mary Elizabeth King
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 Franklin Davenport Laurens
 John Joseph Lawler
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 Florence McCulloch
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Marcus Lane Oliver	Margaret Maud Thomas
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Louis DuBose Quin	Mary Herbert Trapnell
Ernest Lloyd Rhodes	Leander Shelton Van Landingham
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William Gray Sasser	James William Wall
Hassell Brantley Sledd	Annye Elizabeth Welch
Walter Gray Somerville, Jr.	John Foster West

DOCTOR OF PHILOSOPHY

Salah El Abd, *Sociology*

Thesis: The Tennessee Valley Authority: Regional Study, Analysis, and Application.

James Homer Crawford, Jr., *Chemistry*

Thesis: Electronic Processes in Pure and Manganese Activated Zinc Fluoride.

James Clifton Eaves, *Mathematics*

Thesis: On Quasi-k, 1—Commutative Matrices.

Melvin Eisner, *Physics*

Thesis: Pseudovector Meson Field with Strong Coupling.

Felton Dale Freeman, *Sociology*

Thesis: Theoretical Bases for Action Programs in Race Relations.

Willis Cowan Gates, *Music*

Thesis: The Literature for Unaccompanied Solo Violin.

Earl Blair Gerheim, *Physiology*

Thesis: Staphylococcal Coagulation and Fibrinolysis.

Dewey Wesley Grantham, Jr., *History*

Thesis: Hoke Smith: Representative of the New South.

William Barnett Guerrant, Jr., *Chemistry*

Thesis: The Reaction of Organic Acids with Their Corresponding Nitriles.

Mary Francis Gyles, *History*

Thesis: Egyptian Royalty, 663-323 B.C.

Daniel Kirk Hamilton, *Geology*

Thesis: The Occurrence of Ground Water in the Inner Bluegrass Region, Kentucky.

James Steven Johnson, Jr., *Chemistry*

Thesis: Electron Traps in Luminescent Solids.

Rosemary May Kent, *Public Health*

Thesis: An Evaluation of the Health Program of the American Cancer Society, North Carolina Division, Inc.

Albert Lake Lancaster, *German*

Thesis: The Language of Jörg Wickram's *Galmy* and a Comparison of it with that of *Der Jungen Knaben Spiegel*.

James Edward Land, *Chemistry*

Thesis: The Activity of Sulfuric Acid in Water-Isopropanol Mixtures at 25 degrees C.

Gwynn Spencer McPeck, *Music*

Thesis: The Windsor Manuscript, British Museum, Egerton 3307.

Wilton Elman Mason, Jr., *Music*

Thesis: The Lute Music of Sylvius Leopold Weiss.

William Walker Parkinson, Jr., *Chemistry*

Thesis: The Optical Absorption of Manganese Activated Fluoride Phosphor.

Woodrow Wilson Pate, *Economics*

Thesis: The Social Security Act and the Nonproductive Age Groups in the South.

Paul Miller Pitts, Jr., *Chemistry*

Thesis: Reactions in Liquid Sulfur Dioxide.

Allan Rene Richards, *Political Science*

Thesis: War Labor Boards in the Field.

Burton Lester Travis, *Physiology*

Thesis: Protolytic Enzymes and Platelets in Relation to Blood Coagulation.

William Newton Turner, *Geography*

Thesis: The North Carolina Sandhills.

DEGREES CONFERRED JUNE 5, 1950

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William Francis Adcox	Charles Ashby Ballance
Sherman Adler	Robert D. Barbour
Theodore Adler	Mark Virgil Barker, Jr.
Henry Charles Adley	David Collin Barnes, Jr.
Levi Kennedy Alderman, Jr.	Harry L. Barnhill
Kathryn Stewart Altizer	Joseph Lentz Barrier
David Maurice Anderson, Jr.	Barbara Neale Barrow
Harold Lee Andrews (with honors in Music)	Paul Joseph Baschon, Jr.
Samuel Weldon Andrews	David Herring Beard
William Edward Anthony	Charles Henry Beck
Elinor Lawrence Ardrey	Roderic Cortland Bellamy
Jo-Anne Armstrong	Frances Yarborough Bickett
Betty Ann Arnold	Nancee Woodruff Black
Robert Miller Arthur	Doctor Frederick Blackwell, Jr.
Chester Theodore Ashby	Jack Wanda Blaylock
Mett Bagley Ausley	Milton Clay Bliss
Charles Roberts Bailey	Lewis Rogers Bloom
Glenn Boyette Bailey	James Davis Blount, Jr.
	Edwin Henry Bolander

Lyn Bond, Jr.
 Joe Luther Bookout
 Samuel Vernon Boone, Jr.
 Joseph Francis Bowen, Jr.
 Mary Margery Bradley
 Thomas Samuel Bradshaw
 Jack Rudisill Brantley
 Lewis Palmer Bratton
 Lewis Talmadge Breuninger, Jr.
 John Mickle Brewer, Jr.
 Paul Hamer Brigman
 Jesse Colvin Brown, Jr.
 Musette Kitchin Brown
 Caroline Greer Bruner
 Thomas Sherman Bryan
 Edward Albert Bryant
 Shasta Monroe Bryant
 Woodrow Bryson
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 Peter Talmadge Burks
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 Ruth Hamilton Butler
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 Josephine Ann Carpenter
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 Lewis Dean Cassell
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 Charles Sumner Chapin
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 Fogle Chandler Clark
 George Thomas Clark
 Reber Fields Clark, Jr.
 Curtis Sutherland Clauson
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 Jack Alspaugh Clinard
 Leland Grant Close
 Harvey Jay Cohen
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 Mary Amelia Copenhaver
 Odell Joseph Councilman
 Treadwell Downing Covington
 William Fotherall Potter Cox, Jr.
 John Henry Crabtree, Jr.
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 Margaret June Crockett
 Nancy Curtis
 Ruby-White Arnold Darnell
 Patricia Hardwick Daughtry
 Dwight Groome Davis, Jr.
 Nina Darline Davis
 Russell Reid Davis
 Diane Gere Deppen
 Norma Jean Dew
 Starke Spotswood Dillard, Jr.
 Seymour Christopher Dillon
 Elizabeth Shoop Dixon
 James Douglas Dixon
 Clifford Franklin Doll
 Audrey Patricia Donnan
 Samuel Ernest Douglass, Jr.
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 Robert Jones Dunnagan
 George Durant
 Elizabeth Virginia Eaddy
 Anderson Cabell Early II
 Hugh Westcott Eberly
 Frank Lawson Echols
 Edgar Everette Edwards
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 William Richard Elliott
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DOCTOR OF PHILOSOPHY

George Cotton Smith Adams, *Romance Languages*

Thesis: Words and Descriptive Terms for 'Woman' and 'Girl' in French and Provençal Border Dialects.

Raghu Raj Bahadur, *Mathematical Statistics*

Thesis: On a Class of Decision Problems in the Theory of R Populations.

James Bruce Ballentine, *Chemistry*

Thesis: Surface Tension Studies on Some Condensation Products of Sodium Fluorene—2 Sulfonate and Related Compounds.

William Francis Belcher, Jr., *English*

Thesis: A Study of the *British Apollo* (1708-1711).

Laura Elizabeth Bland, *Classics*

Thesis: *Aulularia Sive Querolus*: A Translation with Introduction and Notes.

Gerhard Max Brauer, *Chemistry*

Thesis: Second-Order Transition Temperatures and Specific Refractivities of Plastics and Elastomers.

George Jennings Bryan, *Chemistry*

Thesis: Crystal Counter Investigations and Alternating Current Photoconductivity.

Francis Worthington Chapman, Jr., *Chemistry*

Thesis: Reactions of Anhydrous Zirconium Tetrabromide with Organic Esters.

Mariel M. Daniel, *Sociology*

Thesis: Influence of Selected Occupational, Racial and Residence Factors upon Intelligence: A Cultural-Intellectual Study of North Carolina.

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Thesis: The *Cuadro de Costumbres* in Colombia (1838-1880).

John Barry Dwyer, *English*

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Abbott Lamoyne Ferris, *Sociology*

Thesis: North Carolina Trade Centers, 1910-1940: A Study in Ecology.

Albert Sidney Foley, *Sociology*

Thesis: The Catholic Church and the Washington Negro.

Anthony Keith Hinds, *Mathematics*

Thesis: On the Second Order Differential System.

James Roland Hodges, *English*

Thesis: A Study of the *Female Spectator* (1744-1746).

Robert Earl Kaske, *English*

Thesis: The Nature and Use of Figurative Expression in *Piers Plowman*.

Spencer Bidwell King, Jr., *History*

Thesis: Selective Service in North Carolina in World War II.

- Ernest McPherson Lander, Jr., *History*
 Thesis: Manufacturing in Ante-Bellum South Carolina.
- Jean Lemon Lee, *Romance Languages*
 Thesis: An Etymological Dictionary of the Obwaldisch Dialect of Raeto-Romance.
- Nathaniel Macon, *Mathematics*
 Thesis: Some Theorems on the Approximation of Irrational Numbers by the Convergents of Their Continued Fractions.
- Charles Manning, *English*
 Thesis: American Literary Culture, 1865-1886, by Selected Critics.
- William Knight Miller, *Chemistry*
 Thesis: The Ultraviolet Absorption Spectra of the Monofluoropyridines and the Monofluoroquinolines and the Determination of the Dissociation Constants of the Fluoroquinolines from the Spectrophotometric Measurements.
- John Marshall Nichols, *Physiology*
 Thesis: The Effect of Exercise on the Excretion of Uric Acid.
- Morton Rubin, *Sociology*
 Thesis: Plantation County.
- Otis Lester Shealy, *Chemistry*
 Thesis: Synthesis and Studies of the B-Dimethylaminoethyl Esters of Some Organic Dithio Acids.
- Newton Rosser Smith, *Chemistry*
 Thesis: Preparation and Polymerization of Substituted Styrenes.
- Lala Carr Steelman, *History*
 Thesis: The Public Career of Augustus Octavius Bacon.
- William Emile Strickland, *Romance Languages*
 Thesis: The Speech of the Aubigny-Sur-Nere (Cher) Region.
- Priscilla Warren Sutherland, *Classics*
 Thesis: Quintilian in the Medieval Florologia.
- William Owen Sheppard Sutherland, Jr., *English*
 Thesis: A Study of the *Prompter* (1734-1736).
- Claude Edward Teague, Jr., *Chemistry*
 Thesis: The Preparation of Some Heterocyclic Fluorine Compounds.
- Louis Foster Theiling, Jr., *Chemistry*
 Thesis: Synthesis of Some 2-Guandino-4-Methylquinazoline Derivatives as Possible Antimalarials.
- Shantilal Amidas Vora, *Mathematical Statistics*
 Thesis: Bounds on the Distribution of Chi-Square.
- Le Roy William Weil, *Education*
 Thesis: A Study of the Personnel and Facilities Offered in the Teaching of Music Education in the Senior Colleges and Universities of North Carolina.

Jean Paul Williams, *Chemistry*

Thesis: Potential Studies with the Silver-Silver Chloride Electrode in Aqueous Solutions of Hydrochloric Acid and d-Glucose at 250 degrees C.

Willis Carl Wooten, Jr., *Chemistry*

Thesis: Some Contributions to the Chemistry of Phenanthridine.

HONORARY DEGREES

DOCTOR OF LAWS

Frank Porter Graham

Osborne Bennett Hardison

William Thomas Sanger

William Kerr Scott

Goodrich Cook White

Louis Booker Wright

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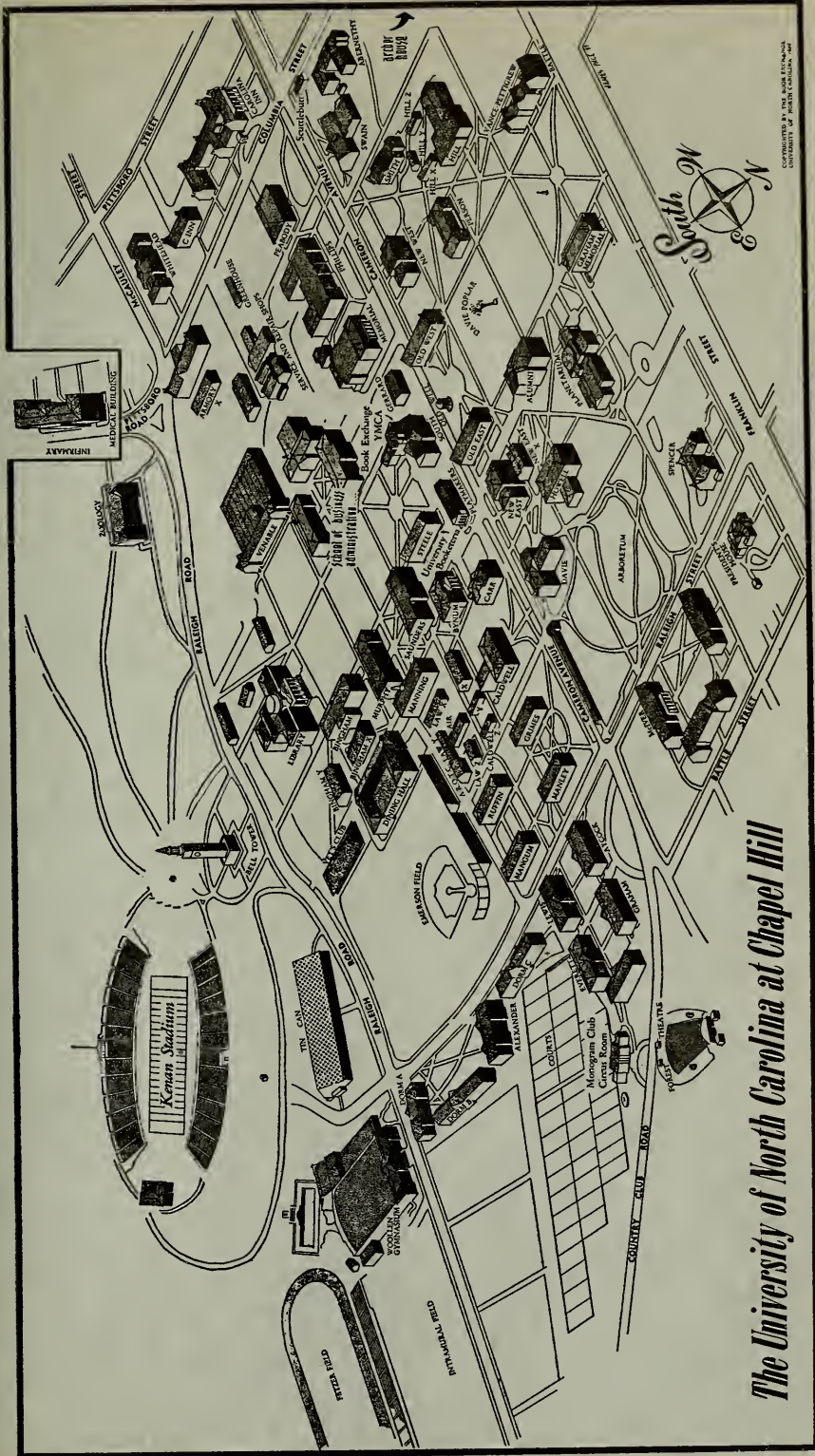
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