North Carolina State College
of
Agriculture and Engineering
of
The University of North Carolina

BASIC DIVISION
THE SCHOOL OF AGRICULTURE AND FORESTRY
DEPARTMENT OF EDUCATION
THE SCHOOL OF ENGINEERING
THE TEXTILE SCHOOL
GRADUATE INSTRUCTION
COLLEGE EXTENSION
THE SUMMER SCHOOL

1937-1938

APRIL, 1937
STATE COLLEGE STATION
RALEIGH

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COLLEGE CALENDAR

1937-38

1937

FIRST TERM

Sept. 9, Thursday, 3:00 p.m. . . College Faculty Meeting
Sept. 10, Friday. . Registration of Freshmen
Sept. 13, 14, Monday and Tuesday . Admission of students from institutions presenting credits for advanced standing
Sept. 15, Wednesday. . *Registration of Sophomores, Juniors, Seniors, and Graduate Students
Sept. 16, Thursday. . Class work begins
Sept. 25, Saturday, 12:00 Noon. . Last day in the first term for registration or for changes in registration
Nov. 1, Monday. . Mid-term reports due
Nov. 11, Thursday (not a holiday) . Observance of Armistice Day
Nov. 25, Thursday. . Thanksgiving holiday
Dec. 15, Wednesday. . First term ends

1938

SECOND TERM

Jan. 3, Monday. . *Second term registration of all students
Jan. 4, Tuesday. . Class work begins
Jan. 8, Saturday, 12:00 Noon. . Last day in the second term for registration or for changes in registration
Feb. 7, Monday. . Mid-term reports due
Mar. 17, Thursday. . Second term ends

THIRD TERM

Mar. 22, Tuesday. . *Third term registration of all students
Mar. 23, Wednesday. . Class work begins
Mar. 28, Monday. . Last day in the third term for registration or for changes in registration
Apr. 13, Wednesday (not a holiday). . Observance of Scholarship Day
Apr. 25, Monday. . Mid-term reports due
June 3, Friday. . Third term ends
June 5, 6, Sunday and Monday. . Commencement Exercises
June 14, Monday. . *Registration for Summer School
June 15, Tuesday. . Class work begins
July 23, Friday. . Summer term ends

Final examinations are held on the five school days preceding the end of each term.

*An extra fee is charged for registration after the day designated for registration.

1937

JANUARY

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W. H. WOOLARD	Greenville	Pitt

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B.S., Wake Forest College; M.A., University of Pennsylvania.

EDWARD WILLIAM BOSHART, *Professor of Education (Industrial Arts and Vocational Guidance).*
B.S., M.A., Columbia University.

CAREY HOYT BOSTIAN, *Associate Professor of Zoology and Entomology.*
A.B., Catawba College; M.S., Ph.D., University of Pittsburgh.

CHARLES RAYMOND BRAMER, *Assistant Professor of Civil Engineering.*
B.S., E.M., Michigan College of Mining and Technology.

WILLIAM STALEY BRIDGES, *Assistant Professor of Mechanicial Engineering.*
B.E., M.S., N. C. State College.

HERMON BURKE BRIGGS, *Professor of Engineering Drawing and Descriptive Geometry.*
B.E., M.E., N. C. State College.

BENJAMIN FRANKLIN BROWN, *Dean of the Basic Division.*
B.S., Northwestern University.

ROBERT RODERICK BROWN, *Assistant Professor of Electrical Engineering.*
B.S., University of Texas; M.S., Massachusetts Institute of Technology.

THOMAS EVERETTE BROWNE, *Director of the Department of Education.*
A.B., Wake Forest College; A.M., Columbia University.

WILLIAM HAND BROWNE, JR., *Professor of Electrical Engineering.*
A.B., P.A.E., B.E., Extra Ordinem, Johns Hopkins University.

MURRAY F. BUELL, *Instructor in Botany.*
B.A., Cornell University; M.A., Ph.D., University of Minnesota.

ROBERT C. BULLOCK, *Assistant Professor of Mathematics.*
A.B., M.A., University of North Carolina; Ph.D., University of Chicago.

CHARLES SMITH CAFFERY, *Professor of Military Science and Tactics.*
Colonel, Infantry, U. S. Army; Graduate, U. S. Military Academy, West Point, N. Y.; Graduate, Advanced Course, Infantry School, Fort Benning, Ga.; Graduate, Ecole Superieure de Guerre, France; Graduate, Command and General Staff School, Fort Leavenworth, Kan.; General Staff Corps Eligibility List.

CARLYLE CAMPBELL, *Professor of English.*
A.B., A.M., Wake Forest College; LL.D., University of South Carolina.

HUGH LYNN CAVENESS, *Assistant Professor of Chemistry.*
A.B., Trinity College; M.A., Duke University.

JOHN WESLEY CELL, *Assistant Professor of Mathematics.*
B.A., M.A., Ph.D., University of Illinois.

THORNTON CHASE, *Assistant Professor of Military Science and Tactics.*
Graduate, Infantry School, Fort Benning, Ga.; Major, Infantry, U. S. Army.

JOSEPH DEADRICK CLARK, *Professor of English.*
B.A., Columbia University; M.A., Harvard University.

JOHN MONTGOMERY CLARKSON, *Assistant Professor of Mathematics.*
B.A., Wofford College; M.A., Duke University; Ph.D., Cornell University.

SHELDEN L. CLEMENT, *Associate Professor of Agricultural Economics.*
B.S., Mississippi Agricultural College; M.S., N. C. State College.

CLINTON B. CLEVENGER, *Acting Professor of Soils.*
B.S., M.S., Ohio State University; Ph.D., University of Wisconsin.

WILLIAM LEANDER CLEVENGER, *Professor of Dairy Manufacturing.*
B.S. in Agriculture, Ohio State University; M.S., N. C. State College.

EDWARD LAMAR CLOYD, *Dean of Students, Secretary of the Faculty.*
B.E., M.S., N. C. State College.

JAMES KIRK COGGIN, *Associate Professor of Education.*
B.S., N. C. State College; M.S., Cornell University.

LEON EMORY COOK, *Professor of Agricultural Education.*
A.B., B.S. in Agriculture, M.S., Cornell University.

ALBERT H. COOPER, *Assistant Professor of Chemical Engineering.*
B.S. in Ch.E., University of Tennessee; M.S. in Ch.E., Massachusetts Institute of Technology; Ph.D., Michigan State College.

JOHN BEE COTNER, *Professor of Plant Breeding.*
B.Pd., Missouri State Teachers' College; M.S., N. C. State College; Ph.D. Cornell University.

WILLIAM HOLDEN DARST, *Professor of Agronomy.*
B.S., Ohio State University; M.S. in Agriculture, Cornell University.

ROY STYRING DEARSTYNE, *Professor of Poultry Science.*
B.S., University of Maryland; M.S., N. C. State College.

LEONIDAS POLK DENMARK, *Instructor in Engineering Drawing.*
B.E., N. C. State College.

JOHN BEWLEY DERIEUX, *Professor of Theoretical Physics.*
B.S., M.A., University of Tennessee; Ph.D., University of Chicago.

ALFRED ALEXANDER DIXON, *Professor of Physics.*
B.S., Guilford College; M.A., Haverford College; Ph.D., Cornell University.

CHARLES GLENN DOAK, *Associate Professor of Physical Education.*

JAMES MATTHEW EDWARDS, JR., *Assistant Professor of Architectural Engineering.*
B.F.A., Yale University.

HENRY CLYDE EYSTER, *Instructor in Botany.*
A.B., Bucknell University; A.M., Ph.D., University of Illinois.

CHARLES EDWARD FELTNER, *Instructor in Mechanical Engineering.*
B.S., Virginia Polytechnic Institute; S.M.C.E., University of North Carolina.

**JOHN CLYDE FERGUSON, *Instructor in Mechanical Engineering.*
B.S., N. C. State College.

HILBERT ADAM FISHER, *Professor of Mathematics.*
M.S., N. C. State College; graduate United States Naval Academy; graduate United States Submarine School.

CLIFFORD AUTEN FLANDERS, *Instructor in Chemistry.*
B.S., M.A., Wagner College; M.A., Columbia University.

JAMES FONTAINE, *Assistant Professor of Civil Engineering.*
B.E., M.S., N. C. State College.

GASTON GRAHAM FORNES, *Instructor in Drawing.*
B.S., M.S., N. C. State College.

GARNET WOLSEY FORSTER, *Professor of Agricultural Economics.*
B.S., Cornell University; M.S., Ph.D., University of Wisconsin.

ALVIN MARCUS FOUNTAIN, *Assistant Professor of English.*
B.E., M.S., N. C. State College; M.A., Columbia University.

RAYMOND SPIVEY FOURAKER, *Professor of Electrical Engineering.*
B.S. in E.E., A. and M. College of Texas; M.S., University of Texas.

MONROE EVANS GARDNER, *Professor of Horticulture.*
B.S., Virginia Polytechnic Institute.

KARL CLAUDE GARRISON, *Professor of Psychology.*
B.S., Peabody College; M.S., University of North Carolina; Ph.D., Peabody College.

HERMAN CHRISTIAN GAUGER, *Instructor in Poultry Science.*
B.S., M.S., N. C. State College.

WILFRED GEORGE GEILE, *Professor of Structural Engineering.*
Ph.B. in Civil Engineering, Yale University.

GEORGE WALLACE GILES, *Assistant Professor of Agricultural Engineering.*
B.S., University of Nebraska; M.S., University of Missouri.

KARL B. GLENN, *Assistant Professor of Electrical Engineering.*
B.E., M.S., N. C. State College.

RICHARD ELLIOTT GREAVES, *Assistant Professor of Poultry Science.*
B.S., Wake Forest College; B.S., N. C. State College.

ARTHUR FREDERICK GREAVES-WALKER, *Professor of Ceramic Engineering.*
Cer. E., Ohio State University.

RALPH WALDO GREEN, *Associate Professor of Marketing.*
B.S., Cornell University; M.S., N. C. State College.

ALBERT HARVEY GRIMSHAW, *Professor of Textile Chemistry and Dyeing.*
Graduate of the New Bedford Textile School; B.S., M.S., N. C. State College.

CLAUDE DELBERT GRINNELLS, *Associate Professor of Veterinary Science.*
B.S., University of Minnesota; D.V.M., Cornell University; M.S., University of Minnesota.

** Resigned.

*CORNELIUS SHERMAN GROVE, *Assistant Professor of Chemical Engineering.*
A.B., Lenoir-Rhyne College; B.S., Ch.E., N. C. State College; M.S., Massachusetts Institute of Technology.

FREDERICK MORGAN HAIG, *Associate Professor of Animal Husbandry and Dairying.*
B.S., University of Maryland; M.S., N. C. State College.

REINARD HARKEMA, *Instructor in Zoology.*
A.B., Calvin College; Ph.D., Duke University.

THOMAS PERRIN HARRISON, *Professor of English.*
B.S., Citadel; Ph.D., Johns Hopkins University; LL.D., Citadel.

THOMAS ROY HART, *Professor of Weaving and Designing.*
B.E., T.E., M.S., N. C. State College.

LODWICK CHARLES HARTLEY, *Assistant Professor of English.*
B.A., Furman University; M.A., Columbia University; Ph.D., Princeton University.

ARTHUR COURTNEY HAYES, *Instructor in Textile Chemistry and Dyeing.*
Ph.B., Brown University; M.S., N. C. State College.

CHARLES MCGEE HECK, *Professor of Physics.*
A.B., Wake Forest College; M.A., Columbia University.

*ROSWELL WOODWARD HENNINGER, *Professor of Industrial Management.*
B.S., Massachusetts Agricultural College; M.S., N. C. State College.

WILLIAM NORWOOD HICKS, *Associate Professor of Sociology and Religion.*
B.E., N. C. State College; A.B., Duke University; M.A., Oberlin College; M.S., N. C. State College.

JOHN THOMAS HILTON, *Professor of Yarn Manufacture.*
Diploma Bradford Durfee Textile School; B.S., M.S., N. C. State College.

LAWRENCE EARLE HINKLE, *Professor of Modern Languages.*
B.A., University of Colorado; M.A., Columbia University; D.S.ès L., Dijon.

JULIUS VALENTINE HOFMANN, *Professor of Forestry.*
B.S.F., M.F., Ph.D., University of Minnesota.

EARL HENRY HOSTETLER, *Professor of Animal Husbandry.*
B.S. in Agr., Kansas State Agricultural College; M.Agr., M.S., N. C. State College.

J. PEELE JOHNSON, *Instructor in Engineering Drawing.*
B.E., N. C. State College.

*THEODORE SEDGWICK JOHNSON, *Professor of Industry.*
B.S., Denison University; C.E., Ohio State University; M.S., Denison University.

ARTHUR DAVE JONES, *Assistant Professor of Chemistry.*
A.B., A.M., University of Cincinnati.

ROBERT EDWARD JONES, *Assistant Professor of Military Science and Tactics.*
Major, Infantry, U. S. Army; Graduate, Infantry School, Fort Benning, Ga.

WALTER EDWARD JORDAN, *Associate Professor of Chemistry.*
B.S., M.A., Wake Forest College; M.S., N. C. State College.

LEROY MONROE KEEVER, *Assistant Professor of Electrical Engineering.*
B.E., M.S., N. C. State College.

WILLIAM PORTER KELLAM, *Librarian.*
A.B., A.M., Duke University; A.B. in L.S., Emory University.

ARTHUR I. LADU, *Professor of English.*
A.B., Syracuse University; M.A., Ph.D., University of North Carolina.

CLAUDE MILTON LAMBE, *Instructor in Civil Engineering.*
B.E., N. C. State College.

* On leave.

FORREST WESLEY LANCASTER, *Assistant Professor of Physics.*
B.S., Ch.E., Purdue University.

BRYON ELMER LAUER, *Assistant Professor of Chemical Engineering.*
B.S. in Ch.E., Oregon State College; Ph.D., University of Minnesota.

MARC C. LEAGER, *Associate Professor of Statistics and Accounting.*
B.S., M.S., University of Minnesota; Ph.D., Columbia University.

FRANK ADOLPH LEE, JR., *Assistant Professor of Mathematics.*
A.B., Randolph Macon College; M.A., University of Virginia.

SAMUEL GEORGE LEHMAN, *Professor of Plant Pathology.*
B.S. in Ed., Ohio University; M.S., N. C. State College; Ph.D., Washington University.

JACK LEVINE, *Assistant Professor of Mathematics.*
B.A., University of California at Los Angeles; Ph.D., Princeton University.

JOHN GARY LEWIS, *Instructor in Textile.*
B.S., M.S., N. C. State College.

DAVID ALEXANDER LOCKMILLER, *Assistant Professor of History and Political Science.*
B.Ph., M.A., Emory University; LL.B., Cumberland University; Ph.D., University of North Carolina.

JAMES FULTON LUTZ, *Associate Professor of Soils.*
B.S., N. C. State College; M.A., Ph.D., University of Missouri.

CARROLL LAMB MANN, *Professor of Civil Engineering.*
B.S., C.E., N. C. State College.

ROGER POWELL MARSHALL, *Assistant Professor of English.*
B.A., Wake Forest College; M.A., Columbia University; M.S., N. C. State College.

M. TAYLOR MATTHEWS, *Assistant Professor of Rural Sociology.*
B.S., East Tennessee Teachers College; Ed.M., Harvard University.

FREDERICK HAROLD MCCUTCHEON, *Assistant Professor of Zoology.*
B.S., M.S., North Dakota State College; Ph.D., Duke University.

WILLIAM MCGEHEE, *Instructor in Psychology.*
B.A., University of the South; M.A., Peabody College.

EMMETT B. MCNATT, *Assistant Professor of Economics.*
A.B., University of Missouri; M.A., Ph.D., Cornell University.

FRANK BARNARD MEACHAM, *Assistant Professor of Zoology.*
B.S., M.S., N. C. State College.

JEFFERSON SULLIVAN MEARES, *Associate Professor of Physics.*
B.S., University of South Carolina; M.S., N. C. State College.

ZENO PAYNE METCALF, *Director of Instruction, School of Agriculture and Forestry and Professor of Zoology.*
A.B., Ohio State University; D.Sc., Harvard University.

ARTHUR STEHMAN MILLER, *Instructor in Economics.*
B.S., Elizabethtown College; M.B.A., University of Pennsylvania.

JOHN FLETCHER MILLER, *Head, Department of Physical Education and Athletics.*
B.Pd., Central Missouri Teachers' College; B.P.E., Springfield College of Physical Education.

WILLIAM DYKSTRA MILLER, *Associate Professor of Forestry.*
B.A., Reed College; M.F., Ph.D., Yale University.

THEODORE BERTIS MITCHELL, *Associate Professor of Zoology.*
B.S., Massachusetts Agricultural College; M.S., N. C. State College; D.Sc., Harvard University.

REUBEN O. MOEN, *Professor of Business Administration.*
B.A., M.A., Ph.D., University of Iowa.

CAREY GARDNER MUMFORD, *Associate Professor of Mathematics.*
B.A., Wake Forest College; A.M., Duke University.

HOWARD M. NAHIKIAN, *Instructor in Mathematics.*
A.B., M.A., University of North Carolina.

RALPH ELBERT NANCE, *Assistant Professor of Animal Husbandry.*
B.S., N. C. State College.

THOMAS LEWIS NASH, *Instructor in Electrical Engineering.*
Graduate, United States Naval Academy.

THOMAS NELSON, *Dean of the Textile School.*
D.Sc., N. C. State College.

CARMINE THOMAS OLIVO, *Instructor in Foundry.*
B.S., State Teachers College of Buffalo.

EDWIN HUGH PAGET, *Associate Professor of English.*
B.L., Northwestern; M.A., University of Pittsburgh.

CHARLES BENJAMIN PARK, *Instructor Emeritus in Machine Shop.*

HUBERT VERN PARK, *Instructor in Mathematics.*
A.B., Lenoir-Rhyne College; M.A., University of North Carolina.

JOHN MASON PARKER, III, *Instructor in Geology.*
A.B., A.M., Ph.D., Cornell University.

LESLIE RENDALL PARKINSON, *Instructor in Aeronautical Engineering.*
B.S., Guggenheim School of Aeronautics, New York University.

JEHU DEWITT PAULSON, *Assistant Professor of Architectural Engineering.*
B.F.A., Yale University.

ROBERT JAMES PEARSALL, *Associate Professor of Electrical Engineering.*
B.E., N. C. State College.

JOSHUA PLUMMER PILLSBURY, *Professor of Horticulture.*
B.S., Pennsylvania State College.

ROBERT FRANKLIN POOLE, *Professor of Plant Pathology.*
B.S., Clemson College; M.S., Ph.D., Rutgers University.

GLENN ORVICE RANDALL, *Associate Professor of Horticulture.*
B.S., University of Arkansas; M.S., Iowa State College.

EDGAR EUGENE RANDOLPH, *Professor of Chemical Engineering.*
A.B., A.M., Ph.D., University of North Carolina.

*WILLIS ALTON REID, *Instructor in Chemistry.*
B.S., Wake Forest College.

ROBERT BARTON RICE, *Associate Professor of Mechanical Engineering.*
B.S., Tufts College; A.M., Columbia University.

THERMAN LEE RICHIE, *Instructor in Textile.*
B.S., N. C. State College.

WALLACE CARL RIDDICK, *Dean of the School of Engineering.*
A.B., University of North Carolina; C.E., LL.D., Lehigh University; LL.D., Wake Forest College.

MACON ROGERS ROWLAND, *Instructor in Mechanical Engineering.*
B.S., N. C. State College.

ROBERT HENRY RUFFNER, *Professor of Animal Husbandry and Dairying.*
B.S., University of Maryland; M.S., N. C. State College.

* On leave.

GEORGE HOWARD SATTERFIELD, *Professor of Biochemistry.*
A.B., Duke University; B.S., University of North Carolina; M.A., Duke University.

HOWARD ERNEST SATTERFIELD, *Associate Professor of Mechanical Engineering.*
B.S. in M.E.; M.E., Purdue University.

IRA OBED SCHAUB, *Dean of the School of Agriculture and Forestry and Director of Agricultural Extension.*
B.S., N. C. State College.

WAYLAND PRITCHARD SEAGRAVES, *Instructor in Mathematics.*
B.S., M.S., N. C. State College.

L. WALTER SEEGERS, *Instructor in History.*
A.B., Muhlenberg College; A.M., University of Pennsylvania.

WALTER EUGENE SELKINGHAUS, *Instructor in Mechanical Engineering.*
B.S., Newark College of Engineering.

RAYMOND ROLLINS SERMON, *Professor of Physical Education.*
B.P.E., Springfield College of Physical Education; B.S., D.O., Kirksville School of Osteopathy.

HOWARD BURTON SHAW, *Professor of Industrial Engineering.*
A.B., B.C.E., University of North Carolina; A.M., Harvard University.

ALFRED BERNARD ROWLAND SHELLEY, *Instructor of English.*
B.S., Tufts College; A.M., Harvard University.

WILLIAM EDWARD SHINN, *Associate Professor of Weaving and Designing.*
B.S., M.S., North Carolina State College.

MERLE FRANKLIN SHOWALTER, *Associate Professor of Education.*
A.B., Indiana University; M.S., Purdue University.

CLARENCE B. SHULENBERGER, *Associate Professor of Accounting.*
A.B., Roanoke College; A.M., Columbia University.

ROSS EDWARD SHUMAKER, *Professor of Architectural Engineering.*
B.Arch., Ohio State University.

IVAN VAUGHAN DETWEILER SHUNK, *Associate Professor of Botany.*
A.B., A.M., University of West Virginia; Ph.D., Rutgers University.

WILLIAM ERNEST SINGER, *Instructor in Chemistry.*
A.B., Manchester College; Ph.D., Pennsylvania State College.

GEORGE KELLOGG SLOCUM, *Assistant Professor of Forestry.*
B.S., M.S., N. C. State College.

GEORGE WALLACE SMITH, *Associate Professor of Engineering Mechanics.*
B.S.E.E., University of North Carolina; M.S.E. in C.E., D.Sc., University of Michigan.

GLENN R. SMITH, *Assistant Professor of Agricultural Economics.*
B.S., M.S., N. C. State College.

ROBERT LEGRANDE STONE, *Instructor in Ceramic Engineering.*
B.S., Missouri School of Mines; M.S., N. C. State College.

JASPER LEONIDAS STUCKEY, *Professor of Geology.*
A.B., A.M., University of North Carolina; Ph.D., Cornell University.

D. BOYD THOMAS, *Instructor in Mathematics.*
B.S., M.S., N. C. State College.

HARRY TUCKER, *Professor of Highway Engineering and Director of the Engineering Experiment Station.*
B.A., B.S., C.E., Washington and Lee University.

FRANK BROWN TURNER, *Assistant Professor in Mechanical Drawing.*
B.S., M.S., N. C. State College.

WILLIAM GARDNER VAN NOTE, *Assistant Professor of Chemical Engineering.*
Ch.E., Rensselaer Polytechnic Institute; M.S., University of Vermont.

LILLIAN LEE VAUGHAN, *Professor of Mechanical Engineering.*
B.E., N. C. State College; M.E., Columbia University.

BENJAMIN WILSON VENABLE, *Assistant Professor of Military Science and Tactics.*
Captain Infantry, U. S. Army; A.B., Hampden Sidney College; Graduate Infantry School, Fort Benning, Ga.; Graduate, Command and General Staff School, Fort Leavenworth, Kans., General Staff Eligibility List.

ROBERT SULLIVAN WARREN, *Assistant Professor of Physical Education and Assistant Coach of Football.*
D.O., American School of Osteopathy; B.S., N. C. State College.

DAVID STATHEM WEAVER, *Professor of Agricultural Engineering*
B.S., Ohio State University; M.S., N. C. State College.

JAMES GRAY WEAVER, *Assistant Professor of Horticulture.*
B.S., M.S., N. C. State College.

BERTRAM WHITTIER WELLS, *Professor of Botany.*
A.B., M.A., Ohio State University; Ph.D., University of Chicago.

FRED BARNETT WHEELER, *Professor of Practical Mechanics and Superintendent of Shops.*
B.E., M.E., N. C. State College.

LARRY ALSTON WHITFORD, *Assistant Professor of Botany.*
B.S., M.S., N. C. State College.

CHARLES BURGESS WILLIAMS, *Professor of Agronomy.*
B.S., M.S., N. C. State College.

HARVEY PAGE WILLIAMS, *Associate Professor of Mathematics.*
B.A., William and Mary College; M.A., Duke University.

LEON FRANKLIN WILLIAMS, *Professor of Organic Chemistry.*
A.B., A.M., Trinity College; Ph.D., Johns Hopkins University.

NORWOOD WADE WILLIAMS, *Assistant Professor of Poultry.*
B.S., M.S., N. C. State College.

ARTHUR JOHN WILSON, *Professor of Analytical Chemistry.*
B.S., M.S., N. C. State College; Ph.D., Cornell University.

THOMAS LESLIE WILSON, *Assistant Professor of English.*
A.B., Catawba College; A.M., Wofford College.

SANFORD RICHARD WINSTON, *Professor of Sociology.*
B.A., Western Reserve University; Ph.D., University of Minnesota.

LOWELL S. WINTON, *Instructor in Mathematics.*
B.S., Grove City College; M.A., Oberlin College.

LENTHALL WYMAN, *Professor of Forestry.*
A.B., M.F., Harvard University.

WILLARD KENDALL WYNN, *Assistant Professor of English.*
A.B., Wofford College; M.A., Emory University; M.A., Columbia University.

ROBERT BAKER WYNNE, *Instructor in English and Public Speaking.*
A.B., A.M., William and Mary College.

ROBERT EDWARD LEE YATES, *Professor Emeritus of Mathematics.*
A.M., Wake Forest College.

FELLOWS AND ASSISTANTS

ALLEN, SOBEY FRANKLIN, *Student Assistant in Mechanical Engineering.*

ASHTON, DONALD FRED, *Teaching Fellow in Zoology.*
B.S., University of Maryland.

BLACKWOOD, EDWARD WOODSTON, *Student Assistant in Yarn Manufacture.*

BOLAND, JOHN ALLEN, *Student Assistant in Business Administration.*

BOLING, HOWARD HILARY, *Research Fellow in Animal Husbandry and Dairying.*
B.S., N. C. State College.

BOURNE, ROBERT GORDON B., *Student Assistant in English.*

CLARKE, RAYMOND T., *Teaching Fellow in Textile.*
B.S., Clemson College.

CLEGG, ROBERT E., *Teaching Fellow in Chemistry.*
B.S., Rhode Island State Colege.

DURHAM, DWIGHT WOMBLE, *Student Assistant in Mathematics.*

EDMONSON, RICHARD TYLER, *Student Assistant in Business Administration.*

GARODNICK, IRVIN O., *Teaching Fellow in Modern Languages.*
B.S., N. C. State College.

GOAD, THOMAS GORDON, *Student Assistant in Mathematics.*

GODFREY, ROBERT KENNETH, *Teaching Fellow in Botany.*
A.B., Maryville College.

GREGORY, DAVID, *Research Fellow in Poultry.*
B.S., Kansas State Agricultural College.

GRIFFIN, ROBERT JACKSON, *Student Assistant in Chemistry.*
B.S., N. C. State College.

HACKNEY, JAMES CARLYLE, *Teaching Fellow in Chemistry.*
B.S., Guilford College.

HORNEY, EUGENE STEDMAN, *Student Assistant in Textile Chemistry and Dyeing.*

LANGE, CARL FREDERICK, *Student Assistant in Mathematics.*

MASK, FRANCIS EARL, *Student Assistant in Mathematics.*

MATHESON, HENRY DOUGLAS, *Teaching Fellow in Chemistry.*
B.S., N. C. State College.

MCCULLOUGH, TIMOTHY PENTLETON, JR., *Teaching Fellow in Physics.*
B.S., University of Mississippi.

MOIR, THOMAS ROBERT, *Student Assistant in Yarn Manufacture.*

OWENS, OTTO PHARON, *Research Fellow in Botany.*
B.S., N. C. State College.

PASTORE, PATRICK NICHOLAS, *Teaching Fellow in Industrial Arts.*
B.S., N. C. State College.

PAYNE, MARSHALL BRANDON, *Student Assistant in Weaving.*

PIERCE, HONOREE WILSIE, *Student Assistant in Business Administration.*

SARROCCO, FIORE ANTONIO, *Student Assistant in Business Administration.*

SCHOOF, HERBERT FREDERICK, *Teaching Fellow in Zoology.*
B.S., N. C. State College.

SIMMONS, GERALD FREMONT, *Student Assistant in Business Administration.*

STINNETTE, CHARLES R., *Student Assistant in Chemistry.*

TYNER, TORREY MARCO, *Student Assistant in Weaving.*

WATSON, SAMUEL MCIVER, JR., *Student Assistant in Mathematics.*
B.S., Elon College.

WHITNEY, JOHN BARRY, JR., *Teaching Fellow in Botany.*
B.S., University of Georgia.

WOODY, CHARLES LEE, *Student Assistant in Mathematics.*

OFFICERS AND STAFF

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E. F. Goldston.....Assistant in Soil Survey
S. O. Perkins.....Assistant Soil Surveyor, in Coöperation with U. S. Department of Agriculture
Anton J. Vessell.....Assistant Soil Surveyor, in Coöperation with U. S. Department of Agriculture
F. O. Bartel.....Senior Drainage Engineer, in Coöperation with U. S. Department of Agriculture
P. H. Kime.....Associate in Plant Breeding
J. H. Moore.....Cotton Technologist
*E. G. Moss.....In charge Tobacco Investigations for the State Department of Agriculture and U. S. Department of Agriculture
C. W. Croom.....Assistant Soil Surveyor, in Coöperation with T.V.A.
Wm. Gettys.....Assistant Soil Surveyor, in Coöperation with T.V.A.

---

* Workers and Branch Stations under authority of the State Department of Agriculture coöperating with the Agricultural Experiment Station in research.
** On leave.

W. W. WOODHOUSE. . . . . Assistant Agronomist, in Coöperation with T.V.A.
G. K. MIDDLETON. . . . . Plant Breeding Agronomist
R. H. TILLEY. . . . . Assistant Plant Breeding Agronomist
R. E. STITT. . . . . Assistant Agronomist, U. S. Department of Agriculture

Animal Husbandry

R. H. RUFFNER. . . . . Head, Animal Industry
C. D. GRINNELLS. . . . . Dairy Investigator
J. E. FOSTER. . . . . Associate in Animal Husbandry Research
E. H. HOSTETLER. . . . . In Charge Animal Husbandry Research
J. O. HALVERSON. . . . . Animal Nutrition
F. H. SMITH. . . . . Assistant in Animal Nutrition
F. W. SHERWOOD. . . . . Associate in Animal Nutrition
J. L. MOORE. . . . . Assistant, Office of Dairy Investigation

Botany

B. W. WELLS. . . . . Botanist
S. G. LEHMAN. . . . . Plant Pathologist
R. F. POOLE. . . . . Plant Pathologist
H. E. EADDY. . . . . Assistant in Plant Pathology
D. B. ANDERSON. . . . . Plant Physiologist, in Coöperation with U. S. Department of Agriculture

Horticulture

M. E. GARDNER. . . . . Horticulturist
ROBERT SCHMIDT. . . . . Associate Horticulturist
C. F. WILLIAMS. . . . . Associate Horticulturist
IVAN D. JONES. . . . . Associate Horticulturist
E. B. MORROW. . . . . Associate Horticulturist
OTTO VEERHOFF. . . . . Associate Horticulturist
M. K. VELDHUIS. . . . . Assistant Chemist, U. S. D. A., Bureau of Chemistry and Soils
J. L. ETCHELLS. . . . . Assistant Bacteriologist, U. S. D. A. Bureau of Chemistry and Soils

Poultry Husbandry

R. S. DEARSTYNE. . . . . Poultry Investigator and Pathologist
**R. E. GREAVES. . . . . Assistant Poultry Investigator and Pathologist
H. C. GAUGER. . . . . Assistant Poultry Investigator and Pathologist
J. J. HUTCHINSON. . . . . Assistant Poultry Breeding
C. H. BOSTIAN. . . . . Poultry Genetics

Zoology and Entomology

Z. P. METCALF. . . . . Entomologist
B. B. FULTON. . . . . Associate Entomologist

** On leave.

Central Station—Raleigh

F. E. MILLER ..... Director of Branch Stations
R. J. HARRIS ..... Assistant Director in Charge Central Station

*BRANCH STATIONS

Blackland Test Farm—Wenona

J. L. REA, JR. ..... Assistant Director in Charge
A. P. LEFEVERS ..... Foreman
BRYAN HARRIS ..... Herdsman

Coastal Plain Test Farm—Willard

CHAS. DEARING ..... Assistant Director in Charge
D. P. SOUTHERLAND ..... Foreman
R. T. CALDWELL ..... Dairy Herdsman
C. O. BOLLINGER ..... Poultryman

Mountain Test Farm—Swannanoa

S. C. CLAPP ..... Assistant Director in Charge
W. M. WHISENHUNT ..... Foreman
H. B. COULTER ..... Dairy Herdsman
G. K. JONES ..... Poultryman

Piedmont Test Farm—Statesville

J. W. HENDRICKS ..... Assistant Director in Charge
R. E. STITT ..... Assistant Agronomist, U. S. Department of Agriculture

Tobacco Test Farm—Oxford

E. G. MOSS ..... Assistant Director in Charge
JAMES F. BULLOCK ..... Assistant, Tobacco Investigations, U. S. Department of Agriculture
A. B. DEAN ..... Foreman

Upper Coastal Plain Test Farm—Rocky Mount

R. E. CURRIN, JR. ..... Assistant Director in Charge
WM. ALLSBROOK ..... Herdsman
J. P. YOUNG ..... Assistant, Tobacco Investigations, U. S. Department of Agriculture

* Workers and Branch Stations under authority of the State Department of Agriculture coöperating with the Agricultural Experiment Station in research.

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T. T. BROWN.....Assistant in Poultry Extension
C. J. MAUPIN.....Assistant in Poultry Extension
C. F. PARRISH.....In Charge of Office of Poultry Extension

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L. R. HARRILL.....State 4-H Club Leader
MISS FRANCES MCGREGOR.....Assistant 4-H Club Leader
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Alamance	H. G. DARGAN (Assistant)	Graham
Alamance	N. B. NICHOLSON	Graham
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Bertie	R. D. SMITH (Assistant)	Windsor
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Buncombe	R. D. BRUCE (Assistant)	Asheville
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Cabarrus	J. E. WILSON (Assistant)	Concord
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Chatham	J. C. KEITH (Assistant)	Pittsboro
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Clay	W. D. JESTER (Assistant)	Hayesville
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Cleveland	J. L. REITZEL (Assistant)	Shelby

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Craven	PAUL M. COX (Assistant)	New Bern
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Cumberland	M. E. HOLLOWELL (Assistant)	Fayetteville
Currituck	L. A. POWELL	Barco
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Davidson	P. M. HENDRICKS	Lexington
Davidson	A. N. HARRELL (Assistant)	Lexington
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Davie	F. E. CORRELL, JR., (Assistant)	Mocksville
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Duplin	G. E. JONES (Assistant)	Kenansville
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Durham	C. M. SALLEY (Assistant)	Durham
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Forsyth	R. W. POU	Winston-Salem
Forsyth	C. L. DAVIS (Assistant)	Winston-Salem
Franklin	E. J. MORGAN	Louisburg
Franklin	W. C. BOYCE (Assistant)	Louisburg
Gaston	MAURY GASTON	Gastonia
Gaston	CLARK MCCASLAN (Assistant)	Gastonia
Gates	R. R. RICH	Gatesville
Graham	W. B. WIGGINS	Robbinsville
Graham	L. B. BARBEE (Assistant)	Robbinsville
Granville	DAN M. PAUL	Oxford
Granville	W. B. JONES (Assistant)	Oxford
Greene	E. V. VESTAL	Snow Hill
Greene	A. J. HARRELL (Assistant)	Snow Hill
Guilford	J. I. WAGONER	Greensboro
Guilford	L. M. BOSWELL (Assistant)	Greensboro
Guilford	H. H. TATUM (Assistant)	Greensboro
Halifax	W. O. DAVIS	Weldon
Halifax	W. M. BRUCE (Assistant)	Halifax
Harnett	J. O. ANTHONY	Lillington
Harnett	C. R. AMMONS (Assistant)	Lillington
Haywood	W. D. SMITH	Waynesville
Haywood	W. A. CORPENING (Assistant)	Waynesville
Haywood	S. R. MITCHINER (Assistant)	Waynesville
Henderson	G. D. WHITE	Hendersonville
Henderson	D. W. BENNETT (Assistant)	Hendersonville
Hertford	J. GORDON BLAKE	Winton
Hoke	H. L. MEACHAM	Raeford
Hyde	C. Y. TILSON	Swan Quarter
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Iredell	W. N. WOOD (Assistant)	Statesville

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Jackson	H. R. CLAPP (Assistant)	Sylva
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Johnston	J. T. COOPER (Assistant)	Smithfield
Johnston	S. C. WINCHESTER (Assistant)	Smithfield
Johnston	R. M. HOLDER (Assistant)	Smithfield
Jones	F. F. HENDRIX	Trenton
Jones	C. D. RAPER (Assistant)	Trenton
Lee	E. O. MCMAHAN	Sanford
Lenoir	C. M. BRICKHOUSE	Kinston
Lenoir	C. R. FREEMAN (Assistant)	Kinston
Lincoln	J. G. MORRISON	Lincolnton
Lincoln	GEO. B. HOBSON (Assistant)	Lincolnton
McDowell	S. L. HOMEWOOD	Marion
Macon	S. W. MENDENHALL	Franklin
Macon	S. D. ALEXANDER (Assistant)	Franklin
Madison	G. W. MILLER	Marshall
Madison	K. A. HANEY (Assistant)	Marshall
Martin	T. B. BRANDON	Williamston
Martin	H. T. WEEKS (Assistant)	Williamston
Mecklenburg	O. H. PHILLIPS	Charlotte
Mecklenburg	MAX CULP (Assistant)	Charlotte
Mitchell	J. C. LYNN	Bakersville
Mitchell	G. H. WHEELER (Assistant)	Bakersville
Montgomery	H. B. JAMES	Troy
Montgomery	J. H. RABAN	Troy
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Moore	W. G. CALDWELL (Assistant)	Carthage
Nash	J. S. SUGG	Nashville
Nash	R. F. SHEARIN (Assistant)	Nashville
New Hanover	S. R. POOLE	Wilmington
Northampton	E. P. GULLEDGE	Jackson
Northampton	E. L. NORTON (Assistant)	Jackson
Onslow	N. M. SMITH	Jacksonville
Onslow	C. D. RAPER (Assistant)	Jacksonville
Orange	DON S. MATHESON	Hillsboro
Orange	E. P. BARNES (Assistant)	Hillsboro
Pamlico	R. W. GALPHIN	Bayboro
Pamlico	A. T. JACKSON (Assistant)	Bayboro
Pasquotank	G. W. FALLS	Elizabeth City
Pender	C. V. MORGAN	Burgaw
Perquimans	L. W. ANDERSON	Hertford
Person	H. K. SANDERS	Roxboro
Person	J. B. SNIPES (Assistant)	Roxboro
Pitt	R. R. BENNETT	Greenville
Pitt	C. D. GRIGGS (Assistant)	Greenville
Polk	J. A. WILSON	Columbus

County	*Name*	*Post office*
Polk	C. H. KING (Assistant)	Columbus
Randolph	E. S. MILLSAPS	Asheboro
Randolph	L. L. RAY (Assistant)	Asheboro
Richmond	O. O. DUKES	Rockingham
Richmond	J. P. CHOPLIN (Assistant)	Rockingham
Robeson	A. D. ROBERTSON	Lumberton
Robeson	R. B. HARPER (Assistant)	Lumberton
Rockingham	F. S. WALKER	Reidsville
Rockingham	W. F. WILSON (Assistant)	Reidsville
Rowan	D. H. SUTTON	Salisbury
Rowan	J. P. LEAGANS (Assistant)	Salisbury
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Rutherford	J. W. WEBSTER (Assistant)	Rutherfordton
Sampson	J. M. HENLEY	Clinton
Scotland	L. G. MATTHIS	Laurinburg
Stanly	JOHN W. ARTZ	Albemarle
Stokes	T. H. SEARS (Assistant)	Walnut Cove
Surry	J. W. CRAWFORD	Dobson
Surry	A. P. COBB (Assistant)	Dobson
Swain	BRYAN NESBIT	Bryson City
Swain	J. B. HIGHSMITH (Assistant)	Bryson City
Transylvania	J. A. GLAZENER	Brevard
Transylvania	W. C. MANESS (Assistant)	Brevard
Tyrrell	H. H. HARRIS	Columbia
Union	T. J. W. BROOM	Monroe
Union	D. C. RANKIN (Assistant)	Monroe
Vance	J. W. SANDERS	Henderson
Vance	M. E. AYCOCK (Assistant)	Henderson
Wake	J. C. ANDERSON	Raleigh
Wake	G. M. SWICEGOOD (Assistant)	Raleigh
Warren	R. H. BRIGHT	Warrenton
Warren	G. R. MCCOLL (Assistant)	Warrenton
Washington	W. V. HAYS	Plymouth
Watauga	W. B. COLLINS	Boone
Watauga	H. M. HAMILTON (Assistant)	Boone
Wayne	C. S. MINTZ	Goldsboro
Wayne	A. S. KNOWLES (Assistant)	Goldsboro
Wilkes	A. G. HENDREN	Wilkesboro
Wilkes	W. J. HANNA (Assistant)	Wilkesboro
Wilson	W. L. ADAMS	Wilson
Wilson	J. A. MARSH (Assistant)	Wilson
Yadkin	L. F. BRUMFIELD	Yadkinville
Yadkin	R. A. MCLAUGHLIN (Assistant)	Yadkinville
Yancey	G. W. SMITH	Burnsville
Yancey	R. H. CROUSE (Assistant)	Burnsville
J. P. HERRING, County Agent at Large		Wilmington, N. C.

NEGRO COUNTY AGENT WORK

J. W. MITCHELL, District Agent, A. and T. College, Greensboro, N. C.
R. E. JONES, Negro Club Leader, Greensboro, N. C.

Negro County Agents

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Bertie	J. C. HUBBARD	Windsor
Craven	OTIS EVANS	New Bern, Box 103
Durham	A. T. HAMME	Durham, Box 1015
Edgecombe	F. D. WHARTON	Bricks
Gates	H. L. MITCHELL	Gatesville
Granville	J. R. RIDDING	Oxford
Halifax	D. J. KNIGHT	Enfield
Hertford	W. C. DAVENPORT	Winton
Iredell	E. C. LACKEY	Statesville
Johnston	McKAY McNEILL	Clayton, Rt. 1
Lenoir	P. G. FULLER	Kinston
Martin	OLIVER CARTER	Parmelee
Mecklenburg	I. D. L. TORRENCE	Charlotte, 229 E. Trade St.
Northampton	L. J. MORRIS	Rich Square
Orange	M. C. BURT	Hillsboro
Pasquotank	E. F. COLSON	Elizabeth City, Box 427
Person	C. J. FORD	Roxboro
Pitt	D. D. DUPREE	Greenville, Box 585
Robeson	S. T. BROOKS	Lumberton, Box 806
Rockingham	H. E. SUTTON	Reidsville
Rowan	A. C. GRANT	Salisbury, 904 W. Monroe St.
Vance	H. E. WEBB	Henderson
Wake	M. H. CROCKETT	Raleigh, O'Kelly Bldg.
Warren	C. S. WYNN	Warrenton
Wilson	C. L. SPELLMAN	Wilson

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Mrs. Estelle T. Smith, Southeastern District Agent..... Raleigh
Miss Anamerle Arant, Northwestern District Agent ..... Raleigh
Miss Pauline Smith, Northeastern District Agent ..... Raleigh
Mrs. Esther Gray Willis, Southwestern District Agent..... Raleigh

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Anson	Mrs. Rosalind Redfearn	Wadesboro
Avery	Miss Margaret Curtis	Newland
Beaufort	Miss Violet Alexander	Washington
Bladen	Mrs. Lillie L. Hester	Elizabethtown
Brunswick	Miss Marion Smith	Southport
Cabarrus	Mrs. Mary L. McAllister	Concord
Caldwell	Miss Atha Culberson	Lenoir
Camden	Miss Mary Teeter	Camden
Carteret	Miss Margaret Clark	Beaufort
Caswell	Miss Maude Searcy	Yanceyville
Catawba	Mrs. Marie Coxe Matheson	Newton
Chatham	Miss Sallie Sue Koon	Pittsboro
Chowan	Miss Rebecca Caldwell	Edenton
Cleveland	Miss Hilda Sutton	Shelby
Craven	Miss Jessie Trowbridge	New Bern
Cumberland	Miss Elizabeth Gainey	Fayetteville
Currituck	Miss Virginia Edwards	Currituck
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Hertford	Miss Florence Cox	Winton
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Lee	MISS CORNELIA SIMPSON	Sanford
Lenoir	MISS MAY SWANN	Kinston
McDowell	MISS ANNE TUCKER	Marion
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Martin	MISS LORA SLEEPER	Williamston
Mecklenburg	MRS. PAULINE W. TAYLOR	Charlotte
Montgomery	MISS MARTHA MCKINNON	Troy
Moore	MISS FLORA MCDONALD	Carthage
Nash	MRS. EFFIE V. GORDON	Nashville
New Hanover	MISS ANN MASON	Wilmington
Northampton	MISS MILDRED IVES	Jackson
Onslow	MISS HELEN CARLTON	Jacksonville
Orange	MISS GRACE E. HOLCOMBE	Hillsboro
Pamlico	MISS SOPHIA L. CLARK	Oriental
Pasquotank	MISS MAUDE L. HODGES	Elizabeth City
Pender	MISS GERTRUDE ORR	Burgaw
Perquimans	MISS GLADYS HAMRICK	Hertford
Pitt	MISS ETHEL NICE	Greenville
Polk	MISS AGNES MCLEOD	Columbus
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Robeson	MISS MARY HUFFINES	Lumberton
Rockingham	MISS MARJORIE HOLMES	Reidsville
Rowan	MISS NELL KENNETT	Salisbury
Rutherford	MISS NELLIE GRAY	Rutherfordton
Sampson	MISS MINNIE L. GARRISON	Clinton
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Washington	MISS FRANCES MISENHEIMER	Plymouth
Watauga	MRS. C. KATE HARMON	Boone
Wayne	MISS RUBY GERTRUDE BUNDY	Goldsboro
Wilson	MISS LOIS RAINWATER	Wilson

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MRS. DAZELLE F. LOWE, Negro District Home Agent, Greensboro, N. C.

MISS WILHELMINA LAWS, Negro Subject Matter Specialist, A. & T. College, Greensboro, N. C.

Negro Home Agents

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Craven	MISS MARIETTA MEARES	New Bern
Durham	ESTELLE T. NIXON, Rt. 2, Box 97	Durham
Edgecombe	MISS IDA MAE WILLIAMS	Bricks
Guilford	MISS ANNIE MURRAY	Greensboro
Johnston	MISS LUCY HICKS	Smithfield
Mecklenburg	MRS. MARGARET COLLINS ROGERS	Charlotte
Northampton	MRS. FANNIE T. NEWSOME, Box 62	Rich Square
Robeson	MRS. LILLIAN M. DEBMAN	Lumberton
Rowan	MRS. ANNIE J. JOHNSON	Salisbury
Wake	MRS. BERTHA MAYE EDWARDS	Raleigh

GENERAL INFORMATION

HISTORY

The North Carolina State College of Agriculture and Engineering is the outgrowth of an idea fostered by two distinct movements, each somewhat different in its original aims. One movement, represented by a group of progressive young North Carolinians, banded together in Raleigh as the Watauga Club, sought to bring about the organization of an industrial school for the teaching of "woodwork, mining, metallurgy, and practical agriculture." The other movement, originating among the farmers in North Carolina, and actively sponsored by Colonel L. L. Polk, then editor of the *Progressive Farmer*, had as its object the establishment of an agricultural college supported by State appropriations and by the Land Scrip Fund of the Federal Government.

Through the efforts of the Watauga Club, the Legislature of 1885 passed a bill, introduced by Mr. Augustus Leazar, the main features of which provided:

1. "That the Board of Agriculture should seek proposals of donations from the cities and towns of North Carolina, and when an adequate donation should be made by any city or town, there the school should be located, giving the place the preference which offered the greatest inducements."

2. "That the school should be under joint control of the Board of Agriculture and directors from such town or city."

3. "That instruction should be in woodwork, mining, metallurgy, practical agriculture, and such other branches of industrial education as may be deemed expedient."

4. "That the Board of Agriculture should be authorized to apply annually $5,000 of the surplus funds of their department to the establishment and maintenance of said school."

Pursuant to the act of the General Assembly, when proposals for the school were advertised, Charlotte responded with the offer of an eligible site and $5,000 in cash; Kinston offered $10,000; Raleigh offered $5,000 (increased subsequently to $8,000), the Exposition Building at the State Fair Grounds, valued at $3,000; one acre of land, donated by Mr. William Stronach, and the use of twenty acres of land by the Directors of the State Fair.

The location of the College in Raleigh was brought about largely through the efforts of the Industrial School Committee of the City Board of Aldermen. Members of this committee were Messrs. G. E. Leach, F. O. Moring, and J. Stanhope Wynne.

In April, 1886, the committee appeared before the Board of Agriculture and, on behalf of the city of Raleigh, increased the original offer of $5,000 to $8,000. The offer was accepted, and negotiations were pending for letting the contract to build when certain events occurred that changed the whole story of the institution.

Farmers' clubs through North Carolina, and Colonel L. L. Polk, through the columns of the *Progressive Farmer*, had, for some years, advocated

the establishment of an agricultural college which would be supported, in part, by the Federal Land Scrip Fund. On the 18th of January, 1887, a mass meeting of the farmers, held in Raleigh, passed a resolution to the effect that the farmers needed an agricultural college, and "that the Land Scrip Fund be diverted from the University and applied thereto."

On January 18th the following resolution was adopted by the Raleigh Board of Aldermen:

"Inasmuch as the farmers' meeting, recently held in this city, composed of worthy citizens of many counties of the State, resolved to request the General Assembly to establish an Agricultural College, and as there exists a popular impression that the proposed institution will receive the sanction of the Legislature, and as the City of Raleigh has agreed to give the sum of $8,000 in money, together with the building of the State Exposition, and by consent of the directors of the State Fair the use of about 20 acres of land for the establishment of an Industrial School and an experiment farm; and further, that inasmuch as Mr. R. Stanhope Pullen, a citizen of Raleigh, has, through our committee, offered to the Board of Agriculture, whose duty it has become under a statute of the State to appropriate the sum of five thousand dollars annually for the establishment and maintenance of an Industrial School, 8 2/3 acres of valuable land conveniently located for the said school; and finally, as the board believes there exists no good reason why the two enterprises should not be united, it is therefore *Resolved*. That the Board of Aldermen of the City of Raleigh, in view of the foregoing facts, and in order to meet the views of the most important class of our citizens, the farmers, has agreed that should the Legislature conclude to establish an Agricultural College that it would, in their opinion, be the part of wisdom, to accomplish the greatest good to all of our citizens, to unite the Agricultural and Industrial Schools; that should such a course be adopted, they recommend that the combined institution be called the College of Agriculture and Mechanic Arts of North Carolina.

"That should the said institution be established at or adjacent to Raleigh, on land which will be donated for this purpose, that the City of Raleigh will agree that the grants or offers heretofore made to and accepted by the Board of Agriculture shall be applied, with the consent of the said board, to such College of Agriculture and Mechanic Arts of North Carolina.

"*It is further Resolved*. That these resolutions and preamble shall be laid before the General Farmers' Convention, to be held in this city on the 26th inst., for their consideration, and also before the appropriate committee of the General Assembly for their action thereupon.

"The Board of Aldermen learns and states with pleasure, by authority, that R. S. Pullen, who has heretofore offered the Board of Agriculture a tract of land of about 9 acres, which tender meets the approval of the said Board of Agriculture, as the land lies conveniently near the State Experiment Farm, will, in case the above named Agricultural and Mechanical College be established in the same, donate about 60 acres of

land, to include the 9 acres and connected therewith, to the State of North Carolina for the purpose of said College.

"The Board of Aldermen would, therefore, include this generous offer as a part of the grants heretofore tendered, should the combined institution be established with the support of the State of North Carolina.

"The Board of Aldermen would respectfully state that it will meet their approval for the management of the proposed institution to be directed as the wisdom of the General Assembly may determine, and that the City of Raleigh does not insist that any part of the management of the same shall be put under its control."

Two days later, January 26, 1887, another great mass meeting of farmers and working men, called together in Raleigh by Colonel Polk from forty counties, passed the following resolutions:

1. "That the time has come to establish an Agricultural and Mechanical College in accordance with the Land Scrip Act.

2. "That the interest from the Land Scrip Fund should be paid to the College.

3. "That a sufficient amount from the general treasury be appropriated and available convict labor be used to build, equip, and maintain the College.

4. "That the surplus funds of the Agricultural Department be utilized in this connection.

5. "That the payment of the Land Scrip Fund to the College should not diminish the appropriations to the University.

6. "That the fund and property of the Industrial School, including donations of the City of Raleigh, in accordance with a resolution of its Board of Aldermen, be turned over to the proposed college."

The above resolutions were incorporated in a bill which passed its final reading before the General Assembly on March 3, 1887, and the new institution was established as the "North Carolina College of Agriculture and Mechanic Arts."

The dividing line between Pullen Park, the tract of land given to the City of Raleigh by Mr. R. Stanhope Pullen, and the sixty acres donated to the College by the same gentleman, together with the original walks and driveways, were located in this manner: Mr. Pullen walked ahead of a plow, held by a small negro boy, and Mr. J. Stanhope Wynne led the mule over the lines indicated by Mr. Pullen.

The cornerstone of Holladay Hall was laid on August 22, 1888, the address being made by Mr. W. J. Peele, of Raleigh, one of the charter members of the Watauga Club and a staunch supporter of industrial education.

The College opened October 3, 1889, with seventy-two students and a teaching and administrative staff of eight. Alexander Q. Holladay was the first president, 1889-1899; followed by George Taylor Winston, 1899-

1908; Daniel Harvey Hill, 1908-1916; Wallace Carl Riddick, 1916-1923; Eugene Clyde Brooks, 1923 1932.

The General Assembly of 1917 changed the name of the College to The North Carolina State College of Agriculture and Engineering.

In 1931 the General Assembly passed a law consolidating three of the State's institutions of higher learning. The first section of this law reads as follows:

"That the University of North Carolina, the North Carolina State College of Agriculture and Engineering, and the North Carolina College for Women are hereby consolidated and merged into 'The University of North Carolina.'" (Chapter 202, Public Laws of North Carolina, 1931.)

ORGANIZATION

The College comprises the School of Agriculture and Forestry, the School of Engineering, the School of Science and Business, the Textile School, the Department of Education, Graduate Instruction, College Extension, the Agricultural Experiment Station, the Agricultural Extension Service, and the Summer School. The Engineering Experiment Station is an integral part of the School of Engineering, and Textile Research of the Textile School. In each of the undergraduate schools are the departments which furnish the courses of instruction. The courses offered in each are grouped according to definite vocational aims, and students entering will be directed first to elect a vocation. This selection determines the program of studies to be pursued.

There are thirty-six major vocations open to young men in the State, for which State College offers from four to seven years training for technical, scientific, and professional service. Thirty years ago these vocations, when filled at all, were filled for the most part by unskilled workers. But the world has moved rapidly during this period of thirty years. Many new discoveries and inventions have been made, and many new social combinations have been effected, requiring a better understanding of human relationships and the need of business and social coöperation. As a result, there has developed a great body of technical and professional knowledge derived from new experiences, and leaders in these larger vocations must not only become masters of the essential technical and professional knowledge, but have a clearer understanding of the human relationships demanded in this age, because of the rapidly increasing tendency of human elements to coöperate in large organizations.

These vocations are classed today among the learned professions, and those who would become successful leaders must secure that broader cultural training which will equip them to participate properly in the civic affairs of their communities, because these vocations are having such a tremendous effect upon the civic life of our State and Nation.

LOCATION

The North Carolina State College is located within the limits of the City of Raleigh, a mile and a quarter west of the State Capitol. Of the

four hundred and eighty-six acres of land owned by the College, thirty acres are in the campus, thirty-five in orchards and gardens, fifteen in the poultry yards, and the remainder in the experiment farm.

Varieties of possibilities in agriculture and engineering are found here or within easy reach. The workings of the State Government in all its functions, departments, and institutions can be observed at close range by the students of the College. Few colleges combine in equal degree the opportunities of the country and the advantages of a city as does State College.

BUILDINGS

Holladay Hall contains the executive offices of the Dean of Administration, the Registrar, the Treasurer, the Dean of Students, and the offices and classrooms of the Department of Education, and of the Reserve Officers Training Corps.

Peele Hall is a new three-story building. It contains offices and classrooms of the School of Science and Business.

Primrose Hall has been remodeled for the use of the Department of Geology. It contains offices, classrooms, and laboratories.

Tompkins Hall is occupied exclusively by the Textile School for instruction and research. The building is equipped with a large variety of machinery and apparatus to be used in research and in teaching the latest processes of textile manufacturing and textile chemistry and dyeing.

Winston Hall contains the offices, classrooms, and laboratories for the departments of Chemistry and of Chemical Engineering.

Page Hall houses the department of Mechanical Engineering. It contains offices, drafting rooms, blueprint room, aeronautics laboratory, hydraulics laboratory and internal combustion laboratory. Classrooms for Mechanical Engineering, and the offices of the Dean of Engineering. It also contains classrooms for Mathematics.

Shops Building. The Shops Building is located south of Page Hall and contains the wood, foundry, forge, and machine shops, and the Mechanical Engineering Instrument Rooms and Laboratory.

Ricks Hall provides offices for the Coöperative Agricultural Extension Service, the Dean of Agriculture and Director of the Agricultural Experiment Station, the Department of Agricultural Economics, Department of Forestry and Poultry Department, together with classrooms and laboratories.

Patterson Hall is occupied by the departments of Agronomy and Botany.

The Zoology Building contains offices for the Director of Instruction of the School of Agriculture, and classrooms and laboratories for the Department of Zoology, and has a modern insectary.

The Ceramics Building contains classrooms, offices, a large machine laboratory with full-size equipment, a large kiln laboratory, and seven small laboratories for special equipment for instruction and research.

Polk Hall contains classrooms, offices, laboratories, and equipment for instruction and research in animal industry and in dairy manufacturing.

It provides the classrooms, museum, and laboratories in instruction and research in Horticulture and Landscape Architecture.

The Electrical Engineering-Physics Building provides modern facilities for Electrical and Architectural Engineering and Physics. It contains classrooms, drawing rooms, offices, and laboratories, designed for instruction and research in these fields.

The Civil Engineering Building houses the departments of Civil and Highway Engineering, including Construction and Sanitary Engineering, Industrial Engineering, and the Engineering Experiment Station.

The first floor is occupied on the south end by the Engineering Experiment Station, consisting of offices, laboratories, and museum, and the office of the N. C. Board of Registration for Engineers and Land Surveyors. The north end contains the highway laboratory and computation rooms, with modern equipment and apparatus for this division.

The east side provides for department shops and surveying instruments. On the second floor are the offices and classrooms, two large drawing rooms, a general assembly room, permanent record rooms, and blue-print room.

The D. H. Hill Library, completed in 1926, is a structure of recognized architectural beauty, designed in the post-colonial of the Jeffersonian period, the style of Monticello and of the buildings of the University of Virginia. It consists of a large portico of Georgia marble columns and the usual Colonial type of brick. It is simple and dignified in its treatment.

Pullen Hall, the College Auditorium, has a seating capacity of 1,000. The space on the lower floors contains classrooms and offices used by the department of English.

The Dining Hall consists of two wings, each 133 by 54 feet, connected by a large, well-equipped kitchen and serving pantry. In the basement there is a bakery, a cold storage plant, ample storerooms, the Students Supply Store, and the College Laundry. In the dining-rooms there are accommodations for 1,600 students. There is operated in this building modern cafeterias, supplying to those students who do not care to avail themselves of the regular dining service a place to secure meals at moderate cost. The equipment throughout is of the latest type.

The Infirmary, a two-story brick building with wards, single rooms, diet kitchen and offices, is well equipped to care for student patients.

Owen Hall (formerly First Dormitory), provides offices for all student publications: *Agriculturist*, *Agromeck*, *Southern Engineer*, *Technician*, and *Wataugan*. The building also provides headquarters for Student Government.

The Frank Thompson Gymnasium, opened for use in 1924, is one of the largest and best-equipped gymnasiums in the South. The gymnasium proper has a playing floor 110 x 130 feet, large enough to accommodate three full-size basketball courts. About 2,500 spectators can be seated at indoor contests. In addition, there is an auxiliary gymnasium which

is used for recreation by the students and faculty members and by the smaller classes in physical training. The swimming pool, 75 x 35 feet, handsomely tiled, is located under its own glass roof, but is connected with the basement proper, which contains ample showers, lockers, storerooms, varsity training rooms, and rooms for visiting athletic teams. Classrooms and offices are on the first floor.

The Young Men's Christian Association Building is the home of the greater part of voluntary student activities. The main floor has a large lobby, with open reading and game rooms, an auditorium, a banquet hall, several bedrooms for visitors, and offices of the association and of the College publications. The upper floor contains two large society halls and rooms for Bible study classes.

The Central Heating Plant furnishes light, heat, and power to all the buildings. The plant and its equipment are of modern type, and so arranged as to be used for instruction.

Barns, Greenhouses, and Poultry Plants. In addition, there are a number of service buildings for the different departments of the College. The College barns house the dairy herd, the work animals, and the sheep and swine herds. There are six greenhouses on the campus operated in conjunction with the instruction and research in horticulture, zoology, and botany. A poultry plant is provided, with ample buildings including an incubator and feed house, judging laboratory, and a fattening and storage house. Breeding houses for special matings and experimental work and four large houses in which the four special strains of S. C. Rhode Island Red, White Wyandotte, S. C. White Leghorn, and Barred Plymouth Rock are bred.

College Warehouse. This building contains the Manager's office of the Service Department and Superintendent of Buildings, room assignments and supplies for Central Plant.

THE DORMITORIES

The College has sufficient dormitory space to house comfortably a thousand students. The dormitories are operated under the direction of the Superintendent of Buildings.

FRESHMAN HOUSING

Freshmen, with the exception of certain self-help students and those students desiring to live with relatives, are required to room in the Freshman Quadrangle, consisting of Fourth, Fifth, Sixth, and South Dormitories. A group of faculty members and appointed seniors with high rating live in the Quadrangle to serve as personal counsellors to new students.

Fourth Dormitory contains rooms with hot and cold running water, and new bathrooms, conveniently located, have been installed. The building is three stories in height and accommodates 46 students.

Fifth and Sixth Dormitories, each three stories in height, provide quarters, together, for 144 students. Bathrooms are located on each floor, and both buildings are of fireproof construction.

Seventh Dormitory is three stories high and has one hundred rooms, and will accommodate 200 students. Each room has running water, and tiled bathrooms are located in each section on each floor. The building is of fireproof construction.

South Dormitory is four stories in height and accommodates 228 students. There is a tiled bathroom in each section.

1911 Dormitory has three stories and houses 240 students. Its remodeling was completed in the summer of 1930.

Watauga Hall has 54 rooms, is three stories high, and accommodates 108 students. Tiled baths are installed, and with its central location it is now one of the most desirable college homes on the campus.

LABORATORIES, SHOPS, AND FACILITIES

Agricultural Economics and Rural Sociology

The Department of Agricultural Economics and Rural Sociology is supplied with modern laboratory facilities. The department has at its disposal several large well-lighted rooms for offices, classrooms, and laboratories. By special arrangement with one of the large calculating manufacturing companies, the supply of calculators is adjusted to the need for them. In addition the department is supplied with adding machines and other calculating devices, including an 80-column Hollerith tabulating and sorting machine. Charts on practically every phase of agricultural economics are in the possession of the department or are available to it through the courtesy of the United States Department of Agriculture. A large number of maps of farms located in various parts of the State are also available for study and to use for purpose of illustration of principles and practices. For the study of farm management and farm organization, the department has collected during the past five years detailed records on approximately one hundred farms. An up-to-date file of bulletins is maintained for reference, covering all phases of agricultural economics and rural sociology.

In reality, the State is a laboratory of the department. The department is constantly making studies in economics of production, marketing, finance, taxation, and prices, as well as studies in such rural social problems as rural population, rural organization, family living, and community life. All of these studies furnish material for the student, and also for the instructor in preparing and developing the courses of instruction. It is significant to note that much of this work is done in coöperation with the United States Department of Agricultural Economics and other agencies of the Federal government. This arrangement brings the student in contact with various governmental officials and also supplements the department's personnel

Agricultural Engineering

The offices, classrooms and shops devoted to Agricultural Engineering are located in Patterson Hall and the Shops Building. The laboratories are equipped with the latest labor-saving farm equipment for seedbed preparation, planting, cultivating, harvesting, and crop preparation practices. These machines are furnished by the leading farm machinery manufacturers of the nation, and are replaced from time to time as new improvements are developed. Special effort is made to have on hand all types of farm equipment suitable for use in the best practices in the production of farm crops.

Farm conveniences in the form of water systems for the home and farm, individual electric light plants, farm gas engines, tractors, septic tanks, etc., are well represented.

The Farm Buildings Laboratory is equipped with drawing tables, supply cabinets, and models of all types of farm buildings construction.

Laboratory equipment for soil conservation work as related to terracing, gully control, etc., consists of well-equipped sets of surveying and leveling instruments.

Field areas in crops, vineyards, orchards, and pastures are available for practice work in the use of farm equipment, and for drainage and erosion control practices.

A complete bulletin library of agricultural engineering material is maintained for student reference.

Agronomy

Field Crops.—The equipment for teaching Field Crops consists of standard apparatus and official types for the study and determination of the market grades of cotton, tobacco, corn, small grains, and forage crops. Other equipment consists of a specimen garden located on the College farm; specimens of cultivated varieties of field crops and their seeds.

Soils.—The soils laboratories are equipped with the facilities for instruction in general and advanced work in soil management, soil fertility, fertilizers, and in soil classification and surveying. Samples of most of the North Carolina soil types as well as many samples from other states are available for study. The information on the classification, distribution, composition, crop adaptation, and fertilizer requirements of North Carolina soils which has been accumulated by the Experiment Station affords valuable material for student use. Facilities for field and laboratory work on the physical and chemical properties, classification, and fertility of North Carolina soils are unusually good.

Animal Husbandry

The space devoted to Animal Husbandry is equipped to instruct students in the profitable types of farm animals, how to handle them so as to get the best returns, how to select breeding stock, and how to feed all classes of farm animals. The students in this department feed and pre-

pare animals for the block, actually doing the slaughtering, and cutting the meat to be sold in a market which is conducted by the students.

The dairy barns contain more than seventy registered cattle representing four breeds. In many ways the herd of dairy cattle owned by this institution is one of the best to be found. A sufficient number of swine are kept to give the students practice in every phase of the industry. The same is true of horses, sheep, and beef cattle.

The dairy is especially well equipped with modern machinery to give instruction in the testing of milk and its products, creamery buttermaking, ice cream making, and in the handling of market milk. There is adequate refrigerating equipment for cold storage of meats as well as dairy products.

Architectural Engineering

For instruction in Architectural Engineering there are provided: a working library of books, measured drawings and plates for reference and research, and a large collection of lantern slides to supplement the lectures on historical architecture. Freehand drawing and rendering are taught with the aid of casts and models provided for this purpose.

The department has taken over the entire top floor of the Electrical Engineering-Physics Building. This provides three commodious drafting rooms, a studio and freehand drawing rooms, a large and well fitted lecture and stereopticon room, and an adequately equipped photographic laboratory.

Botany

Well-lighted laboratories are available, equipped with tapering tables for microscopic work. The bacteriology rooms are supplied with the necessary autoclaves, ovens, and incubator space. The plant physiology laboratory has a greenhouse adjoining it, which is equipped with tables for experimentation in addition to the regular benches. An additional greenhouse is available for plant disease research. The necessary herbaria have been developed to adequately support the various botanical courses. A botanical library is open for student use.

Ceramic Engineering

The Department of Ceramic Engineering occupies its own building, in which is located classrooms, a design room, graduate research laboratory, grinding and forming laboratory, glaze laboratory, screen room, drying laboratory, plaster and mold room, and kiln laboratory.

The Ceramic Engineering laboratories are well-equipped for experimental, testing and research work. New additions to the apparatus each year assure the student of contact with the latest advances in ceramic equipment and processes.

The laboratories are equipped to produce, on a laboratory scale, structural clay products, pottery and whitewares, glasses, refractories, metal enamels, insulating materials and cements and plasters.

Equipment consists of crushers, gyratory and vibrating screens, blungers, a dry and wet pan grinder, hydraulic and hand presses, a laboratory auger machine with deairing attachment, filter press, ball mills and glaze and enamel equipment.

In the drying laboratory are electric and closet dryers fully equipped with control instruments.

In the kiln room is a large down draft kiln, a muffle kiln for glazing and enameling, a load test furnace, three high temperature furnaces, an expansion furnace and an assay furnace. The kilns and load furnace are equipped with the latest type Maxim Premix gas burners. All kilns and furnaces are equipped with draft gauges and temperature measuring instruments.

The graduate research laboratory is completely equipped for making silicate analyses and contains balances, microscope, volumeters, potentiometer and an electric furnace.

Chemical Engineering

The laboratories of the department of Chemical Engineering occupy the ground floor of Winston Hall. The available space has been divided into an exhibit room; Water and Engineering Materials laboratory; Electrochemical Engineering laboratory; Fuel and Gas Technology room; Oil and Hydrogenation laboratory; Experimental Rayon plant; Destructive Distillation installation; dark room for metallographic and microphotographic study; the Graduate Research laboratory; Unit Processes laboratory; plant and equipment design laboratory; cellulose laboratory.

The Chemical Engineering laboratories have suitable equipment, much of it specially designed, for the study of the main processes and plant problems of the chemical engineering industries. They are supplied with direct and alternating current, gas, water, steam, compressed air, electric motors, generators, and storage batteries. They are equipped with precision and control instruments, such as refractometer, surface tension apparatus, polariscope, potentiometer, microscope, colorimeter, calorimeters, tint-photometer, thermocouples, and optical pyrometer. They are equipped also with filter presses, centrifuges, crushers, grinders, and pulverizers, vacuum pan, stills, autoclave, jacketed kettle, gas, water, and electrical meters, equipment designed and built such as double effect evaporators, heat exchangers, flow of fluid experimental equipment for orifice, venturi, pitot, weir gauges, column still, absorption tower, crystallizer, rotary and tunnel driers, gas furnace, resistance and arc electric furnace, and humidifier. An experimental refinery and hydrogenation plant for vegetable and other oils has been installed. A complete permutit water-softening equipment forms a unit of an experimental water purification and treatment system. In addition, the industrial plants of the city offer opportunity for study of plant operation and problems.

There has been recently added to the department of Chemical Engineering a valuable exhibit room, where products of many of the Chemical Engineering industries are exhibited. These exhibits are used for in-

structional purposes and serve to give the student very valuable training. These exhibits are arranged in the form of flow sheets showing the various steps in manufacturing processes.

The department shop is supplied with machines and tools for building and repairing equipment.

Chemistry

The Department of Chemistry occupies Winston Hall. There are laboratories for Inorganic, Organic, Physical, Qualitative and Quanitative Analysis, and research. All these laboratories are supplied with the necessary apparatus, chemicals, and suction hoods, and all have convenient gas, water, and electric connection.

The Chemical Library is well supplied with reference books and chemical journals.

The Chemical Museum contains specimens of the more common minerals, ores, and chemicals, together with many industrial, chemical and allied products.

There is special equipment for research work by graduate students.

Civil Engineering

The Department of Civil Engineering is located in the new Civil Engineering Building. This building is newly furnished with facilities for taking care of the work; classrooms, laboratories, drawing rooms, and offices. The equipment includes surveying instruments, transits, levels, plane tables, current meters, sextants, planimeters, calculating machines, and blue-printing apparatus.

Construction Engineering

The equipment of the Department of Civil Engineering is available for instruction in Construction Engineering. In addition there is provided a complete file of trade literature and publications, a collection of lantern slides to supplement lectures, and a series of drawings and blue-prints for investigation.

Electrical Engineering

Instruction in Electrical Engineering is given in the Electrical Engineering-Physics Building, which contains the offices, well-arranged recitation rooms, an excellent computing room, a large lecture room and several laboratories.

The Machine Laboratory, sixty by eighty feet, is supplied with power from the college plant, and also through a direct connection with the lines of the Carolina Power and Light Company; two banks of transformers supply two and three phase power, at standard voltages, to any point in the laboratories and lecture rooms. Direct current power is supplied through motor-generator sets and a rotary, with a combined rating of 150 kilowatts. About 300 Kv-a. in generators and motors and 150 Kv-a. in transformers are available for testing and for demonstrations.

A gallery running around the laboratory provides rooms for research and other special investigations; two laboratories with a floor space of fifteen hundred square feet are devoted to electric and magnetic measurements and standardization. An excellent equipment of meters and instruments facilitates the work in the laboratory. In addition there is a laboratory well-equipped with bar, portable and integrating photometers; one for the study of communication systems and high voltage line performances; one for oscillographic measurements, a small shop and a good storage battery equipment.

Engineering Experiment Station

The laboratory of the Engineering Experiment Station is located in the south end of the Civil Engineering Building. It is equipped with machines and apparatus for making many of the physical tests on materials, such as stone, brick, wood and steel. There are two Olsen Universal Testing Machines, one a hand-operated machine of 15,000-pound capacity, and a 150,000-pound electrically driven machine. There are also grinding and shaping machines, diamond core drill, a stone cutting saw, brick rattler, a Deval machine, and numerous smaller pieces of apparatus. The laboratory contains also an improved drum dynamometer, a tire tester, and a road test truck. All of the equipment in the laboratories of the several engineering departments is available for experiment and tests undertaken by the Engineering Experiment Station.

Forestry

Some of the field work of the Department of Forestry is now carried on at the Camp Polk prison farm near the State Fair Grounds, which has a thousand acres of timber land. The supervision of the timber is handled by class projects.

The Poole Woods, six miles east of Raleigh, is a virgin tract containing stands of short-leaf and loblolly pine. This is an area of seventy-five acres that has been acquired for a laboratory and as a last remnant of the virgin stand of timber in this locality.

The George Watts Hill Demonstration Forest, near Durham, is a tract of 1,400 acres which has been given to the College. It contains stands of short-leaf, loblolly pine, oaks, gum, tulip, dogwood, and all of these species in different associations. It is rolling country and serves admirably for the study of forest problems in the Piedmont section.

The MacLean Forest located in Hyde County in the eastern part of the State is in the typical Coastal Plain region. It contains 1,554 acres and is used for demonstration work in the east coast type.

A large tract of land has recently been acquired in Jones and Onslow counties in the southeastern part of the State, which consists of more than 84,000 acres and has the various types of timber found in this region. The large areas of virgin timber make a very complete laboratory for studying forest development and succession.

In all, the Forestry department has available about 87,000 acres on which to do field work, demonstration and research. These areas include the various types found in North Carolina with the exception of the mountain conditions.

The Arboretum area of seventy acres near Raleigh is being developed into an arboretum containing all of the tree species and associated shrubs that grow in this climatic condition. It contains swamp land and upland which adapts it for this use. More than one hundred tree species have been planted in this area.

The Wood Technology Laboratory contains a representative collection of the more common woods and will be gradually extended.

The Timber-Testing Laboratory, in connection with the Engineering Experiment Station, contains the machines for the various timber tests.

Greenhouse space is available for special problems in forest research.

Geological Engineering

The Department of Geology occupies Primrose Hall, which contains classrooms, laboratories, and offices. The equipment includes a varied collection of rocks and minerals for teaching the various phases of geology, laboratory equipment for making qualitative chemical and blowpipe examination of rocks and minerals, microscopes and other optical equipment, a machine for making thin sections of rocks and minerals, geological models, and a collection of topographic maps and geological folios illustrating important features of topography and geology.

Highway Engineering

The equipment at the College for instruction in Highway Engineering is fairly complete, and is constantly being added to and enlarged. The Materials Testing Laboratory in the new Civil Engineering Building is fully equipped for testing all materials used in road building; there is full field equipment for surveys, and modern drawing rooms provided with the necessary furniture and instruments. There is also a large lecture room fitted for the use of lantern slides and motion pictures.

Horticulture

The Department of Horticulture is well equipped in classrooms, laboratory, and field equipment to offer instruction in the several important and diverse fields of horticulture.

Pomology and Small Fruit Culture. The College orchards and vineyards, the laboratories, orchard equipment, a nursery plot, and other facilities are available to treat every phase of fruit-growing from the selection and propagation of varieties to the details of orchard management.

Olericulture and Floriculture. Two modern greenhouses are an important part of the equipment of the department, and are used primarily for experimental and instructional work in these two important and

growing fields of horticulture. Potting rooms, propagation benches. and other more specialized equipment are used to offer both undergraduate and graduate instruction. Land and equipment to demonstrate and study details of commercial olericulture are convenient to the greenhouses.

A physiological laboratory, cytological laboratory, calculating machines, library, greenhouses and land are available to graduate and undergraduate students to carry on special studies. Experiment Station projects conducted by the Experiment Station Staff are also available for study and observation.

Landscape Architecture

General equipment and facilities for instruction are amply provided for in the combined resources of the department of Civil and Architectural Engineering, and Horticulture.

Special equipment and facilities provided by the department of Horticulture include nursery and tree-surgery tools, instruments and supplies; drafting rooms with necessary furniture; poles, pins and tapes for simple measurements and laying out work on the ground; planimeters and slide rule for use in making estimates; periodicals, illustrated folios, nearly six hundred lantern slides; and a first-class nucleus of a standard professional library on the subject.

In Plant Materials extensive collections on the College grounds and at various points in the city furnish an ample supply of all kinds of these materials for both study and use. In addition there are several collections within easy reach for occasional visits and study.

In Design and Construction the College grounds, private properties, and numerous public and semi-public areas and institutions in and about the city provide a wide range of subjects for study and practice. The City of Raleigh itself is a most interesting subject for study in connection with the course in City Problems, since it is one of the very few existing examples of a capital city which was planned in advance of its building.

Mechanical Engineering

The Department of Mechanical Engineering is located in Page Hall. This building is completely furnished and includes the offices for the members of the teaching staff and classrooms and drafting rooms.

Drafting Rooms. The drafting rooms are equipped with tables, stools, cases for boards, reference files, and models. The senior drafting room has two Universal Drafting machines in addition to other necessary equipment. The blueprint room contains a blueprint machine and sheet washer in addition to sun frames.

Shops. The Shops Building contains the offices of the instructors in the shops and also contains completely equipped shops for instruction purposes.

The Wood Shop is equipped with a large variety of modern machines, such as: lathes, combination saw, dado saw, cut-off saw, jointer planes, mortisers, sanders, moulder, sticker, trimmer, shaper, boring machine, band saw, jig saw, all kinds of clamps, a glue room with electrical glue

heater, and other essentials that go to make an up-to-date shop. These machines are driven electrically with either individual or group motors. There are many work benches, and much auxiliary equipment.

The shops and the shop recitation room are well lighted, heated, and ventilated.

The Foundry Equipment consists of a 36" cupola, a 14" cupola, brass furnace, core oven, core machine, molding machines, cleaning mill, motor driven elevator, emery wheel and buffer, and the necessary tools and patterns for practical molding.

The Forge Shop is equipped with forty anvils and forges, the blast for the forges being produced by a large power blower and regulated by an individual control on each forge easily accessible to the operator. The shop is also equipped with a modern down-draft type exhaust system, thereby eliminating all overhead pipes which would interfere with the proper and efficient lighting of the shop. Other equipment consists of: a special gas furnace for the heat treatment of steel, an oxy-acetylene welding outfit, drill press, iron shears, vises, emery wheel and other necessary forging equipment.

Laboratories. The Aeronautics Laboratory is located on the basement floor of Page Hall. This laboratory is equipped with a thirty-two inch vertical return wind tunnel, using the National Advisory Committee on Aeronautics' system of balances. The arrangement of the tunnel is such that the National Physics Laboratory system may be used and with wind velocities up to sixty miles per hour. A complete set of flight instruments is available for study, experimental, and test purposes. The laboratory houses, in addition to the major components of many well-known airplanes, a complete airworthy biplane. Because the internal combustion engine and hydraulics laboratories are adjacent, aircraft engine testing and hydrodynamics are included in the Page Hall laboratories.

The Mechanical Engineering Laboratories are equipped with instruments and apparatus for making coal and gas analyses, oil tests, and steam, gasoline and oil engine efficiency and economy tests. The steam engines installed include plain slide valve, automatic cut-off, and uniflow engines. The latter operates a two stage air compressor. There is also a triple expansion marine engine and a turbo-fan set. The Power Plant is equipped and used for complete boiler, steam engine, and turbo-generator tests. The laboratory is also equipped with 50,000 and 15,000 pound materials testing machines.

The Metallurgy Laboratory is well-equipped for advanced work dealing with the structure and physical properties of metals and alloys. The equipment includes an electric heat-treating furnace with rheostat control, pyrometers of the optical and thermocouple types, complete apparatus for the polishing and etching of specimens, including a three-wheel polishing machine, metallurgical microscopes fitted with a variety of lens combinations, dark rooms for photographic work and photoelastic equipment.

A complete laboratory for heating and ventilation work is in the process of development.

Physics

The Physics Department occupies the north end of the new Physics and Electrical Engineering Building. The design of laboratories and classrooms and the modern furniture make for high teaching efficiency. Laboratories and lecture tables are served by complete distributing systems for gas, water, and electricity, the latter connecting with the central power room and switchboards of the department and the power house. Six smaller rooms are provided for private research.

In apparatus the department is especially well equipped for laboratory work and for advanced research. A bequest of the late William Kearney Carr added much to the general collection of demonstration apparatus and facilities for research in X-rays and in Sound. Duplication of the most modern types of laboratory apparatus has made it possible to have the whole of each class working on the same experiment simultaneously. A library of Physics periodicals has been kept for many years, affording ready reference for those in research.

Located on the top of the Physics-Electrical Engineering Building is the Astronomical Observatory. Under the dome is a 5-inch equatorially mounted refracting telescope. Beside it is the chart, instrument, and radio room, making a good equipment for the teaching of General Astronomy. Also the latest type of radio receiving apparatus is installed in this room for use in connection with research and the radio laboratory below.

Poultry Science

The College maintains a modern poultry plant with four major breeds of poultry as best adapted to North Carolina conditions. Facilities for practical experience and teaching have been stressed in the construction of this plant, students having opportunities to observe and carry out feeding and feed mixing, selection and mating of poultry, culling, incubating and brooding, fattening, caponizing, and various methods and practices of marketing. The plant contains 23 acres, has four commercial houses, 24 brooding and rearing houses, and a capacity of 1,800 birds.

In conjunction with the production plant a special disease plant is maintained in which investigational work is carried out on the poultry disease problems of North Carolina.

In Ricks Hall the department maintains a poultry disease research laboratory, a diagnostic laboratory, candling and grading room, sticking and picking laboratory, incubation room, disease museum, seminar room and educational laboratories.

Sanitary Engineering

The equipment of the Department of Civil Engineering, including the Materials Testing Laboratory, is available for instruction in Sanitary Engineering. Equipment is provided for routine chemical and bacteriological tests for the proper control of Water Purification and Sewage Disposal plants. The Raleigh Water Purification Plant and the gymnasium swimming pool filter plant are available for practical instruction

and demonstration. Coöperation with the Bureau of Sanitary Engineering of the State Board of Health, which is located in Raleigh, offers an exceptional opportunity for the study of all phases of Sanitary Engineering.

Textiles

In equipping the Textile School with machinery the aim has been to secure, as near as possible, ideal mill conditions. The essential principles of cotton yarn and fabric manufacturing can be fully illustrated on any of the standard machines, but in order to have ideal mill conditions, machines from different makers are included in the equipment so that the students may have the opportunity of becoming familiar with all the standard makes of textile machinery.

Carding and Spinning. For the purpose of giving instruction in the manufacture of fine and coarse yarns, a full equipment of the necessary machinery is provided. This machinery is located on the top floor of the building, and consists of pickers, cards, drawing, speeder, spinning, spooling and twisting frames, also a complete equipment of combing machinery for the production of fine yarns.

Knitting. This department is equipped with a variety of circular knitting machines for making ladies' hose and mens' plain and fancy half hose. It is also equipped with loopers, bottle bobbin winder, Universal winder, balances, etc.

Weaving. This room contains a larger variety of looms than can be found in any mill. These have been carefully selected so that the students may obtain a knowledge of the different cotton, rayon, and silk looms made in the United States. The equipment contains looms to produce such fabrics as prints, sheeting, denims and twill fabrics, ginghams, fancy shirtings, plush and dress goods, as well as leno and jacquard fabrics.

On this floor, also, is located the jacquard card-cutting and lacing equipment, and in a separate room silk throwing equipment, consisting of silk and rayon winder, 5.B. spinner, warping and beaming machine.

The development of the weaving industry in North Carolina for the past few years has been along diversified lines, and many fancy cotton, rayon, and silk fabrics are now manufactured in this State. The weaving equipment in the school has been especially selected so that textile students may be trained in the technique of manufacturing high-grade fabrics.

Designing and Fabric Analysis. A full equipment of design boards for single and double cloths are provided in the classrooms. Dies for cutting samples and different makes of balances are provided for the analysis of fabrics.

Dyeing. The Dye Laboratory is provided with a full equipment of analytical balances and other apparatus necessary for experimental work. It is also well fitted up with appropriate work tables and apparatus for experimental dyeing, dye-testing, color-matching, and the testing of dyed samples by light, acids, and alkalies.

The Dye House is equipped with the proper dyeing machinery needed in the dyeing of larger quantities of material and the giving of instruction in boiling out, bleaching, and dyeing of raw stock, skeins, warps, and piece goods.

Research Laboratories. Two laboratories are provided with the necessary apparatus to test cotton and rayon yarns and fabrics for moisture content and tensile strength, and for the analysis of starches and oils, photomicrography and other research.

Zoology

The space devoted to Zoology is equipped to present the various subjects and to carry on research in its own and related fields. The Entomology laboratory has a large insectary with necessary equipment. The Genetics laboratory is provided with the usual equipment, and has an especially large collection of breeding animals for research and instruction in this field. The beekeeping laboratory is well provided with apparatus to illustrate all phases of beekeeping. A small apiary is maintained on the College grounds. The technique and graduate laboratories are especially well equipped for the teaching of graduate work. The museum contains a synoptic collection illustrating most groups of animals.

COLLEGE PUBLICATIONS

State College Record, issued monthly, contains announcements of official activities of the College. One issue constitutes the institution's catalog which sums up the work for the current session and outlines that for the following college session.

The Extension Farm News, with a circulation of 3,500 among farmers, club members and agricultural experts, is issued monthly, and is the official organ of the School of Agriculture.

Bulletins of the Experiment Stations in Agriculture and Engineering and of other departments are issued from time to time, as projects are completed.

The North Carolina State Alumni News is the official organ of the General Alumni Association.

STUDENT ACTIVITIES

Students attend college to fit themselves for a technical business life. While here they are therefore expected to be businesslike in their habits, to be prompt in their attendance, and regular at classes, shops, drills, and all other duties. To prepare themselves for their daily work, students are expected to observe in their own rooms the regular morning and evening hours of study, and to be absent from the College only at the regular specified periods.

Students are expected to keep their rooms neat and sanitary; to refrain from disturbing one another by noise in the buildings or on the grounds—in short, to conduct themselves in their college home with the same courtesy, self-respect, and propriety as in their own homes.

Student Government

The first Constitution of Student Government was granted by the Board of Trustees in 1921. Student Government in State College, therefore, has already passed the experimental stage. Its service to the administration of the College, its effect on the student body, and its introduction of students to the great problem of government have made it an important factor in the life of the College.

The governing body is entirely under the jurisdiction of the Student Council. There are fourteen members on the Council and they are elected as follows: Three members elected from each of the four schools, and one member elected from the freshman class at large at the beginning of the second term.

The Student Council has complete control of the legislative, judicial, and executive functions of the government it represents. It is the purpose of Student Government to handle all matters of student conduct, honor, and general student interest; and to promote, in campus life, self-control, personal responsibility, and loyalty to the College and student body.

Young Men's Christian Association

The Young Men's Christian Association is a fellowship whose primary purpose is to win boys and men to Jesus Christ, to associate them in Christian living, and to help them to discover and to accept the full meaning of Christian discipleship for their own lives and for society.

The program work of the Association is carried on by a junior-senior cabinet, a sophomore council and a freshman council. The governing board is composed of eleven directors and there is an employed staff of three. Since 1913 the Association has had a building on the campus, made possible by a large gift from Mr. John D. Rockefeller and smaller gifts from many other friends. This building is the religious and social center of the campus and, in addition, has recreational features.

Societies, Clubs, and Fraternities

Alpha Mu, a local sorority, was organized in 1932, in order to instill a spirit of coöperation and friendship among the women students at State College. The primary purpose of this organization is to encourage a happy, wholesome college life for the women of State College.

The International Relations Club was organized to create and further interest in domestic and foreign affairs and is open to members of the faculty and students who are in sympathy with its aims.

The Monogram Club of North Carolina State College was reorganized in April, 1930. The purpose of the club is to develop true sportsmanship in all athletics; to create a spirit of coöperation among athletes, students, coaches, faculty members and alumni; to create and maintain respect and pride for the Monogram, and to regulate the wearing of athletic Monograms and Numerals.

Phi Epsilon, an organization exclusively for young women, promotes friendship among the women on the campus, improves opportunities for

their participation in campus activities and fosters the social and cultural association of its members. An adviser is ever ready to give counsel in individual or group problems.

The Red Masquers is an organization for the purpose of play production on the campus. It is entirely a student-body effort toward dramatic work and has progressed to the production of three-act plays.

The Agricultural Club, composed of students in Agricultural Education and Forestry, meets regularly and sponsors the Agricultural Students Fair and the Annual Barn Warming.

The Forestry Club consists of students in Forestry, and meets regularly for the discussion of topics in this field. The club takes part in intramural sports and general college activities.

The State College Grange is a student branch of the National Grange. Its chief purpose is to train Grange leaders. Students in Agriculture and Education, and also adults eligible to membership in regular Granges, are eligible to membership.

The Horticultural Society was organized by the students to stimulate greater interest in and to foster a better understanding of the educational value, research, professional possibilities ,and ideals of horticulture.

The Aeronautic Society has as its purpose the promotion of the technical phases of aeronautics. The society admits to membership students enrolled in any department of engineering, who are interested in aeronautics.

The Beaux-Arts is composed of students in Architectural Engineering and Landscape Architecture. Its purpose is the discussion of problems met in the practice of the profession.

The American Ceramic Society has established a student branch in order to promote interest in Ceramic Engineering and to prepare students for membership in the parent society.

The Chemical Engineering Society is a student chapter of the American Institute of Chemical Engineers. Seniors, juniors, and sophomores in Chemical Engineering are active members, and freshmen are associate members. Chemical Engineering subjects and problems are discussed. Members on graduation are eligible for junior membership in the A. I. Ch. E.

The Civil Engineering Society is the student chapter of the American Society of Civil Engineers. The students eligible to membership are seniors, juniors, and sophomores in Civil Engineering. Freshmen are eligible as associate members. After graduation members are eligible for junior membership in the national A. S. C. E. Bi-monthly meetings are held for discussions of Civil Engineering subjects.

The Construction Engineering Society is a student chapter of the Associated General Contractors of America. This chapter has the distinction of being the first one organized in this country, and it contributes materially to the professional advancement of the sophomores, juniors and seniors eligible for membership.

The Electrical Engineering Society is a student branch of the American Institute of Electrical Engineers. There is great interest in the discussion of papers, inspection trips, and addresses by visiting engineers.

The Industrial Engineering Society is a student branch of the National Society for the Advancement of Management into which the former National Society of Industrial Engineers has been merged with the Taylor Society. State College S. I. E. was established in 1934 and meets regularly twice a month for discussion of industrial engineering matters.

Keramos, the national professional Ceramic Engineering fraternity, has established a chapter, to which juniors and seniors of good character and high scholarship are eligible. Membership is a mark of distinction in Ceramic Engineering.

The Mechanical Engineering Society is a student branch of the American Society of Mechanical Engineers. The society is composed of seniors and juniors in Mechanical Engineering. It meets twice a month for the discussion of engineering subjects.

The Engineers' Council is the student organization representing the entire Engineering School. The membership is composed of two seniors, a junior and one professor from each of the Engineering departments. The organization publishes quarterly a student technical magazine, and during the spring term provides for the Engineers' Fair and Exposition.

Theta Tau, a national professional engineering fraternity, installed Rho Chapter at State College in 1924. The total membership in the chapter now exceeds two hundred. The purpose of the fraternity is to develop and maintain a high standard of professional interest and to unite the members in a strong bond of fraternal fellowship.

The Business Club, composed of students in Business Administration and Industrial Management, is organized to bring about a closer contact between students and faculty and to have discussions with representative men of business in an effort to develop the professional attitude.

Delta Sigma Pi is a professional business fraternity. Beta-Delta chapter was established at State College in 1929. Its principal objects are to foster the study of business, to encourage scholarship and the association of students for their mutual advancement by research and practice, to promote a closer affiliation with the commercial world and to further a higher standard of commercial ethics and culture.

The Tompkins Textile Society meets twice a month to hear addresses from leaders in the textile industry, discuss textile topics, or hear reports upon articles in textile journals.

Social Fraternities. Fifteen national Greek-letter fraternities and two local Greek-letter fraternities have chapters at State College. The majority of these fraternities occupy chapter houses near the college campus. The work of the fraternities is coördinated through a local Interfraternity Council.

Honor Societies

Alpha Zeta, National Honorary Agricultural Fraternity, established the North Carolina chapter at State College in 1904. It strives to encourage scholarship and develop leadership personality and character in agricultural students. Membership is limited to students having high scholastic standing and who have given promise of developing into leaders in the field of agriculture.

Blue Key, National Honorary Leadership Fraternity, is a working organization of members of the junior and senior classes. It strives to promote a spirit of fraternalism among the students through studying, discussing, and furthering the best interests of State College.

Gamma Sigma Epsilon is an honorary chemical fraternity. Alpha Beta chapter of North Carolina was established at State College in 1921. Its purpose is to promote scholarship and develop leadership in the field of chemistry. At the bi-weekly meetings, the members discuss chemical topics of importance.

The Golden Chain, Senior Honor Society, was organized at State College in 1926. The purpose is to foster prevailing traditions and to promote new traditions. Citizenship is the determining factor. Such qualities of citizenship as better athletics, highest standards of scholarship and government, clever expression, and fidelity to duty are prerequisites to membership in this society.

Kappa Phi Kappa, a professional education fraternity, established the North Carolina Alpha-Sigma chapter in 1931. The purpose is to promote the cause of education by enlisting men of recognized character and ability to study and practice its principles.

Lambda Gamma Delta is the honorary agricultural judging fraternity. Its aims are to promote and stimulate interest in agricultural endeavor. Students making any one of the national intercollegiate judging teams—Livestock, Horticulture, Poultry, or Farm Crops—are eligible to membership.

The Order of 30 and 3 is an honorary organization founded at North Carolina State College in 1931, recognizing leadership ability, scholarship, interest in college welfare, and good character. Eleven of the outstanding sophomores are elected during the winter term of each year. The club fosters high ideals, better school spirit, and support of all activities for the promotion of the best in student life.

Phi Eta Sigma Fraternity, Freshman Honor Society, was installed at North Carolina State College in 1930. Members are chosen from the freshman class following their first term in college. The purpose of the society is to recognize and encourage high standards of scholarship at the beginning of students' college careers.

Phi Kappa Phi, a national honor society with forty-five chapters, has as its primary purpose the promotion of scholarship in all branches of learning. Having both faculty and student members the society seeks also to cultivate high ideals and cordial relations within its membership.

Phi Psi is a national professional Textile Fraternity. Its objects are to promote good fellowship among men of the Textile Schools, to encourage a high standard in textile work, and to assist, by all honorable means, the advancement of its members.

Pi Kappa Delta, national honorary public-speaking society, established the North Carolina Alpha chapter at State College in 1925. Its purpose is to promote intercollegiate contests in debate and oratory, and to provide suitable recognition for students who represent the College in these activities.

The Pine Burr Society was founded at State College in 1922. Its purposes are to encourage high standards of scholarship, to develop leadership in all worth-while organizations on the campus, and to preserve the history of the College.

Scabbard and Blade, National Honorary Military Society, founded in 1905, has at present local units in 82 colleges and universities. Its purpose is to raise the standard of military training in the R.O.T.C. and promote good fellowship among cadet officers.

Sigma Pi Alpha, National Honorary Language Fraternity, Alpha chapter, was founded at State College in 1927. The object of this fraternity is to stimulate an interest in and to acquire a more intimate knowledge of the language, life, customs, and culture of Spanish-speaking and other countries of the world, and to bring about a better understanding of them. Student membership is limited to those who have an unusual interest in languages and who have a high scholastic average.

Sigma Tau Sigma promotes scholarship among students in the Textile School. Members are elected on the basis of their standing in scholarship.

Tau Beta Pi, the National Honorary Engineering Society, established the North Carolina Alpha chapter at State College in 1925. The purpose is to promote scholarship among engineering students. The requirements for admission are high, and election to Tau Beta Pi is considered a signal honor.

EVENTS

The Students' Agricultural Fair is an annual occasion when the students in Agriculture have the opportunity to display the work of the various departments in which they are interested. It is held in connection with the North Carolina State Fair.

The Engineers' Celebration, in the Spring Term presents a comprehensive Exposition of the activities, interests, and equipments of the departments of the School of Engineering, the Engineers' Parade with representative and original floats, and the Grand Brawl with its impressive induction of qualified seniors into the Order of the Knights of St. Patrick.

The Textile Institute and Style Show is an annual event which affords Textile students an opportunity to display the products of their school.

The home economics departments of North Carolina colleges for women coöperate with the Textile School in staging the Style Show which is usually held about the middle of April.

FORENSICS

State College's record in intercollegiate forensics places it among the two or three leading schools in the United States. During the past five years State College speakers have won over forty major National, Southern, South Atlantic, N.C.I.F.A., and state championships in debating, oratory, extemporaneous speaking, after-dinner speaking, and impromptu speaking. The Direct Clash debate plan was originated at State College four years ago, and since that time our debate teams have traveled over 19,000 miles by special invitation to demonstrate this new and difficult form before conventions and audiences in all parts of the country. They have twice appeared on the program of the National Association of Teachers of Speech, once in Los Angeles and once in New York City.

But despite the school's brilliant record in intercollegiate competition, emphasis has been put on providing training for every student interested in public speaking. An average of thirty students each year take part in the various school and inter-school contests. Any student of reasonable intelligence and industry is assured of at least three intercollegiate debates each year and the chance to take part in as many more as his ability and rate of improvement will justify. In addition, some eighteen semester hours of classroom instruction in public speaking are offered in the curriculum.

MUSIC

The Band has gradually grown in size and quality until now it has become a first-class, well-balanced symphonic band of 70 pieces, with a comprehensive music library and a splendid equipment of instruments, to which additions are made from time to time.

The Concert Orchestra and the Glee Club are being developed according to the same high standards. Vocal Quartet and Chamber Music Ensemble work are also encouraged.

There is a demand for all the musical organizations of State College in other towns as well as for local civic affairs and on the campus.

Mu Beta Psi (National Musical Fraternity). The purpose of this fraternity is to promote a better fellowship among the musicians of the various musical organizations of a college and among the musicians of the various musical organizations of the different colleges; also to advance music to its proper place as an educational subject. Juniors having served two years in some musical unit are eligible to membership.

STUDENT PUBLICATIONS

The Student Publications Association, composed of eighteen members, supervises publications for students of the College. Each publication, the student body and faculty are represented. The publications offer a good medium for practice in journalism, in addition to serving the College community.

one of the options offered by the School of Education, so that students desiring to major may do so. The present demand is for teachers of mathematics, science, and history, who are also qualified to teach physical education and coach.

RULES OF ELIGIBILITY

North Carolina State College is a member of the Southern Conference and subscribes to its rules of eligibility for intercollegiate athletic contests.

MILITARY TRAINING

Military Training at the North Carolina State College of Agriculture and Engineering is organized in a department called the Reserve Officers' Training Corps (R. O. T. C.). This department is one of the major divisions of the College. Instruction in Military Science and Tactics is divided into two periods of two years each. The first two years for Freshmen and Sophomores embrace the basic courses, and the last two years for Juniors and Seniors, the advanced courses.

All Freshmen who register for enrollment are given a thorough physical examination. Physically acceptable Freshmen and Sophomores are required to take the basic courses in Military Science and Tactics. Those under-classmen who for cogent reasons, desire exemption from these required courses, must submit formal application in writing to the Dean of Administration through the Professor of Military Science and Tactics. Students excused from taking the basic military courses are required to take alternative courses in the Humanities or Social Sciences.

Credit is given by the Military Department to all students who have satisfactorily completed all or part of the basic military courses prior to enrollment in this College.

The advanced courses for juniors and seniors are elective. A student, upon successful completion of the advanced courses in Military Training, may, if he so elects, receive a reserve commission and be assigned to a reserve unit, normally in his own locality.

While the R. O. T. C. is designed under the National Defense Act of Congress to qualify students for positions of leadership in time of national emergency, it also affords to the College a means for practical training in organization, leadership and discipline which will be of value to its graduated students in an industrial or professional career. The theoretical courses have an element of general educational value.

The Federal government not only furnishes officers of the regular army as instructors, but it also assists very materially by supplying, without cost, equipment and uniforms to all R. O. T. C. students, and by providing pay for those who volunteer to take the advanced courses for juniors and seniors. The amount paid by the Federal government to each R. O. T. C. student during the junior and senior years is approximately $200.00.

Although the government furnishes necessary military uniforms and equipment, the College finds it desirable to require each student to make a small deposit as a guarantee against the return of such government clothing and equipment as is issued him. The student must also provide himself with a pair of low tan shoes. For the sake of uniformity, these must be purchased at the College. Other incidental expenses cost each freshman about $1.25 annually.

North Carolina State College not only has one of the largest Reserve Officers' Training Corps units in the Fourth Corps Area, comprising the eight states of North Carolina, South Carolina, Georgia, Florida, Alabama, Tennessee, Mississippi and Louisiana, but also has one of the best R. O. T. C. units in the South. It is organized as an infantry regiment of three battalions, with an excellent regimental band of sixty student members.

The training is conducted so as to emphasize the fundamental importance of good character and to develop the elements of leadership. It seeks to improve the student's general health and appearance. Neatness of clothing is required and the value of correct posture is stressed. Students must be punctual and regular in attendance in classes, drills, and other military duties.

INFORMATION FOR APPLICANTS

Classification of Undergraduate Students

A *regular student* is one who desires to pursue one of the standard curricula offered by the institution.

A *special student* is one who is admitted to take certain subjects. An individual of mature age, already engaged in a trade, occupation, or profession, may, upon the recommendation of the Dean of the School in which he desires to register, be admitted as a special student without fully meeting the entrance requirements in order to further improve himself in his vocation. Special students are required to present a record of their previous education when applying for admission. Special students are not eligible for a degree, cannot represent the institution in intercollegiate contests, and cannot become members of fraternities. Work completed by special students does not give college credit and cannot be used toward a degree.

Requirements for Admission to Undergraduate Schools

(See Graduate School for Graduate Admission)

There are two bases for the admission of regular students:

1. Graduates from a standard high school (a high school which is accredited by the State Department of Public Instruction) are eligible for admission without an examination.

2. (a) Graduates of four-year non-standard high schools may be admitted by passing successfully the College entrance examination prepared by the Examination Committee of the North Carolina College Conference.

(b) In exceptional instances a person of mature age may be admitted by the Dean of the School on the basis of his ability to carry the regular work of a curriculum in that school. This ability shall be determined by examinations, which shall include a psychological test.

Each applicant for admission must be at least sixteen years of age, and must have a certificate of good moral character from the school last attended. A regular student, although admitted to college, must meet the specific requirements of the school selected.

Any student deficient in specified units may, upon the recommendation of the Dean of the School he desires to enter, be admitted, but must make up his deficiencies before the beginning of his sophomore year.

Fifteen units of credit are required for admission to the four-year curricula. A unit is defined as a subject pursued in an accredited high school for five periods a week throughout the year, each period being at least forty minutes.

The specified subjects are as follows:

	Units of Credit
English:	
Grammar and Composition	1
Literature for Study	1
Literature for Reading	1
History:	
*American or equivalent	1
Mathematics:	
Algebra to Quadratics	1
Algebra, Quadratics through Progressions	.5
Plane Geometry	1
**Solid Geometry	.5
Science:	
Any one listed below	1

Besides these required subjects, an applicant must present from the specified subjects or the following elective list enough credits to total fifteen units.

Elective Subjects

(The figure in each subject represents the maximum number of credits which will be acceptable. Less than that number may be offered. The total acceptable units in each group include those offered in the specified subjects.)

Science Group:	
Biology	1
Botany	1
Chemistry	1

* A student lacking American History will be admitted without condition but must elect nine hours in American History or Government as part of his credits toward graduation.

** Required in the School of Engineering only. Students having entrance condition in Solid Geometry will be required to take a special course to remove it.

Commercial Geography	.5
General Science	1
Physics	1
Physiology and Hygiene	1
Physical Geography	1
Zoology	1
Language:	
English	4
French	2
German	2
Latin	4
Spanish	2
History and Social Science:	
American or equivalent	1
English	1
General	1
Medieval and Modern	1
Ancient	1
North Carolina	.5
Civics	1
Sociology	1
Economics	1
Mathematics:	
Algebra	2.5
Business Arithmetic	1
Plane Geometry	1
Solid Geometry	.5
Trigonometry	.5
Miscellaneous (Not over 4 credits):	
Agriculture	4
Bookkeeping	1
Stenography and Typewriting	1
Drawing	1
Mechanic Arts	2
Mill Practice	1
Any other High School subject	1

Explanation

1. In addition to the three specified units in English, a fourth elective unit may be allowed for a full year of advanced work in the subject, including the history of English or American literature.

2. In Science a unit of credit is allowed only when the course includes laboratory. A record of the laboratory work in Science should be kept in a suitable note-book, and certified by the teacher of the subject or the principal or superintendent of the school.

3. In Foreign Modern Languages one unit of credit is allowed for each year's work. The first year's work should cover the grammar and about 200 pages of translation.

4. In Latin one unit each is allowed for grammar and composition, Cæsar (Books I-IV), Virgil (Books I-IV of the Æneid), and Cicero (six orations).

5. Standard high school textbooks are recommended for all subjects.

Certificates

Certificates must be presented on official College Admission blanks furnished by the College Registrar. These must be signed by the proper officials of accredited high schools or other preparatory schools of approved standing. These certificates must be submitted to the Registrar for approval. It is of distinct advantage to the applicant to send in his certificate as early as possible after the work is completed, but no certificate should be submitted until all work done for college entrance is entered on the certificate blank.

Certificates mailed to the College should be directed to the Registrar's office.

Advanced Standing

Students who have attended colleges of approved standing will be allowed credit for work done upon the presentation of proper certificates to the dean of the school in which they expect to register. At least one years' work in residence is required for an undergraduate degree.

Vaccination

Each applicant for admission is required to be vaccinated against smallpox before he can be admitted unless he has been successfully vaccinated within two years preceding his registration. Since inoculation against typhoid fever has become a standard preventive measure, parents are requested to have their sons inoculated before coming to College. However, this is not compulsory. The College offers a treatment free to all students. Therefore, there is no valid reason why any student should contract this disease if he will avail himself of this preventive of a disease to which young men are sometimes peculiarly susceptible.

Health of Students

We strive to protect the health of our students in every possible way. Each student is given a thorough physical examination when he enters college. If defects are discovered which can be corrected by special exercise the student is placed in a "Corrective Class" under supervision of a special instructor in our Department of Physical Education.

In case of illness, the student is sent to our College Infirmary where a resident nurse is on duty at all times. Our College Physician visits the Infirmary regularly once each day, and more often when necessary.

Your attention is called to the following regulations governing care of the sick:

"The hospital and medical fee provides hospital service, general medical treatment, and the services of a hospital nurse for students of the College who pay this fee.

"It does not provide for surgical operations, nor private nursing. Neither does it include the services of dentists and eye, ear, nose, and throat specialists, except as they are called in for consultation by the College Physician."

Parents will be notified immediately in case of accident or serious illness of their sons, and no surgical operations will be performed, except in cases of extreme emergency, without full consent of parents.

Student Assemblies

The College Auditorium is not large enough to accommodate a joint assembly of all classes. The freshman class will meet twice each week. Wednesday at twelve o'clock the entire freshman class will meet in an Assembly in Pullen Hall. Friday the freshmen meet by schools with the dean or chairman of a department or an adviser appointed by the dean of the school. Sophomores will meet in an Assembly in Pullen Hall on the second Friday in each month. Juniors and seniors will meet in an Assembly in Pullen Hall on the first Friday in each month. Attendance on these assemblies is required.

Grades and Credits

The minimum passing grade in any course is 60 per cent. The following system is used in reporting the grades of students: A, 90 to 100 per cent, inclusive; B, 80 to 89 per cent, inclusive; C, 70 to 79 per cent, inclusive; D, 60 to 69 per cent, inclusive; F, for all grades below 60 per cent. Where the grade F is reported to the Registrar the student must repeat the course in class before he shall receive credit for the course. A student may be given an incomplete grade (I) if some specific portion of his work remains unfinished at the end of the term, provided his standing in the course has been of grade C or higher.

An incomplete grade, which is not removed by the end of the first term in which the student is in residence after receiving it, automatically becomes a failure.

The following system will be used in assigning "quality points" for the graduation requirements: A, 3 points per term credit; B, 2 points per term credit; C, 1 point per term credit, and D, 0 point per term credit. Students who enter with advanced standing are allowed one point for each term credit accepted on transfer.

In order that a student may reënter for any term he must have passed the following percentage of his term credits during the preceding term: Freshman, 50 per cent; sophomore, 60 per cent; junior, 60 per cent, and senior, 60 per cent.

A student, who is not eligible to reënter regularly in any term under the foregoing scholarship rule, may be permitted to proceed on probation in the succeeding term upon due consideration by the Scholarship Committee, and vote of the Faculty Council.

Every student who fails more than three credit hours shall be required to drop one half the number of hours he fails, or as near that number of hours as may be mathematically possible. The reëntrance of a student after the lapse of a term following that in which his eligibility was forfeited shall be decided by the Director of Instruction of his school upon the basis of maximum scholastic advantage to the student. This rule also applies to students applying from other institutions.

Credit is allowed upon a course only when the course is entered on the student's roster filed with the Registrar and Director of Instruction of his school.

Before allowing students to enter the third or fourth year, they shall have net credit points equal to or greater than the term credits carried. (In case of repeated courses, the repeated grade only shall be considered.)

This means that before advancing to the third or fourth year, students must have made an average of at least a "C" grade.

The minimum number of hours required for graduation in each school will be found in the description of courses, and so forth, under each school.

Right to Withhold Diploma

When the College grants a degree it places its stamp of approval upon a student, both as to his scholastic achievement and as to his character. The College therefore reserves the right to withhold a diploma for other reasons than poor scholarship.

Absence From Class or Examination

When a student is accepted for admission to State College, it is understood that he comes here with the desire and expectation of attending all his College duties as they are assigned to him.

The College faculty expects a student to attend every class, and no "class cuts" are allowed.

For class absences a student will lose one credit point for each three absences, except when the student is absent while engaged in activities authorized by the College, or except upon the presentation of a doctor's certificate showing that he was not well enough to attend class.

When a student has been absent from class, he must give his reason to the Dean of Students within one week from the date of the absence; otherwise, the reason for the absence will not be accepted.

If a student is absent from class ten times during a term, twenty times during a year, or sixty times during four years, he is automatically placed on probation and his parents and instructors are notified.

Students absent from class without a satisfactory reason while "On Probation" are subject to suspension or dismissal upon recommendation of the Committee on Discipline and approval of the Faculty Council.

There shall be a double loss of points for all college work missed on the two days preceding and on the two days following the authorized College holidays.

If a student is absent from any final examination without an official excuse his grade will be reported as "failure."

EXPENSES

The total college expense of a student will vary according to the taste and requirements of the individual, but need not exceed $425.00 for students from within the State or $500.00 for those from outside the State. This amount includes the cost of board, tuition, lodging, heat and lights, fees and deposits, books, drawing instruments, laundry, and certain necessary incidentals. It does not include an allowance for clothing, pocket money, and contingencies.

Freshmen in Engineering, Forestry, Landscape Architecture, Industrial Management, Textile, and Teachers of Industrial Arts, will be required to purchase drawing equipment which will cost from $15.00 to $25.00, depending upon the completeness of the set and the quality of the material.

Tuition and Fees

The College is organized and operated on the basis of a full scholastic year as a unit. All tuition charges, room rents and fees, therefore, are for the full scholastic year, and are due and payable in advance, but for the convenience of the student, and at his option, may be paid in two installments in September and January.

Tuition and fee charges are due and payable in full at registration, or may be divided in two equal installments, payable at registration in September and January. The charges for tuition and fees are as follows:

Undergraduate Tuition and Fees

Tuition and regular fees for students residing in North Carolina amount to $167.00 for the year; for other students, $247.00. If the student elects to pay one half in January, the amounts are as follows:

FOR SEPTEMBER REGISTRATION

	Students Residing in North Carolina	Other Students
Tuition	$ 40.00	$ 80.00
*College fees	32.00	32.00
**Student Activity fees	4.00	4.00
Athletic fee	8.00	8.00
Total September to January	$ 84.00	$ 124.00

* These fees include Registration, Hospital and Medical, Library and Lecture, Laboratory and Classroom and Physical Education. Students living out of college with their parents need not pay the hospital and medical fee amounting to $8.00. Women students do not pay the $6.00 Physical Education fee.

** These fees include student government, student publications and general student activities. Students in Agriculture and Agricultural Education pay $4.00 additional. Students in Engineering pay $1.00 additional.

FOR JANUARY REGISTRATION

Tuition	$ 40.00	$ 80.00
College fees	32.00	32.00
Student Activity fees	4.00	4.00
Athletic fee	7.00	7.00
Total	$ 83.00	$ 123.00

The above fees are for all regular undergraduate students, and for special students carrying twelve or more credit hours per term. Special students carrying less than twelve hours per term pay the same fees as graduate students.

Students entering after the date of registration will be required to pay an extra fee of $5.00.

A deposit of $10.00 is required of each student in the Reserve Officers Training Corps to indemnify the College against the loss of Military Equipment. All unused portion of this amount is returned to the student at the end of the year. Students in the Reserve Officers Training Corps will require approximately $6.00 for shoes and other supplies.

Graduate Tuition and Fees

Graduate students, and special students carrying less than twelve credit hours per term, will pay a matriculation fee of $5.00 (payable only once) and $3.00 per term per credit hour. This payment includes tuition and College fees, but does not include student activity and athletic fees which are optional with graduate and special students.

Room Rents

Reservation of rooms in the College dormitories should be made in advance. Assignment of rooms will be made on receipt of the first payment, provided such payment is made on or before August 15. Reservations will be held until then, after which time, rooms for which no payments have been received will be assigned to others.

Room rent, including heat, light, and janitor service, varies from $72.00 to $45.00 per student per year, depending on the size and location of the room.

After June first, prospective students can secure detailed information, including floor plans of the various dormitories by addressing the Superintendent of Dormitories, North Carolina State College, Raleigh, North Carolina.

Payments of rent are due on August 15th, and on registration days in January and March.

Total Room Rent	Payable August 15	Payable January	Payable March
$72.00	$24.00	$24.00	$24.00
67.50	22.50	22.50	22.50
63.00	21.00	21.00	21.00
58.50	19.50	19.50	19.50
54.00	18.00	18.00	18.00
45.00	15.00	15.00	15.00

Refunds

A student withdrawing from College within ten days from the date of entrance shall be refunded the amount paid, less the registration fee and a reasonable charge for board, lodging, and services while in College.

A student withdrawing from College later than ten days from the date of entrance shall receive no refund, except for board and military deposit. Refunds for board shall be under the usual regulations governing withdrawal from the dining hall.

A room reservation may be canceled at any time before September 1, and in case formal notice is given the Superintendent of Buildings in writing before that date the full amount paid will be refunded.

A student withdrawing from a dormitory room regularly assigned and occupied for a period of ten days shall be entitled to no refund.

What a Student Needs for His Room

The College rooms are supplied with necessary furniture. Each student, however, should bring with him his own blankets, bed linen, and towels.

Board

Board at the college is on a cafeteria basis. Students may pay cash for each meal or purchase a book of tickets at a ten per cent discount from the cash price.

The dining halls are modernly equipped and thoroughly sanitary. They are operated as a non-profit service agency, and all food served is of the very best and is purchased at the lowest possible cost.

The price of board will naturally vary with the trend of commodity prices and the individual desires of the student. Board for the average student will probably range from eighteen to twenty-two dollars per month.

Self-Help

An employment bureau for students is maintained in the Y. M. C. A., and, while the College does not guarantee to furnish work, many are assisted in finding positions where they can earn enough to help them pay at least a part of their college expenses. The work supplied is of various kinds, the most common being manual labor of one sort or another, although there are at times requests for stenographic, clerical, and other skilled help. A large number of students earn their board, or room, or both, by working in boarding houses, the college boarding department, or private homes. In general, a student is expected to work three hours a day for his board, and five to ten hours a week for his room, the amount of time in the latter case being determined by the character and location of the room.

Students desiring employment while in college may secure full information by writing to the Self-Help Secretary.

Student Loan Fund

The Alumni Association established in the year 1900 a small loan fund to be loaned to needy students of talent and character. This has been augumented from various sources and now amounts to $29,000.00. This amount includes the Finley Loan Fund, mentioned below, of $1,000.00, the Masonic Loan Fund of $4,500.00, the Frank M. Harper Loan Fund of $200.00, and the Escheats Loan Fund of $10,000.00. Contributions have been received also from C. C. Chamberlain, Chairman Committee Sixth Masonic District Loan Fund, and from the New Bern Masonic Theatre Loan Fund. Loans are made at 6 per cent, and good security is required. As the loan fund is small and is kept loaned out, new loans can be made only as old ones are paid. The fund at present is restricted to students in the senior and junior classes.

Finley Loan Fund. As a memorial foundation to William Wilson Finley, President of the Southern Railway Company at the time of his death, that company has established a Finley Loan Fund for needy students of agriculture. The fund amounts to $1,000.00. This is loaned to students who are making their way through college, and returned by them to the fund after they have finished college and gone to work. It is administered by the Treasurer of the College, and all beneficiaries are named by the College.

Scholarships and Fellowships

The 1933 session of the General Assembly abolished all state scholarships and other forms of free tuition. Part of the law reads as follows:

"It being the purpose of this act that all students in State institutions of higher learning shall be required to pay tuition, and that free tuition be and the same is hereby abolished, except such students as are physically disabled, and are so certified to be by the Vocational Rehabilitation Division of the State Board for Vocational Education, who shall be entitled to free tuition in any of the institutions named in this act."

The John Gray Blount Scholarships are endowed by Colonel W. B. Rodman, of Norfolk, Va., in memory of his great-grandfather. The maximum value of each of these two scholarships is $200.00.

The W. O. Mitscherling Fellowship Fund. This fund is provided annually by Dr. W. O. Mitscherling, of Burlington, N. C., for the benefit of the Chemical Engineering Department, and is to be used in assisting graduate students and for the encouragement of research work.

The Champion Fibre Company Fellowship in Chemical Engineering provides a fund for use in encouraging graduate and research work in Chemical Engineering.

The Morrison Scholarship. This scholarship is given by Mrs. Cameron Morrison, of Charlotte, N. C., to the North Carolina boy or girl who excels in Jersey 4-H Calf Club work and who desires to take a four-year course in Agriculture at State College, majoring in Dairy Husbandry. This scholarship, available first in the fall of 1934, has a value of $320.00, which will pay the tuition for four years.

The Barrett Scholarships. These scholarships are given by the Agricultural Development Bureau of the Barrett Company to the North Carolina club members who excel in 4-H Corn Club work. These scholarships will be available in the fall of 1936 and consist of one four-year scholarship, valued at $320.00, and three one-year scholarships, valued at $80.00 each.

The Chilean Nitrate Leadership Award. In order to promote interest in a continuous program of achievements in all phases of 4-H Club work, the Chilean Nitrate Educational Bureau, Incorporated, offers a four-year scholarship in Agriculture, valued at $320.00, to North Carolina State College to the club boy selected as the outstanding club member in the State during 1936.

One hundred scholarships to the State 4-H Summer Short Course, held at State College, are offered to the club boys selected as the most outstanding club members in the State. One scholarship will be awarded to each county in the State. These scholarships have a value of $5.00 each.

The Holladay Scholarship. Mr. Randolph Holladay established in 1936 a four-year scholarship in honor of his father, Colonel Alexander Q. Holladay, LL.D., first President of the North Carolina State College. This scholarship was awarded to a student in August, 1936, for a period of four years.

National Cottonseed Products Association Scholarship. In order to promote interest in baby beef work and to stimulate the value of feeding a balanced ration, the North Carolina Division of the National Cottonseed Products Association offers a one-year scholarship in dairying or animal husbandry at the North Carolina State College of Agriculture to the North Carolina 4-H Club member growing and exhibiting the best baby beef calf during 1936.

The Syd Alexander Scholarship. This scholarship was endowed by Mrs. Mary R. Alexander, of Charlotte, North Carolina, in memory of her husband, the late Sydenham B. Alexander, alumnus and trustee of the North Carolina State College. The principal of the endowment is five thousand dollars. The returns from this endowment are to be awarded to a student in the State College who is a native and resident of Mecklenburg County, North Carolina, and who is pursuing a course in the School of Textiles of the State College.

MEDALS AND PRIZES

The Alpha Zeta Cup is awarded annually on Scholarship Day to the sophomore in Agriculture who made the highest scholastic average during his freshman year.

Alumni Athletic Trophy. The General Alumni Association presents annually a handsome trophy to the student athlete doing the most outstanding work during the college year.

The American Institute of Chemical Engineers Award is presented annually to the Chemical Engineering sophomore who has made the highest scholastic record during his freshman year.

The Associated General Contractors Prize is awarded each year by Carolina's Branch of the Associated General Contractors of America to that member of the senior class in Construction Engineering who has the best scholarship record for the sophomore, junior, and senior years. The prize consists of a year's special training in construction in the field with pay.

Delta Sigma Pi Scholarship Key. To encourage high scholarship Delta Sigma Pi presents annually at every university and college where it has a chapter the Delta Sigma Pi Scholarship Key, which is awarded by the faculty to that senior who upon graduation ranks highest in scholarship for the entire course in Business.

The Elder P. D. Gold Citizenship Medal has been established by Mr. C. W. Gold, of Greensboro, N. C., member of the class of 1896, in memory of his father, Elder P. D. Gold, of Wilson, N. C.

This medal is awarded to that member of the senior class who has most distinguished himself in Student Citizenship during his sophomore, junior, and senior years.

The award is based on four qualities of citizenship in the college community—Scholarship, Student Leadership, Athletics, and Public Speaking. These four qualifications are certified to by the College Registrar, the Student Council, the Faculty Athletic Committee, and a committee composed of the ranking junior officer in all college societies in which public speaking is practiced.

The Moland-Drysdale Scholarship Cup is awarded to the freshman in the Department of Ceramic Engineering who has the highest scholastic average for the two terms preceding the annual Scholarship Day. In making the award, considerable weight is also given to interest shown in the activities of the department. The cup was presented to the Department of Ceramic Engineering by George N. Moland, of Hendersonville, N. C., president of the Moland-Drysdale Corporation of that city.

National Association of Cotton Manufacturers Students Medal is awarded annually to the Textile student who has the highest proficiency in his work.

Phi Kappa Phi Medals are awarded each year at the Scholarship Day exercises. A gold medal is awarded to the senior who as a junior made the highest grades. A silver medal is awarded to the junior who as a sophomore made the highest grades. A bronze medal is awarded to the sophomore who as a freshman made the highest grades.

The Sigma Tau Sigma Cup is awarded annually on Scholarship Day to the senior in Textile who has the highest scholastic average.

The J. C. Steele Scholarship Cup is awarded annually to the student of the three upper classes in the Department of Ceramic Engineering who

has the highest scholastic average for the three terms preceding the annual Scholarship Day. In making the award the head of the department also takes into consideration the personality of the candidates and the interest shown in the departmental activities during the previous year.

The cup was presented to the Department of Ceramic Engineering by J. C. Steele and Sons of Statesville, to commemorate the establishment in that city of the first plant for the manufacture of ceramic machinery in the South by J. C. Steele.

The School of Science and Business Scholarship Plaque is accorded each year on Scholarship Day to that student who has made the most progress in scholarship during the previous year. The award is unique in that it is for *improvement* in scholarship, the usual method being to award for highest scholarship.

The Textile Colorist Medal is awarded annually to the senior who presents the best thesis on some phase of Textile Chemistry and Dyeing.

THE D. H. HILL LIBRARY

The College realizes that experience in the use of books and periodicals is an essential part of the training of the agriculturist, engineer, industrialist, and scientist. In various courses the student is constantly being referred to books which he is either recommended or required to read. The book collection is being chosen with special reference to the courses offered by the College and to the development of general reading along desirable channels.

The library consists of all books and periodicals belonging to the College. It contains over 43,500 bound volumes, exclusive of government documents, and much unbound material. The library is a depository for the publications of the United States Government and also receives most of the experiment station publications of the different states. In addition there is a collection of foreign agricultural documents.

Two reading rooms with a seating capacity of more than 200 are maintained in connection with the library. There is a large general reference room, one division of which contains encyclopedias, dictionaries, atlases, and general reference books. The other division contains current magazines and state and national newspapers. There is a smaller room which is used for general reading purposes. It is equipped with comfortable furniture and has in it a collection of the best fiction and readable nonfiction. As the purpose of this collection is to promote reading for pleasure, studying is not permitted in the room. The library also offers an elective course in use of the library during the winter and spring quarters. This course is open to juniors, seniors, and others by special permission.

Elementary instruction in the use of the library is given new students during the fall quarter. This includes lectures and problems in the use of the catalog, magazine indexes and reference books.

Hours. The library is open every weekday from 8:00 a. m. to 10:00 p. m., excepting in vacation, when it opens at 9:00 a. m. and closes at

5:00 p. m. On Sundays the hours are from 2:00 p. m. to 10:00 p. m., during the academic year and summer school. The library is closed on Sundays during vacation periods, New Year's Day, Fourth of July, Labor Day, and Christmas Day.

Rules. The rules of the library are designed to facilitate study and promote the use of books. Faculty members may keep books until May 15 of each year with the following exceptions. Fiction, "Open Shelf Collection" books, and bound periodicals are issued for two weeks only unless they are needed for course work. However, faculty members are urged to return all books as soon as their need for them is filled. Books needed for reserve which are charged to faculty members will be recalled when needed. The term Faculty applies to persons of or above the rank of Instructor.

Students and other members of the College community may borrow books for a period of two weeks with the privilege of renewal in most cases.

Books and periodicals which the library does not own can usually be obtained from other libraries through the interlibrary loan system. This service is available to graduate students and faculty members.

Books bought at the recommendation of a department do not consequently become the exclusive property of that department. They are the property of the College, acquired through the library, and are to be so placed as to insure their greatest use to the greatest number of students and faculty members.

In addition to the D. H. Hill Library, the City of Raleigh has many excellent library facilities available to State College students. The North Carolina State Library, the Supreme Court Library, the North Carolina Library Commission and the Olivia Raney Library contain over 150,000 volumes.

THE BASIC DIVISION

BENJAMIN FRANKLIN BROWN, *Dean*

PURPOSE AND ORGANIZATION OF THE BASIC DIVISION

The School of Science and Business will be discontinued on July 1, 1937. Students now registered in curricula offered in the School of Science and Business must complete the requirements for graduation by the June commencement, 1938. The Basic Division will continue the instruction offered in the curricula formerly set up in the School of Science and Business.

With the opening of the school year 1937-38, the Basic Division will supersede the School of Science and Business. The Basic Division will continue to offer the courses of instruction formerly offered by the School of Science and Business, which may be required in the curricula of the several Schools of the College. A further statement will be contained in the next catalog, giving more in detail the functions of the Basic Division.

This Division will ultimately be modeled along the lines of general colleges, which have been established in some of the leading universities of America.

THE SCHOOL OF AGRICULTURE AND FORESTRY

IRA OBED SCHAUB, *Dean and Director of Extension*
ZENO PAYNE METCALF, *Director of Instruction*
RHETT YOUMAN WINTERS, *Director of the Agricultural Experiment Station*

ORGANIZATION

North Carolina is one of the foremost states in the Union in the value of farm crops. The scientific investigations, demonstrations, and instruction of State College, in coöperation with the State Department of Agriculture, have been particularly effective in promoting better methods of farming, and in adopting scientific agriculture. The majority of the people of the State employed in gainful occupations are devoting their energies to some form of agriculture, and the greater part of our wealth and prosperity is derived from this great vocation.

The art of cultivating the soil properly and living well at home, the value of selecting that form of agriculture which is in greatest demand, and the best method of turning the surplus products into commercial channels that will be most profitable to the producer are matters of the greatest concern to the people of the State. The School of Agriculture has been reorganized for the purpose of rendering a much larger service to the State along these and other lines. The Experiment Station and the Extension Service have been more closely united with college instruction, and the courses of study have been so organized and the instruction so broadened as to offer much larger opportunities to young men entering college, and to farmers and other agricultural workers throughout the State.

Beginning a generation ago on a very small scale, the School of Agriculture and Forestry has grown until today it embraces the following important divisions: (a) Agricultural Economics, including Farm Marketing and Farm Management; (b) Agronomy, including Field Crops, Soils, Plant Breeding, and Agricultural Engineering; (c) Animal Industry, including Animal Production, Animal Nutrition, Dairy Production, and Dairy Manufacturing; (d) Botany, including Bacteriology, Plant Physiology and Plant Diseases; (e) Chemistry; (f) Horticulture, including Pomology, Small Fruit Culture. Floriculture, Truck Farming, and Landscape Architecture; (g) Forestry; (h) Poultry Science, including Poultry Diseases, Poultry Breeding, Poultry Feeding, and Poultry Management; (i) Zoology, including Genetics, Entomology, and Animal Physiology.

THE PURPOSE OF THE SCHOOL

The purpose of the School of Agriculture and Forestry is three-fold: (1) To secure through scientific research, experimentation, and demonstration accurate and reliable information relating to soils, plants, and animals, and to secure from every available source reliable statistical, technical, and scientific data relating to every phase of agriculture that might be of advantage to our State; (2) to provide instruction in college for young men who desire to enter the field of general agriculture, or wish to become professionals in agricultural education or specialists in

any field of science related to agriculture, and (3) to disseminate reliable information through publications and through extension agents, and through a wise use of this information to give instruction to the agricultural workers of the State in the scientific, experimental, and practical progress in the various lines of agriculture.

All effective instruction in agriculture is based on research and investigation, and the curricula are organized so that not only the subject-matter for classroom instruction and extension work may be drawn from research, experimentation, and demonstration, but that the students themselves shall have the opportunity to work under the direction of research specialists.

The vocations open to well trained young men in the field of agriculture and the opportunities afforded for distinct service to the State are greater than ever before in our history. In order that the larger vocations in agriculture may be presented to the youth of our State, the courses of study are so organized as to give specific training for the following major vocations:

General Farming.
Agricultural Extension Agents.
Agricultural Specialists in State or Federal Departments.
Stock Raising and Dairying.
Specialists in the Manufacture of Dairy Products.
Foresters.
Fruit Growers.
Truck Farming.
Poultrymen.
Agricultural Specialists in Foreign Lands.

In addition to these major vocations, the School of Agriculture gives instruction in Beekeeping, Floriculture and the basic instruction for teachers of Agriculture.

ADMISSION

Each applicant for admission must present evidence that he has satisfactorily completed a four-year curriculum of not less than fifteen units in a secondary school which is approved by the State Department of Education.

Each applicant for admission must be at least sixteen years old, and must submit fifteen units of credit from an accredited high school. Of these units 8.5 are in specified subjects and 6.5 in elective subjects.

ADVANCED STANDING

Students who have attended other colleges will be allowed credit for work done upon the presentation of proper certificates to the Director of Instruction.

AGRICULTURAL CURRICULA FOR UNIVERSITY AND COLLEGE GRADUATES

Selected courses leading to the degree "Bachelor of Science" in Agriculture are offered to graduates of universities and standard colleges. These are arranged in accordance with the vocational aim of the individual student, and in the light of credits presented from the institution from which the student has been graduated, subject to the approval of his adviser and the Director of Instruction. In cases where the student presents enough credits which may be used for courses required in his curriculum he may be graduated with a B.S. degree in one year. In no case should it take more than two years to complete the work for his B.S. degree.

REQUIREMENTS FOR GRADUATION

The requirement for graduation is the satisfactory completion of one of the curricula outlined below.

A minimum of two hundred and thirty (230) term credits and two hundred and thirty (230) points is required for graduation from the School of Agriculture. The term credits should be distributed as follows: A maximum of sixty (60) term credits in major department, and a minimum of eighteen (18) term credits in Language, twenty-four (24) term credits in Science, eighteen (18) term credits in Social Science, twelve (12) term credits in Military Science or alternative, and six (6) term credits in Physical Education.

Students entering with advanced standing are required, during the remainder of their course, to earn at least as many points as the number of term credits remaining necessary for graduation.

DEGREES

The degrees of Bachelor of Science in Agriculture and Bachelor of Science in Forestry are conferred upon the satisfactory completion of one of the curricula in Agriculture.

The degree of Master of Science in Agriculture is offered for the satisfactory completion of one year of graduate study in residence. Candidates for this degree are enrolled as students in the Graduate School.

The professional degree of Master of Agriculture may be conferred upon graduates after five years of service in Agriculture, and upon the acceptance of a satisfactory thesis.

CURRICULA IN AGRICULTURE

The curricula in Agriculture offer a combination of practical and theoretical work. About half of the time is devoted to lectures and recitations, and the other half to work in shops, laboratories, greenhouses, dairy, poultry yards, and on the College farm.

In order that every graduate of the School of Agriculture shall acquire a liberal education in lieu of specializing too intensely, and shall become a leader having breadth of vision, the curricula in Agriculture contain broadening subjects such as language, literature, history, and social sciences.

GENERAL AGRICULTURE

The basic freshman and sophomore years are outlined below. This curriculum is intended to train students in board basic fields of agriculture. The curriculum of each student is to be arranged in accordance with his vocational aims subject to the approval of his adviser and the Director of Instruction. Students specializing in this curriculum will find vocational opportunities as:

Agricultural Specialists in State or Federal Departments, and Agricultural Colleges.

The School of Agriculture is equipped to train men in the fields of:

1. Agricultural Economics and Farm Marketing.
2. Agricultural Chemistry.
3. Animal Production.
4. Dairy Manufacturing.
5. Entomology.
6. Field Crops and Plant Breeding.
7. Floriculture.
8. Plant Pathology.
9. Pomology.
10. Poultry Science.
11. Rural Sociology.
12. Soils and Fertilizers.
13. Vegetable Gardening.

Agricultural Inspectors.

Most states now maintain inspection of fertilizers, seeds, nurseries, and insecticides. Most cities have special inspectors for city milk supplies. Students seeking vocational opportunities in these fields may elect appropriate subjects in their junior and senior years.

Agricultural Extension Specialists.

Students in this group will find employment as agricultural agents for railroads and commercial firms dealing in agricultural products and as extension specialists in the various fields of agriculture in the Extension Departments of agricultural colleges and as county agricultural agents.

County Agent.

The growing importance of marketing of agricultural products and the need for better organization of farms has given rise to a strong demand for county agents who have had special training in Agricultural Economics.

Agricultural Specialists and Commercial Agricultural Agents.

The School of Agriculture is well equipped to train men for agricultural industries such as manufacturing of fertilizers, livestock and poultry feeds and farm machinery, and for the manufacturing of dairy and horticultural products.

These concerns are usually anxious to obtain men who have had actual agricultural experience, and who, in addition, have had special training in agricultural economics, accounting, and statistics. This field is developing rapidly and offers a fine opportunity for students who wish to enter the purely commercial field.

Agricultural Specialists in Foreign Lands.

The School of Agriculture is well equipped to train men as experts in cotton and tobacco production in foreign lands.

Junior Agricultural Economist.

A position as a Junior Agricultural Economist involves research in Agricultural Economics. Such positions are usually available in the governmental departments such as United States Department of Agriculture and in various State institutions.

Farm Manager.

There is a growing demand for men who have had practical farm experience and who have special training in farm organization and management. This field is practically a new one, and there have been many requests for men with special training in farm management.

Marketing Specialists.

There is a growing demand for men who can manage coöperative marketing and other farmers' business associations.

CURRICULUM IN AGRICULTURE

Freshman Year

COURSES	CREDITS		
	First Term	*Second Term*	*Third Term*
Composition, Eng. 101	3	3	3
General Inorganic Chemistry, Chem. 101, 103, and 105	4	1	4
General Botany, Bot. 102	0	4	0
General Zoology, Zool. 101	4	0	0
Physical Geology, Geol. 120	0	0	4
Economic History, Hist. 101	3	3	3
Mathematical Analysis, Math. 100 a-b-c	3	3	3
Military Science I, Mil. 101, or alternate	2	2	2
Fundamental Activities and Hygiene, P.E. 101	1	1	1
	20	20	20

Sophomore Year

Farm Equipment, Agr. Eng. 130	0	3	0
Soils, Soils 115	0	0	4
General Economics, Econ. 103	3	3	0
Agricultural Economics, Agr. Econ. 260	0	0	3
Physics for Agricultural Students, Phys. 105	5	0	0
Animal Physiology, Zool. 201, or			
Plant Physiology, Bot. 209	0	0	5
Economic Zoology, Zool. 102	0	4	0
General Botany, Bot. 101	4	0	0
Introduction to Organic Chemistry, Chem. 241	0	4	0
Animal Nutrition I, A. H. 101	3	3	0
General Poultry, Poul. 101	3	0	0
Principles of Forestry, For. 104	3	0	0
General Horticulture, Hort. 101	0	0	3
General Field Crops, F.C. 101	0	0	3
Military Science II, Mil. 102, or alternate	2	2	2
Sport Activities, P.E. 102	1	1	1
	21	20	21

CURRICULA IN AGRICULTURAL ECONOMICS AND RURAL SOCIOLOGY

Farm Business Administration Option

For Freshman and Sophomore years refer to page 81.

Junior Year

COURSES	CREDITS *First Term*	*Second Term*	*Third Term*
English	3	3	3
Farm Management I, Agr. Econ. 261	0	0	3
Accounting, Econ. 201	3	3	3
Farm Accounting, Agr. Econ. 262	0	0	3
Statistical Methods, Econ. 212	3	3	0
Shop Work, M.E. 105	2	0	0
Technical Agricultural Courses	3	3	3
Electives	4	6	3
	18	18	18

Senior Year

Agricultural Finance, Agr. Econ. 267	0	3	0
Farm Management II, Agr. Econ. 362	0	0	3
Agr. Engineering, Agr. Eng. 145	0	0	3
Farm Cost Accounting, Agr. Econ. 263	0	3	3
Business Law, Econ. 211	3	0	0
Farm Marketing, Agr. Econ. 265	3	0	0
Soils of North Carolina, Soils 315	0	3	0
Woodworking, M.E. 108	3	0	0
Drawing, C.E. 100	1	1	1
Farm Structures, Agr. Eng. 365	0	0	3
Technical Agricultural Courses	3	3	3
Electives	6	6	3
	19	19	19

Farm Marketing and Farm Finance Option

For Freshman and Sophomore years refer to page 81.

Junior Year

COURSES	CREDITS *First Term*	*Second Term*	*Third Term*
English	3	3	3
Marketing, Econ. 215, and Agr. Econ. 265	3	3	3
Rural Sociology, Rur. Soc. 302	0	3	0
Statistical Methods, Econ. 212-214	3	3	3
Accounting I, Econ. 201	3	3	3
Electives	6	3	6
	18	18	18

Senior Year

Marketing Methods and Problems, Agr. Econ. 366	3	0	0
Cotton and Tobacco Marketing, Agr. Econ. 368	0	3	0
Agricultural Finance Agr. Econ. 367	0	3	0
Agricultural Coöperation, Agr. Econ. 363	0	3	0
Farm Cost Accounting, Agr. Econ. 263	0	3	3
Farm Management I, Agr. Econ. 261	0	0	3
Community Organization, Rur. Soc. 305	0	0	3
Money, Credit, and Banking, Econ. 221	3	3	0
Business Finance, Econ. 223	0	0	3
Business Law, Econ. 211	3	0	0
Technical Agriculture	3	3	3
Electives	6	0	3
	18	18	18

Rural Sociology Option

For Freshman and Sophomore years refer to page 81.

Junior Year

COURSES	CREDITS *First Term*	*Second Term*	*Third Term*
English	3	3	3
General Sociology, Soc. 103	3	3	0
Rural Sociology, Soc. 302	0	0	3
History of Agriculture, Hist. 318	0	0	3
Statistical Methods, Econ. 312	3	3	0
Government, Hist. 209	3	3	3
Accounting, Econ. 201	3	3	3
Electives	3	3	3
	18	18	18

Senior Year

Social Psychology, Soc. 305	0	3	0
Social Pathology, Soc. 301	0	0	3
Farmers Movements, Rur. Soc. 303	3	0	0
The American Family, Soc. 306	3	0	0
Rural Community Organization, Rur. Soc. 305	0	0	3
Population Problems, Soc. 311	0	3	0
Farm Management I, Agr. Econ. 261	0	0	3
Farm Marketing, Agr. Econ. 265	3	0	0
Agricultural Coöperation, Agr. Econ. 363	0	3	0
Technical Agriculture	6	6	6
Electives	3	3	3
	18	18	18

CURRICULUM IN ANIMAL PRODUCTION

For Freshman and Sophomore years refer to page 81.

Junior Year

COURSES	CREDITS *First Term*	*Second Term*	*Third Term*
Dairying, A.H. 208	0	3	0
Swine Production, A.H. 201	3	0	0
Farm Meats I, A.H. 206	0	3	0
Animal Nutrition II, A.H. 211	3	0	0
History of Breeds, A.H. 210	0	0	3
Herd Improvement, A.H. 304	0	0	3
Business English, Eng. 120	0	0	3
Public Speaking, Eng. 160	0	3	0
Southern Writers. Eng 233	3	0	0
Genetics, Zool. 304	4	0	0
Legumes and Grasses, F.C. 205	0	0	4
Chemistry of Vitamins, Chem. 341	0	3	0
Farm Engines, Agr. Eng. 155	0	3	0
Market Grading of Field Crops, F.C. 332	3	0	0
Animal Hygiene and Sanitation, A.H. 221	0	0	3
Electives	3	3	3
	19	18	19

Senior Year

Animal Breeding, A.H. 202	4	0	0
Sheep Production, A.H. 205	0	0	3
Beef Cattle, A.H. 224	0	3	0
Pure Bred Livestock Production, A.H. 310	0	3	0
Stock Farm Management, A.H. 308	0	0	3
Horse and Mule Production, A.H. 209	3	0	0
Senior Seminar, A.H. 220	1	1	1
Incubation and Brooding, Poul. 103	0	0	3
Terracing and Drainage, Agr. Eng. 135	0	0	3
General Bacteriology, Bot. 203	6	4	0
Pomology, Hort. 205	4	0	0
Agricultural Marketing, Agr. Econ. 265	3	0	0
Testing of Milk Products, A.H. 213	0	4	0
Business Law, Econ. 211	0	0	3
Electives	3	3	3
	18	18	19

CURRICULUM IN DAIRY MANUFACTURING

For Freshman and Sophomore years refer to page 81.

Junior Year

COURSES	CREDITS		
	First Term	*Second Term*	*Third Term*
Creamery Buttermaking, A.H. 212	4	0	0
Testing of Milk Products, A.H. 213	0	4	0
Ice Cream Making, A.H. 217	4	0	0
Cheese Making, A.H. 214	0	0	3
Dairy Manufacturing Practice, A.H. 215	0	3	0
City Milk Supply, A.H. 210	0	0	4
Business English, Eng. 120	0	0	3
Public Speaking, Eng. 160	0	3	0
Southern Writers, Eng. 233	3	0	0
Chemistry of Vitamins, Chem. 341	0	0	3
Animal Breeding, A.H. 202	4	0	0
Food and Nutrition, Chem. 344	0	3	0
Animal Hygiene and Sanitation, A.H. 221	0	0	3
Farm Engines, Agr. Eng. 155	0	3	0
Electives	3	3	3
	18	19	19

Senior Year

Dairy Machinery, A.H. 222	0	1	0
Dairy Products Judging, A.H. 223	0	0	1
Dairy Manufactures, A.H. 301	3	3	3
Senior Seminar, A.H. 220	1	1	1
General Bacteriology, Bot. 203	0	4	0
Swine Production, A.H. 201	3	0	0
Animal Nutrition II, A.H. 211	3	0	0
Farm Meats I, A.H. 206	0	3	0
Business Law, Econ. 211	0	0	3
Herd Improvement, A.H. 304	0	0	3
Food Products and Adulterants, Chem. 340	3	0	0
Stock Farm Management, A.H. 308	0	0	3
Agricultural Marketing, Agr. Econ. 265	3	0	0
Farm Accounting, Agr. Econ. 262	0	0	3
Pure Bred Livestock Production, A.H. 310	0	3	0
Electives	3	3	3
	19	18	20

CURRICULUM IN ENTOMOLOGY

For Freshman and Sophomore years refer to page 81.

Junior Year

COURSES	CREDITS		
	First Term	*Second Term*	*Third Term*
Systematic Zoology, Zool. 307	3	3	3
Genetics, Zool. 304	4	0	0
Comparative Anatomy, Zool. 205	0	4	4
Modern Language	3	3	3
Systematic Botany, Bot. 204	0	0	3
Physiological Chemistry, Chem. 342	3	3	0
Public Speaking, Eng. 160	0	0	0
Technical Writing II, Eng. 325	0	0	3
Electives	6	3	3
	19	19	19

Senior Year

Vertebrate Embryology, Zool. 207	5	0	0
Field Zoology, Zool. 309	0	0	4
Applied Entomology, Zool. 301	3	3	3
Modern Language	3	3	3
Beekeeping, Zool. 209	0	0	3
Plant Ecology, Bot. 307	3	0	0
Histology, Zool. 315	0	3	0
Bacteriology, Bot. 203	0	4	0
Electives	3	4	4
	17	17	17

CURRICULUM IN FIELD CROPS AND PLANT BREEDING

For Freshman and Sophomore years refer to page 81.

Junior Year

COURSES	CREDITS *First Term*	*Second Term*	*Third Term*
Genetics, Zool. 304	4	0	0
English	3	3	3
Soil Fertility, Soils 265	3	0	0
Fertilizers, Soils, 310	0	3	0
Cereals, F.C. 201	0	4	0
Legumes and Grasses, F.C. 205	0	0	4
Plant Breeding, F.C. 345	0	0	4
Major Options	5	5	4
Electives	3	3	3
	18	18	18

Senior Year

Major Options	6	6	6
Technical Agriculture	6	6	6
Electives	6	6	6
	18	18	18

CURRICULUM IN FLORICULTURE

For Freshman and Sophomore years refer to page 81.

Junior Year

COURSES	CREDITS *First Term*	*Second Term*	*Third Term*
Public Speaking, Eng. 160	3	0	0
Plant Ecology, Bot. 307	3	0	0
Bacteriology, Bot. 203	0	4	0
Systematic Botany, Bot. 204	0	0	3
Diseases of Fruit and Vegetable Crops, Bot. 202	0	0	3
Genetics, Zool. 304	4	0	0
Economic Entomology, Zool. 201	0	0	4
Plant Propagation, Hort. 102	0	3	0
Soil Fertility, Soils 265	3	0	0
Soils of North Carolina, Soils 315	0	3	0
Fertilizers, Soils 310	0	3	0
Woody Plants, L.A. 216	2	2	2
Terracing and Drainage, Agr. Eng. 135	0	0	3
Plant Materials: Annual and Herbaceous Plants, L.A. 217	0	0	2
Electives	3	3	3
	18	18	20

Senior Year

Business English, Eng. 120	3	0	0
Technical Writing II, Eng. 325	0	0	3
Commercial Floriculture, Hort. 210	3	0	0
Horticultural Problems, Hort. 304	2	2	2
Horticultural Seminar, Hort. 308	1	1	1
Commercial Floriculture, Hort. 210	0	3	0
Experimental Horticulture, Hort. 301	0	3	0
Agricultural Coöperation, Agr. Econ. 363	0	3	0
Rural Sociology, Agr. Econ. 302	0	0	3
Agricultural Chemistry, Chem. 245	3	0	0
Plant Breeding, F. C. 345	3	0	0
Applied Psychology, Psychol. 269	0	3	0
Landscape Gardening, L.A. 204	0	0	3
Electives	3	3	6
	18	18	18

CURRICULUM IN PLANT PATHOLOGY

For Freshman and Sophomore years refer to page 81.

Junior Year

COURSES	CREDITS		
	First Term	*Second Term*	*Third Term*
Business English, Eng. 120	3	0	0
Public Speaking, Eng. 160	0	3	0
Technical Writing II, Eng. 325	0	0	3
Bacteriology, Bot. 203	0	4	0
Diseases of Field Crops, Bot. 201	3	0	0
Diseases of Fruit and Vegetable Crops, Bot. 202	0	0	3
Plant Ecology, Bot. 307	3	0	0
Economic Entomology, Zool. 204	0	0	4
Advanced Morphology, Bot. 303 and 304	3	3	0
Plant Breeding, F.C. 345	3	0	0
Electives	3	8	8
	18	18	18

Senior Year

Plant Microtechnique, Bot. 205	3	0	0
Advanced Plant Pathology, Bot. 301	0	5	0
Mycology, Bot. 305	3	3	3
Soil Microbiology, Bot. 309	0	0	3
Genetics, Zool. 304	4	0	0
Microanalysis of Plant Tissue, Bot. 308	0	3	0
Qualitative Analysis, Chem. 215	4	0	0
Quantitative Analysis, Chem. 211	0	0	4
Electives	4	7	8
	18	18	18

CURRICULUM IN POMOLOGY

For Freshman and Sophomore years refer to page 81.

Junior Year

COURSES	CREDITS		
	First Term	*Second Term*	*Third Term*
Public Speaking, Eng. 160	3	0	0
Business English, Eng. 120	0	3	0
Technical Writing II, Eng. 325	0	0	3
Plant Ecology, Bot. 307	3	0	0
Small Fruit Culture, Hort. 105	3	0	0
Plant Propagation, Hort. 102	0	3	0
Vegetable Gardening, Hort. 209	0	0	4
Soil Fertility, Soils 265	3	0	0
Fertilizers, Soils 310	0	3	0
Terracing and Drainage, Agr. Eng. 135	0	0	3
Plant Materials, L.A. 203	0	2	0
Landscape Gardening, L.A. 204	0	0	3
Genetics, Zool. 304	4	0	0
Economic Entomology, Zool. 204	0	0	4
Applied Psychology, Psychol. 269	0	3	0
Electives	3	3	3
	19	17	20

Senior Year

Bacteriology, Bot. 203	0	4	0
Diseases of Fruit and Vegetable Crops, Bot. 202	0	0	3
Systematic Botany, Bot. 204	0	0	3
Systematic Pomology, Hort. 206	2	0	0
Fruit Growing, Hort. 205	4	0	0
Horticulture Problems, Hort. 304	2	2	2
Seminar, Hort. 308	1	1	1
Experimental Horticulture, Hort. 301	0	3	0
Farm Management, Agr. Econ. 261	0	0	3
Plant Breeding, F.C. 345	3	0	0
Farm Meats, A.H. 206	0	3	0
Agricultural Chemistry, Chem. 345	3	0	0
Rural Sociology, Rur. Soc. 302	0	3	0
Incubation and Brooding, Poul. 103	0	0	3
Electives	3	3	3
	18	19	18

CURRICULUM IN POULTRY SCIENCE

For Freshman and Sophomore years refer to page 81.

Junior Year

COURSES	CREDITS *First Term*	*Second Term*	*Third Term*
English Elective	0	3	0
Technical Writing II, Eng. 325	0	0	3
Public Speaking, Eng. 160	0	0	3
Poultry Anatomy, Poul. 304	3	3	0
Poultry Judging, Poul. 302	4	0	0
Poultry Nutrition, Poul. 303	0	0	4
Preparation and Grading of Poultry Products, Poul. 208	0	3	0
Incubation and Brooding, Poul. 103	0	0	3
Bacteriology, Bot. 203	0	4	0
Genetics, Zool. 304	4	0	0
Vertebrate Embryology, Zool. 207	5	0	0
Cereal Crops, F.C. 201	0	3	0
Farm Management, Agr. Econ. 261	0	0	3
Electives	3	3	3
	19	19	19

Senior Year

Poultry Diseases, Poul. 305	4	4	0
Sero-Diagnosis in Poultry Diseases, Poul. 308	0	0	3
Commercial Plant Management, Poul. 306	0	3	0
Selecting and Mating Poultry, Poul. 201	0	0	3
Senior Seminar, Poul. 310	0	0	3
Swine Production, A.H. 201	3	0	0
Dairy Cattle Milk Production, A.H. 204	3	0	0
Pomology, Hort. 205	3	0	0
Farm Meats, A.H. 206	0	3	0
Rural Sociology, Rur. Soc. 302	0	3	0
Farm Marketing, Agr. Econ. 265	3	0	0
Farm Machinery and Tractors, Agr. Eng. 250	0	0	3
Terracing and Drainage, Agr. Eng. 135	0	0	3
Chemistry of Vitamins, Chem. 341	0	3	0
Electives	3	3	3
	19	19	18

CURRICULUM IN SOILS

For Freshman and Sophomore years refer to page 81.

Junior Year

COURSES	CREDITS *First Term*	*Second Term*	*Third Term*
English Elective or Modern Language	3	3	3
Soil Fertility, Soils 265	3	0	0
Fertilizers, Soils 310	0	3	0
Soils of North Carolina, Soils 315	0	3	0
Qualitative Analysis, Chem. 211, 212, 213	4	4	4
Legumes and Grasses, F. C. 205	0	0	4
Electives	9	6	6
	19	19	17

Senior Year

Soil Technology, Soils 321	3	3	3
Pedology, Soils 320	3	0	0
Soil Conservation and Land Use, Soils 317	0	0	3
Soils Seminar, Soils 350	1	1	1
Bacteriology, Bot. 203	0	4	0
Organic Chemistry, Chem. 321	0	4	4
Drawing, C.E. 100	1	1	1
Electives	10	4	6
	18	17	18

CURRICULUM IN VEGETABLE GARDENING

For Freshman and Sophomore years refer to page 81.

Junior Year

COURSES	CREDITS *First Term*	*Second Term*	*Third Term*
Public Speaking, Eng. 160	3	0	0
Business English, Eng. 120	0	3	0
Plant Ecology, Bot. 307	3	0	0
Bacteriology, Bot. 203	0	4	0
Systematic Botany, Bot. 204	0	0	3
Diseases of Fruit and Vegetable Crops, Bot. 202	0	0	3
Fruit Growing, Hort. 205	4	0	0
Plant Propagation, Hort. 102	0	3	0
Vegetable Forcing, Hort. 211	0	3	0
Vegetable Gardening, Hort. 209	0	0	4
Soil Fertility, Soils 265	3	0	0
Fertilizers, Soils 310	0	3	0
Genetics, Zool. 304	4	0	0
Economic Entomology, Zool. 204	0	0	4
Terracing and Drainage, Agr. Eng. 135	0	0	3
Electives	3	3	3
	20	19	20

Senior Year

Technical Writing II, Eng. 325	3	0	0
Systematic Olericulture, Hort. 212	2	0	0
Small Fruits and Grapes, Hort. 105	3	0	0
Horticultural Problems, Hort. 304	2	2	2
Horticultural Seminar, Hort. 308	1	1	1
Experimental Horticulture, Hort. 301	0	3	0
Home Floriculture, Hort. 228	0	0	3
Agricultural Chemistry, Chem. 245	3	0	0
Plant Breeding, F.C. 345	3	0	0
Plant Materials, L.A. 203	0	2	0
Landscape Gardening, L.A. 204	0	0	3
Agriculture Coöperation, Agr. Econ. 363	0	3	0
Dairying, A.H. 208	0	3	0
Soils of North Carolina, Soils 315	0	3	0
Rural Sociology, Rur. Soc. 302	0	0	3
Electives	3	3	6
	20	20	18

CURRICULUM IN AGRICULTURAL CHEMISTRY

For Freshman year refer to page 81.

Sophomore Year

COURSES	CREDITS *First Term*	*Second Term*	*Third Term*
General Botany, Bot. 101	4	0	0
Economic Zoology, Zool. 102	0	4	0
Animal Physiology, Zool. 201, or Plant Physiology, Bot. 209	0	0	5
Qualitative Analysis, Chem. 211	4	0	0
Quantitative Anaylsis, Chem. 212, 215	0	4	4
Soils, Soils 115	4	0	0
Bacteriology, Bot. 203	0	4	0
Animal Nutrition I, A.H. 101	0	0	3
General Economics, Econ. 103	3	3	0
Agricultural Economics, Agr. Econ. 260	0	0	3
Military Science II, Mil. 102 or alternate	2	2	2
Sport Activities, P.E. 102	1	1	1
	18	18	18

Junior Year

Organic Chemistry, Chem. 321	4	4	4
Physics, Phys. 103	4	4	4
French or German	3	3	3
Elective Chemistry	3	3	3
Elective Agriculture	3	3	3
Electives	3	3	3
	20	20	20

Senior Year

Chemistry Major	7	7	7
French or German	3	3	3
Electives	9	9	9
	19	19	19

AGRICULTURAL ENGINEERING

This curriculum has been arranged to give its graduates sound and fundamental training in engineering, basic training in the agricultural sciences, and a specialized study in courses involving the application of engineering knowledge to agricultural problems.

Due to the great variety of work required of agricultural engineers, a number of subjects peculiar to other curricula are included, so that the student receives a considerable breadth of training. Engineering principles applied to agriculture have played an important part in the advancement and development of agricultural practices. Agricultural engineering as a profession, however, is of only comparatively recent development, but it is rapidly becoming recognized as one of the more important of the engineering professions, since it is identified with the most important of industries—agriculture. This course is especially suited to the boy brought up on the farm, as it prepares him for a professional business, or farming career, and enables him to capitalize on his farm training.

Subdivided on the basis of engineering technique, Agricultural Engineering embraces three general fields: (1) Power and Machinery, including Rural Electrification; (2) Farm Structures, including Sanitation, Materials of Construction and Equipment, and (3) Land Reclamation, which includes Irrigation, Drainage, Soil Erosion Control, and other forms of mechanical improvement of agricultural lands.

Occupations open to graduates are, briefly: teaching, experiment station and extension service positions with colleges and the government; engineers in land reclamation, drainage, or irrigation enterprises; designing, advertising, sales and production work with manufacturers of farm machinery, equipment, and building materials; rural electrification work; editorial work with publishers; appraisal and agricultural engineering consultant service.

CURRICULUM IN AGRICULTURAL ENGINEERING

Freshman Year

COURSES	CREDITS *First Term*	*Second Term*	*Third Term*
Algebra, Trigonometry, and Analytical Geometry, Math. 101-2-3	6	6	6
Composition, Eng. 101	3	3	3
General Inorganic Chemistry, Chem. 101-3-5	4	4	4
Engineering Drawing, II, M.E. 102	3	3	0
Descriptive Geometry, M.E. 103	0	0	3
Military Science I, Mil. 101, or alternate	2	2	2
Fundamental Activities and Hygiene, P.E. 101	1	1	1
	19	19	19

Summer requirement:—Surveying, C.E. 102.

Sophomore Year

Differential Calculus, and Integral Calculus I, II, Math. 201-2-3	4	4	4
Business English, Technical Writing, *Public Speaking Eng. 120, 324, 160, or **Spanish, M.L. 103	3	3	3
Physics for Engineers, Phys. 104	4	4	4
Farm Equipment, Agr. Eng. 130	3	0	0
Farm Engines, Agr. Eng. 155	0	3	0
Soils, Soils 115	0	0	4
Economic History, Hist. 101	3	3	3
Military Science II, Mil. 102, or alternate	2	2	2
Sport Activities, P.E. 102	1	1	1
	20	20	21

Junior Year

General Zoology, Zool. 101	4	0	0
General Botany, Bot. 102	0	4	0
General Economics, Econ. 103	3	3	0
Agricultural Economics, Agr. Econ. 260	0	0	3
Terracing and Drainage, Agr. Eng. 135	0	0	3
Farm Conveniences, Agr. Eng. 147	0	3	0
Farm Shop Work, Agr. Eng. 217	3	3	0
Farm Management, Agr. Econ. 261	0	0	3
General Animal Husbandry, A.H. 101	3	0	0
Engineering Mechanics, E.M. 211, 212, 213	3	3	3
Field Crops, F.C. 102	0	0	3
General Horticulture, Hort. 101	0	0	3
Electives	3	4	3
	19	20	21

Senior Year

Engineering Geology, Geol. 201	3	0	0
Dairy Cattle and Milk Production, A.H. 204	3	0	0
Rural Sociology, Agr. Econ. 302	0	3	0
Rural Sanitation, Bot. 206	0	3	0
Farm Machinery and Tractors, Agr. Eng. 250	0	0	3
Problems in Agr. Eng., Agr. Eng. 335	3	3	3
Erosion Prevention, Agr. Eng. 360	0	0	3
Farm Structures, Agr. Eng. 365	0	0	3
Rural Electrification, Agr. Eng. 370	0	3	0
Soil Fertility, Soils 265	3	0	0
Soil Erosion Control, Soils 317	0	0	3
Senior Seminar, Agr. Eng. 350	1	1	1
Farm Buildings, Agr. Eng. 145	0	3	0
Electives	6	3	3
	19	19	19

* Either Principles of Journalism, Eng. 150 or some term of a course in American or English Literature may be elected in place of Public Speaking.

** With the consent of the advisor, another course in modern language may be elected in place of the one prescribed as alternative to the course in English.

FORESTRY

The aims of the curriculum in Forestry are: (1) to train young men for work in the technical and applied fields of forestry on public or private forest land; (2) to give special training in fields of research; (3) to advance the knowledge of the entire profession.

The profession of forestry is comparatively young in North Carolina. It began some thirty years ago and has made remarkable progress during its first quarter century of existence. The next decade promises more advancement and achievement than all of the past because the foundation has been laid and the building of the superstructure will depend upon the expertness of the builders. In the ranks of the builders are included the United States Forest Service; State Forest Departments in a large number of states; corporations and lumber companies; individual land-owners, and last, but by no means least, the farm woodlands.

Students completing the forestry course may look to the following fields of employment: United States Forest Service, the State Service, including not only North Carolina, but especially the Southern States and any other state organizations, the lumber companies, timber-holding companies, corporations and individuals. The forestry program in the State of North Carolina is very materially strengthened by the presence of the national forests and the Appalachian forest experiment station. These will be of direct aid in the study of forest research problems, management problems and the organization and work of the National Forest Service.

Forest management aims to make a forest properly a permanent producing unit. All forestry is now being built on this basis.

The field of forest utilization requires special courses dealing with the utilization of the products of the forest. During the third term of the senior year field studies of woodworking industries, logging operations, paper and pulp mills and problems in forest management take up most of the time.

The field of silviculture deals with the problems of producing a forest, such as selection of species, methods of reproduction, cutting systems, etc. The work is becoming increasingly important as our virgin timber supply is depleted.

Research in forestry problems is being recognized by all agencies in the fields of Forestry. Men trained in research methods are needed in the government experiment stations, state experiment stations and private laboratories.

Two hundred and thirty-five (235) credits and two hundred and thirty-five (235) points are required for graduation in Forestry.

A field trip through the southeast and Gulf states is required for the senior class to study applied forestry under field and factory conditions. Local field trips are also required of other classes. A nominal fee is charged to cover the expense of these trips.

CURRICULUM IN FORESTRY

Freshman Year

COURSES	CREDITS First Term	Second Term	Third Term
Drawing, C.E. 100	1	1	1
Botany, General and Systematic Bot. 101, 102, 204	4	4	3
Mathematical Analysis, Math. 100 a-b-c	3	3	3
Composition, Eng. 101	3	3	3
Zoology, Zool. 101, 102	4	4	0
Economic Entomology, Zool. 204	0	0	4
Elementary Forestry, For. 101	1	1	1
Introductory Sociology, Soc. 102	0	0	3
Military Science, I Mil. 101, or			
Human Relations, Soc. 101	2	2	2
Fundamental Activities and Hygiene P.E. 101	1	1	1
	19	19	21

Sophomore Year

Introduction to Economics, Econ. 102	0	3	0
Land Economics, Agr. Econ. 269	0	0	3
Plant Physiology, Bot. 209	0	0	5
Dendrology, Bot. 207	3	0	3
General Inorganic Chemistry, Chem. 101, 103, and 105	4	4	4
Wood Technology, For. 102	0	3	0
Physical Geology, Geol. 120	4	0	0
Timber Physics, For. 103	0	0	3
Surveying, Theoretical C.E. 206	3	3	0
Field Surveying, C.E. 207	1	0	0
Topographical Drawing, C.E. 208 a	0	1	0
Introduction to Psychology, Psychol. 101	3	0	0
Military Science II Mil. 102, or			
World History, Hist. 104	2	2	2
Sport Activities, P.E. 102	1	1	1
	21	17	21

Summer Camp

Surveying and Mapping, C.E. s101	0	0	3
Dendrology, For. s211	0	0	3
Mensuration, For. s200	0	0	3
Silviculture, For. s203	0	0	3
			12

Junior Year

Soils, Soils 115	4	0	0
Mensuation I, II, For. 201, 202	0	3	3
Silviculture I, II, For. 204, 205	3	3	0
English	3	3	3
Forest Entomology, Zool. 210	0	0	3
Plant Ecology, Bot. 307	3	0	0
Meteorology, Phys. 209	0	3	0
Forest Finance, For. 308	0	3	0
Methods of Research in Forestry, For. 311	0	0	3
Statistical Methods, Econ. 312	3	3	0
Elective in Social Science Group	0	0	3
Electives	3	3	3
	19	21	18

Senior Year

Logging, For. 303	3	0	0
Lumbering, For. 304	0	3	0
Seasoning, For. 305	0	0	2
Diseases of Forest Trees, Bot. 208	3	0	0
Silviculture, III, IV, For. 301, 302	3	3	0
Forest Management, For. 306, 307	3	3	0
Seminar, For. 310	0	2	0
Forest Products, For. 206	3	0	0
Forest Utilization, For. 207	0	0	2
Timber Appraisal, For. 309	0	0	2
Elective in Social Science Group	0	3	0
Senior Field Trip, For. 317	0	0	3
Electives	3	3	3
	18	17	12

LANDSCAPE ARCHITECTURE

A comparative study of Landscape Architecture with Architecture, the oldest art of design, will disclose the fact that distinct parallelism exists between these two fields of human endeavor. Not only in the character and extent of the training required in each case is this shown, but also in the division of work which takes place, and in the relationships existing among those responsible for various parts of the work in the practice of these two closely associated professional fields.

Training in Landscape Architecture is a composite derived from the fields of the fine arts, certain branches of engineering, and ornamental horticulture. Properly it is dominated by the principles of design, and therefore correctly classed with Architecture, Sculpture and Painting. Its province is the design of landscapes, and the preparation of plans and specifications for their construction.

Training in Landscape Construction is also a composite derived from the same fields, but with emphasis upon the materials and methods of construction employed in Civil Engineering and ornamental horticulture. Its province is the execution of plans and specifications for landscapes as prepared by the landscape architect or designer.

Training in Landscape Gardening is essentially ornamental horticulture, with some knowledge of the principles of design and of construction. Its particular province is the maintenance of designed and constructed landscapes.

The curriculum in Landscape Architecture is strictly undergraduate work, and is designed to provide a broad and thorough foundation for the additional post-graduate training required by the profession for entrance into its ranks. Such subsequent training, together with some professional practice should present an open door to the entire field of the Landscape Architect, of the City Planner, or of the Regional Designer, as the professional student may elect.

Students who wish to fit themselves for work in Landscape Construction or in Landscape Gardening will for their first two years pursue the basic curriculum for Agriculture, with substitutions from other curricula as indicated. The outline of the courses for the last two years will provide the necessary differentiation between these two lines of work. Specialization in the present day demands that technical training for specific lines of human endeavor shall be most efficient.

CURRICULUM IN LANDSCAPE ARCHITECTURE

Freshman Year

COURSES	CREDITS *First Term*	*Second Term*	*Third Term*
Algebra, Trigonometry, Analytical Geometry, Math. 101, 102, 103	6	6	6
Composition, Eng. 101	3	3	3
Botany, General and Systematic, Bot. 101, 102, and 204	4	4	3
Engineering Drawing II, and Descriptive Geometry, M.E. 102, 103	3	3	3
Arboriculture, L.A. 106	1	1	2
Military Science I, Mil. 101 or	2	2	2
Human Relations, Soc. 101	2	2	2
Fundamental Activities and Hygiene, P.E. 101	1	1	1
	20	20	20

Sophomore Year

Business English and Technical Writing, Eng. 120, 324	3	3	0
Plant Physiology, Bot. 209	0	0	5
Plant Propagation and Nursery Practice, Hort. 102	3	0	0
Physical Geology, Geol. 120	0	0	4
Introduction to Economics, Econ. 102	0	3	0
Introduction to Psychology, Psychol. 101	3	0	0
Introduction to Architecture, A.E. 100	3	0	0
Elements of Architecture, A.E. 101	0	3	3
Surveying, Theoretical, C.E. 206	3	3	0
Field Surveying, C.E. 207	1	1	1
Plant Materials, Woody Plants, L.A. 216	2	2	2
Theory of Landscape Design, L.A. 218	0	3	3
Military Science II, Mil. 102, or World History, Hist. 104	2	2	2
Sport Activities, P.E. 102	1	1	1
	21	21	21

Junior Year

Plant Materials: Annual and Herbaceous Plants, L.A. 217	0	0	2
Plant Ecology, Bot. 307	3	0	0
History of Landscape Design, L.A. 219	3	3	0
Landscape Design I, L.A. 220	4	4	4
Public Speaking, Eng. 160	0	0	3
Shades and Shadows, A.E. 102	2	0	0
Freehand Drawing I, Pen and Pencil Drawing, A.E. 104	2	0	0
Elementary Rendering, A.E. 103	0	2	0
Freehand Drawing III, Charcoal, A.E. 105	0	0	2
Perspective Drawing, A.E. 201	0	0	2
Economic Zoology and Entomology, Zool. 102, 204	0	4	4
History of Architecture, A.E. 205	3	3	0
Topographic Drawing, C.E. 208 a	0	1	0
Electives	3	3	3
	20	20	20

Senior Year

Planting Design, L.A. 221	3	3	3
Landscape Design II, L.A. 222	4	4	4
City Problems, L.A. 223	0	3	0
Landscape Construction, L.A. 225	2	2	2
Pencil Sketching, A.E. 107	3	0	0
Accounting for Engineers, Econ. 112	0	0	3
Appreciation of Fine Arts, A.E. 208	3	3	3
Electives	3	3	3
	18	18	18

THE AGRICULTURAL EXPERIMENT STATION

The North Carolina Agricultural Experiment Station was established originally as a division of the State Department of Agriculture in accordance with an act of the General Assembly of 1877. Its work was greatly promoted by an act of Congress of 1887, known as the Hatch Act, which contributed a definite sum to each State for the purpose of making investigations in agriculture. The funds for the Experiment Station were further supplemented by an act of Congress of 1906, known as the Adams Act, and again the same way by an act of Congress of 1925, known as the Purnell Act. Under the requirements of the Hatch Act the Station became a department of the College.

The Agricultural Experiment Station embraces a central farm located at the College and a corps of trained investigators who devote their time and attention to solving the more important problems in soils, crops, animal industry, dairying, horticulture, poultry, plant diseases, and entomology, rural sociology, and agricultural economics.

Some one hundred and ninety different projects have been approved and are being investigated by these workers.

"The agricultural research of the College and Experiment Station have been materially strengthened through the inauguration of plans whereby teachers in agriculture and the biological sciences have been given some time to do research. This has been definitely organized and is now administered under the Experiment Station, making it possible to coördinate related research work, and making possible closer coöperation between the teaching and research group."

Six branch Experiment Stations of the State Department of Agriculture are used coöperatively with the College for work in the field on the different soils and under the different climatic conditions of the State.

The Station conducts a large correspondence with farmers and others concerning agricultural matters, and it takes pleasure in receiving and answering questions. The Agricultural Experiment Station is always glad to welcome visitors and to show them the work in progress.

The purposes of the Agricultural Experiment Station are:

To carry on experiments for the improvement of agriculture which will be of service to the farmers and to the agricultural teachers and extension workers;

To demonstrate improved methods of agriculture to the farmers of the State, and

To publish bulletins relating to agriculture, embodying the results of experiments, and to distribute them to the people of the State, thereby furthering the cause of agricultural progress.

CO-OPERATIVE AGRICULTURAL EXTENSION WORK

The Agricultural Extension Service of the College is conducted in cooperation with the State and the United States Department of Agriculture and the various counties of the State. The work is supported by Federal

funds derived from the Smith-Lever Act, from State appropriations which supplement the Smith-Lever Fund, and from county funds. The purposes of the Agricultural Extension Service are: (1) To carry new agricultural information and good practices to the farmers and farm women of the State through the County Agricultural and Home Demonstration Agents; (2) To conduct agricultural clubs for the boys and girls of the State, in which the young people are taught to grow crops and rear animals according to the teachings of modern agriculture; (3) To publish monthly letters and bulletins for the aid of extension workers and for the benefit of farmers; (4) To organize club schools during the summer, at which the members are given two or three days of technical instruction. In addition to these club schools there is also held at State College a short course for members of all clubs.

COLLEGE EXTENSION COURSES IN AGRICULTURE

General information about College extension and correspondence courses may be found elsewhere in this catalog, and bulletins giving detailed information are issued from time to time.

THE DEPARTMENT OF EDUCATION

THOMAS EVERETT BROWNE, *Director*

The Department of Education at State College, operating as a Department of the Division of Education of the Greater University of North Carolina, will continue to make its contribution to the agricultural, industrial, and economic life of North Carolina in a very distinctive and definite fashion. The specific function of this department will be to prepare teachers and educational leaders in the agricultural and technological fields.

This preparation will involve the guidance and direction of those students interested in teaching as a vocation in the selection of courses, in planning their professional careers, in their observation of teaching and in their programs of directed teaching. Members of the staff of the department make arrangements for observation and practice teaching in selected high schools of the State and supervise the work of these students while they are out teaching. All trainees are given an opportunity to meet the requirements of the State Department of Public Instruction with respect to observation and practice teaching.

Not only does this preparation involve a mastery of subject-matter courses in the teaching fields of their choice, but the completion of a gamut of professional courses including educational psychology, principles, and special methods of teaching and administration.

The Department of Education coöperates closely with all the schools on the campus, where the subject-matter courses for the various teaching fields are given. Its chief function is to provide the professional training for the student preparing to teach, and to advise, guide, and assist the student in getting ready for entrance into the teaching profession and in securing employment in his chosen vocation. While the main objective of the department is to provide definite and specific curricula for those students who have chosen teaching as a profession, it also serves those students in other curricula who wish to choose elective work in education.

AGRICULTURAL EDUCATION

The preparation of men to occupy positions as teachers of vocational agriculture in the high schools of the State, qualifying under the provisions of the Smith-Hughes Law, is one of the distinct activities of the College. State College is the designated teacher-training institution for teachers of agriculture in the white schools.

The program for the preparation of teachers of agriculture provides for the participation of the students in as many of the activities of agriculture teaching as is practicable, especially in organizing and conducting evening classes, and in carrying on community work and supervised practice.

Provision is made for seniors to teach under the supervision of the staff in agricultural education, assisted by the regular teachers of agriculture with whom they are carrying on their practice.

Advanced courses in agricultural teaching are offered and graduate students are afforded the opportunity of making studies of problems of their special interests.

INDUSTRIAL EDUCATION

The development of industries in the State of North Carolina is accompanied by an increasing demand for teachers of trade and industrial subjects. For nearly a half century North Carolina State College of Agriculture and Engineering has had a large part in the training of engineers and has developed facilities for the training of teachers for industrial, vocational, and related subjects.

During the first two years of the plan for studying industrial education, the required subjects include shop practice, drawing, English, mathematics, physics, chemistry, education, military training, and physical education. The junior and senior years are given to the study of trade and related subjects, electives, education economics, school shop administration, and the analysis of occupations and trades. Electives for the purpose of broadening the student's point of view are distributed throughout the four year course and are to be selected with the aid and approval of the director of the Industrial Education curriculum.

Primarily this plan of study is designed to prepare teachers of industrial arts, vocational, and related subjects, but through its group of electives affords a student an opportunity to pursue a variety of subjects in engineering, physical sciences, or social sciences. Through a careful selection of courses in guidance, personnel administration, and labor problems, students may prepare for personnel posts in industry.

The first two years of this curriculum, as outlined on Page 104, are in line with the general plan of the College which emphasizes work of fundamental value in the first two years, while in the last two years work of a professional and specialized nature are undertaken.

The shop and drawing courses of this curriculum are offered by the Architectural, Electrical and Mechanical Departments of the School of Engineering, in coöperation with the Department of Industrial Education.

The successful completion of the Industrial Education curriculum leads to the degree of Bachelor of Science in Education and a teacher's license issued by the State Department of Public Instruction. The curriculum is intended for those who wish to become teachers, supervisors, or directors of Industrial Arts in the junior and senior high schools, or to become teachers of special vocational subjects as: (1) shop work in wood, metal, electrical, auto mechanics, textiles, and printing; (2) mechanical or architectural drawing; and (3) mathematics or science as related to shop activities and industrial occupations.

The courses offered in Industrial Education have as their aim the promotion of the welfare of industry, largely through the better training of teachers. These courses are arranged in two general groups:

I. Four-year curriculum for teachers of industrial arts in junior and senior high schools, heads of departments, supervisors, and directors of Industrial Education; and

II. Two-year curriculum for teachers of shop work in vocational schools and classes operating under the State Board of Vocational Education.

Within the groups will be found an adequate selection of electives to meet the needs of those having different ambitions.

Trade experiences of at least two years is required of those who expect to teach shop work on a vocational basis; but it is not required on the part of those who teach shop work on an industrial arts or general education basis. Trade experience is not required of those who teach the related subjects; however, such would be helpful.

Approved summer session, extension, and correspondence courses, subject to rules governing such, may be used to meet requirements for standard teachers' certificates or toward appropriate degrees.

RURAL SCHOOL PRINCIPALS AND TEACHERS

The rapid development of the consolidation movement in the rural school districts has created a demand for persons who are acquainted with the social and economic conditions of rural people. The rural school occupies a strategic position with reference to North Carolina's development. There are very definite social situations that are demanding organized effort. The rural school occupies the center of the community organization movement. The development of the rural sections, with their distinctive sociological and economic background, is dependent upon the proper type of rural organization. The principal and teachers in this community school must assume the leadership in this movement. For principal and teachers to measure up to the possibilities and opportunities of this distinctively rural development they must have specific training in rural sociology, rural social problems, rural economics, and rural community organizations.

The Department of Education is making a positive effort to train people for this particular situation. Liberal coöperative arrangements have been made with other schools and departments so that teachers preparing for the rural field take courses in the natural sciences and in the social sciences, designed to equip them for meeting the problems of the rural community.

PSYCHOLOGY

The general work in psychology is recognized as a fundamental part of students' general educational training. It aims to give the student a better understanding of human behavior as it develops in response to both biological and social forces. Certain specialized courses of an applied nature have been developed in response to the educational needs of some curricula. Educational psychology formulates the basic principles upon which various educational methods and principles are developed, and is therefore required in all curricula in education. Advanced courses in educational psychology of a more specialized nature are designed to give the student a better understanding and appreciation of some particular phase of the individual pupils in their educational relations.

In addition to the work of instruction in the College and in the training of teachers, the division of psychology assists in the testing and advisory work with students, and is constantly called upon by school principals, teachers and parents to lend advice in a testing program or aid in making case studies of exceptional and problem children.

TEACHERS AND COUNSELORS OF VOCATIONAL GUIDANCE

The increasing interest in vocational guidance is making demands for teachers who are prepared to participate in organization phases. Effective vocational guidance is dependent upon hearty coöperation of all teachers in the school system. There is a growing need for leaders who are familiar with subject matter, tests and measurements, school objectives and practices, and the requirements of various occupations, trades, and professions. One who wishes to undertake this work as a leader must realize the importance of the collection and preparation of materials for the use of teachers and pupils and the qualifications essential for counseling individuals and groups. Members of the faculty of the Department of Education will be glad to discuss problems with students desiring to enter this field.

REQUIREMENTS FOR GRADUATION

The requirement for graduation in the Department of Education is the satisfactory completion of one of the curricula with the number of points equal to the number of term credits required, which in no case is less than 225 after 1938. Students graduating in the curriculum in High School Teaching in 1937 will be required to complete 212 credits, and those graduating in 1938 will be required to complete 219 credits with an equal number of points in each case. For graduation in Agricultural Education, 218 credits and 218 points will be required in 1937 and 221 credits and 221 points in 1938. In Industrial Education 221 credits and 221 points in 1937, and 225 credits and 225 points in 1938 are required for graduation.

Students who enter with advanced standing are allowed one point for each term credit accepted.

All students in Education will be required to take at least twenty-seven (27) term credits in Education, eighteen (18) term credits in Language, eighteen (18) term credits in Science, eighteen (18) term credits in Social Science, twelve (12) term credits in Military or the alternative, and six (6) in Physical Education. The credits required for graduation are to be chosen from the technical subjects listed in the several curricula and from the electives.

DEGREES

Students completing the curriculum in Agricultural Education will be granted the degree of Bachelor of Science in Agricultural Education, and students completing the curriculum in Industrial Education will be granted the degree of Bachelor of Science in Industrial Education. Students completing all other curricula in the Department of Education will be granted the degree of Bachelor of Science in Education.

CURRICULA

The following curricula are offered in the Department of Education. For specific information about any of the curricula write to the person whose name appears after the curriculum, all of whom may be addressed at State College Station, Raleigh.

1. Curriculum for Teachers of Agriculture (Professor L. E. Cook);
2. Curriculum for Teachers of Industrial Arts (Professor E. W. Boshart);
3. Curriculum for High School Teachers (Professor M. F. Showalter).

CURRICULUM FOR TEACHERS OF AGRICULTURE

Freshman Year

COURSES	CREDITS *First Term*	*Second Term*	*Third Term*
Composition, Eng. 101	3	3	3
General Inorganic Chemistry, Chem. 101-3-5	4	4	4
General Botany, Bot. 102	0	4	0
General Zoology, Zool. 101	4	0	0
Mathematical Analysis, Math. 100 a-b-c	3	3	3
Economic History, Hist. 101	3	3	3
Physical Geology, Geol. 120	0	0	4
Military Science I, Mil. 101, or Alt.			
Human Relations, Soc. 101	2	2	2
Fundamental Activites and Hygiene, P.E. 101	1	1	1
	20	20	20

Sophomore Year

Farm Equipment, Agr. Eng. 130	3	0	0
Soils, Soils 115	0	0	4
General Economics, Econ. 103	3	3	0
Agricultural Economics, Agr. Econ. 260	0	0	3
Physics for Agr. Students, Phys. 105	5	0	0
Animal Physiology, Zool. 201, or			
Plant Physiology, Bot. 209	0	0	5
Economic Zoology, Zool. 102	0	4	0
General Botany, Bot. 101	4	0	0
Introduction to Organic Chemistry, Chem. 241	0	4	0
Animal Nutrition I, A.H. 101	0	3	0
General Poultry, Poul. 101	0	3	0
Principles of Forestry, For. 104	3	0	0
General Horticulture, Hort. 101	0	0	3
General Field Crops, F.C. 101	0	0	3
Military Science II, Mil. 102, or Alt.	2	2	2
Sport Activities, P.E. 102	1	1	1
	21	20	21

Junior Year

English, elective	3	0	3
Education, Ed. 203, 208	3	3	3
Teaching Farm Shop Work, Agr. Eng. 217	3	3	0
Farm Management, Agr. Econ. 261		0	3
Farm Accounting, Agr. Econ. 262	0	0	3
Soil Fertility, Soils 265	3	0	0
Fertilizers, Soils 310	0	3	0
Rural Sociology, Rural Soc. 302	0	3	0
*Diseases of Field Crops, Bot. 201	3	0	0
Economic Entomology, Zool. 204	0	0	4
**Electives	6	6	3
	21	18	19

Senior Year

English, elective	0	0	3
Materials and Methods in Teaching Agriculture, Ed. 312	0	3	0
Secondary Education in Agriculture, Ed. 326	0	0	3
Principles of Teaching, Ed. 306	3	0	0
Observation and Directed Teaching, Ed. 308	0	5	0
Methods of Teaching Agriculture, Ed. 307	3	0	0
Evening Classes and Community Work, Ed. 311	0	5	0
***Animal Hygiene and Sanitation, A.H. 221			3
Agricultural Marketing, Agri. Econ. 265	3	0	0
Community Organization, Rural Soc. 305	0	0	3
**Electives	3	0	3
	14	15	15

* Diseases of Fruit and Vegetable Crops, Bot. 202 may be substituted for Bot. 201.

** Options and electives must be chosen with the approval of the adviser.

*** Common Diseases, A.H. 219 may be substituted for A.H. 221.

CURRICULUM FOR TEACHERS OF INDUSTRIAL ARTS

Freshman Year

COURSES	CREDITS *First Term*	*Second Term*	*Third Term*
Composition, Eng. 101	3	3	3
Mathematical Analysis, Math. 100 a-b-c or Algebra, Trigonometry and Analytical Geometry, Math. 101, 102, 103	3 or 6	3 or 6	3 or 6
General Chemistry, or Optional Science	4	4	4
Engineering Drawing II, M.E. 102	3	3	0
Descriptive Geometry, M.E. 103	0	0	3
Industrial Arts, Ed. 106	3	3	3
Military Science I, Mil. 101 or World History, Hist. 104	2	2	2
Fundamental Activities and Hygiene, P.E. 101	1	1	1
	19 or 22	19 or 22	19 or 22

Sophomore Year

Business English, Eng. 120, Principles of Journalism, Eng. 150, Public Speaking, Eng. 160	3	3	3
Physics for Engineers, Phys. 104	4	4	4
Economic History, Hist. 101	3	3	3
Project Design, Ed. 232, A and B	0	3	3
Elementary Rendering, Freehand Drawing III, Pencil Sketching, A.E. 103, 106, 107	2	2	2
Shop Work, M.E. 107, 108	0	2	2
Military Science II, Mil. 102 or *Elective	2	2	2
Sport Activities, P.E. 102	1	1	1
Elective	4	0	0
	19	20	20

Junior Year

Educational Psychology, Ed. 203	3	3	0
General Sociology, Soc. 103	3	3	0
Introduction to Economics, Econ. 102	3	0	0
Business Law, Econ. 211	0	0	3
Vocational Education, Ed. 321	0	3	0
Visual Aids, Ed. 208	0	0	3
Practices in Industrial Arts Teaching, Ed. 233 A, B	0	3	3
Metal Shop, M.E. 251	3	3	0
Electric Shop, E.E. 110	0	0	3
Problems in Secondary Education, Ed. 332	0	0	3
†Elective	8	5	6
	20	20	20

Senior Year

Field Work in Secondary Education, Ed. 333	0	3	0
Vocational Guidance, Ed. 320	0	0	3
Methods in Industrial Arts Teaching, Ed. 322	4	0	0
Observation and Directed Teaching, Ed. 344	0	6	0
Occupational Studies, Ed. 324	0	0	3
Furniture Designs and Rod Making, M.E. 205	3	3	3
†Elective	11	6	9
	18	18	18

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* Elective Shop Work should be taken in fields available as in Textiles, Woodshop, Machine Shop, and Foundry.

† With aid of advisors individuals will elect as follows: In junior year, one sequence in history and another in industrial problems. In the senior year, one sequence in history and another in sociology.

CURRICULUM FOR TEACHERS OF VOCATIONAL SUBJECTS

(Note: Intended for those who have had not less than two years of trade experience, or its equivalent. Admission to this course will be by comprehensive examination.)

First Year

COURSES	CREDITS *First Term*	*Second Term*	*Third Term*
Introduction to Trade Teaching Problems	3	0	0
Observation and Reports on Trade Teaching	3	0	0
Analysis of Trades and Jobs	3	0	0
Study and Organization of Teaching Materials	0	3	0
Anaylsis of Teaching Methods	0	0	3
Course and Lesson Planning	0	3	3
Study of the Evening School Student and His Problems	0	3	3
Study of Mathematics, Science, Drawing and English as Needed	6	6	6
	15	15	15

Second Year

The Place or Need for Vocational Education	3	0	0
The Growth of Vocational Education	0	3	3
Types of Industrial Schools and Classes	3	0	0
Vocational Guidance	0	0	3
Observation and Practice Teaching	3	3	0
Administration of Industrial Education	0	3	3
Electives to be Selected from Shop and Subject Matter Courses With the Aid of Advisor	6	6	6
	15	15	15

CURRICULUM FOR HIGH SCHOOL TEACHERS

(Students of junior and senior standing only may be admitted to this curriculum.)

Freshman Year

COURSES	CREDITS *First Term*	*Second Term*	*Third Term*
Composition, Eng. 101	3	3	3
Economic History, Hist. 101	3	3	3
General Zoology, Zool. 101	4	0	0
[1]Human Physiology, Zool. 103	0	4	0
Introduction to Psychology, Psychol. 101	0	0	4
General Chemistry, Chem. 101, 103, 105, or General Physics, Phys. 101, or [2]Chemistry, Physics, Geology Sequence	4	4	4
[3]Mathematical Analysis, Math. 100 a-b-c	3	3	3
Military Science I, Mil. 101, or [4]Human Relations, Soc. 101	2	2	2
Fundamental Activities and Hygiene, P.E. 101	1	1	1
	20	20	20

Sophomore Year

Elective Literature or Modern Language	3	3	3
General Sociology, Soc. 103	3	3	0
Elective Sociology	0	0	3
[5]Science Elective	3–4	3–4	3–4
[6]Two Teaching Options and Electives	6–7	6–7	6–7
Military Science II, Mil. 102, or World History, Hist. 104	2	2	2
Sport Activities, P.E. 102	1	1	1
	19	19	19

Junior Year

Educational Psychology, Ed. 203	3	3	0
Problems in Secondary Education, Ed. 332	0	0	3
The Teaching of Mathematics, Ed. 341, or The Teaching of English, Ed. 340, or The Teaching of French, Ed. 343, or Elective	0	0	3–6
General Economics, Econ. 103	3	3	3
[7]Two Teaching Options and Electives	12	12	6–9
	18	18	18

Senior Year

The Teaching of Science, Ed. 339, or The Teaching of History, Ed. 342, or Elective	3–6	0	0
Special Methods Laboratory, Ed. 350	0	3	0
Observation and Directed Teaching, Ed. 344 or Elective Education	0	6	0
Field Work in Secondary Education, Ed. 333	0	3	0
[7]Two Teaching Options and Electives	12–15	6	18
	18	18	18

[1] Teachers of Science will defer Human Physiology until later and substitute Zoology 101.

[2] Teachers of Science will take Physics or Chemistry. Other students will take the Chemistry, Physics, and Geology sequence.

[3] Students who expect to continue in Mathematics will substitute other work for this sequence and will take Mathematics 101, 102, 103 in the sophomore year. Teachers of Physical Education will substitute Hygiene, P.E. 110, in the third term. In special cases this sequence may be deferred until the sophomore year and modern language substituted.

[4] No credit in Human Relations for juniors and seniors.

[5] Teachers of Science will take Chemistry or Physics.

[6] Teachers of Science will take Botany 101 and 102.

[7] A minimum of 27 term credits in Language and Literature is required of all students. Sufficient work must be chosen in this group in the junior and senior years to complete this requirement.

TEACHING OPTIONS

1. Science—72 credits, to include Botany 8, Zoology 8, Chemistry 12, Physics 12, Geology 9, and 12 additional credits in one of the following groups: Botany and Zoology, Chemistry, or Physics.

2. Mathematics—26-30 credits, to include College Algebra, Trigonometry, Analytical Geometry, Differential and Integral Calculus, and History of Mathematics.

3. History and other Social Science—72 credits, to include Ancient and Medieval History 6, Modern European History 9, American History 12, North Carolina History 3, Government 9, Economics 9, Sociology 9, and Physiography 3.

4. English—45 credits, to include Composition 9, American Literature 9, English Literature 9, Advanced Grammar and Composition 3, and Development of Language 6.

5. French—27 credits in addition to elementary French, or two units of entrance credit in French, and 6 credits in Development of Language.

6. Physical Education for Men 45 credits, to include Fundamental Activities, Sports Activities, General Zoology, Human Physiology, Hygiene, Games and Organized Play, Gymnastics, Track and Field, Football, Basketball, Baseball, Junior Practice Teaching, Medical and Health Supervision, History and Principles, Organization and Administration, and Senior Practice Coaching.

The work in Physical Education should be distributed as follows:

Sophomore Year

FIRST TERM	SECOND TERM	THIRD TERM
Games and Organized Play, P.E. 111	Gymnastics, P.E. 112	Track and Field, P.E. 113

Junior Year

Football, P.E. 114 Junior Practice Teaching, P.E. 117	Basketball, P.E. 115 Junior Practice Teaching, P.E. 117	Baseball, P.E. 116 Junior Practice Teaching, P.E. 117

Senior Year

Medical and Health Supervision, P.E. 119	History and Principles, P.E. 118	Organization and Administration, P.E. 120
Senior Practice Coaching, P.E. 121	Senior Practice Coaching, P.E. 121	Senior Practice Coaching, P.E. 121

THE SCHOOL OF ENGINEERING

WALLACE CARL RIDDICK, *Dean*

HARRY TUCKER, *Director of Engineering Experiment Station*

ORGANIZATION

The School of Engineering of the North Carolina State College of Agriculture and Engineering embraces Aeronautical, Architectural, Ceramic, Chemical, Civil, Construction, Electrical, Geological, Highway, Industrial, Mechanical, and Sanitary Engineering and the Engineering Experiment Station.

State College has progressively increased its emphasis on engineering education for the youth of the State. The objectives of the School of Engineering are defined, and its threefold program of instruction, research, and extension established. The instruction in engineering has been improved and advanced, important research is in progress with its stimulating effect upon teachers and students, and the Extension Service is fulfilling its promise of usefulness.

The reasons for the establishment of the College and the support of the General Assembly indicate that this is the technical institution of the State for Engineering as well as for Agricultural education. The State has already made large investments for buildings and equipment for engineering here.

Measured by its facilities for instruction, its shops and laboratories, its technical and industrial equipment, the personnel of its force for teaching and investigation, and the number of students, the School of Engineering is substantially equipped to render, and is rendering, great service in engineering education and in the State's industrial development.

The location of the College is particularly favorable for the study of engineering. Raleigh, besides being the Capital and having the several State Departments, the State Highway Commission, the State Board of Health, and other important State institutions, is a rapidly growing city, marked by modern developments in residential, commercial, and municipal construction. This local building and engineering goes on the year round, and affords excellent opportunities for observation and study. There are in the vicinity commercial chemical works, woodworking mills, railway shops, machine shops, airport, and manufacturing industries.

Raleigh is also a center from which electric power is distributed to a large section of the State. A transformer and meter substation adjoins the campus, and from it high-tension lines radiate in four directions. Hydro electric and steam-electric plants are within easy reach on the Cape Fear River. The important systems of highways centering in Raleigh are exceptionally valuable for the observation and study of the construction, use, and maintenance of roads.

THE PURPOSE OF THE SCHOOL

The purpose of the School of Engineering is threefold: (1) to educate men for professional service in Aeronautical, Architectural, Ceramic, Chemical, Civil, Construction, Electrical, Geological, Highway, Industrial, Mechanical, and Sanitary Engineering, and at the same time to equip them to participate in commercial and public affairs and to develop their capacities for intelligent leadership; (2) to aid in the development of our commerce and industry through research and experimentation, to investigate natural resources and demonstrate their value to the people of the State; (3) to coöperate with private companies, municipalities, and public authorities for the purpose of improving the public utilities, and with commercial and industrial organizations through scientific research for increasing technical skill, improving the value of manufactured products, and eliminating waste.

In order to make effective these purposes the School of Engineering offers instruction in Aeronautical, Architectural, Ceramic, Chemical, Civil, Construction, Electrical, Geological, Highway, Industrial, Mechanical, and Sanitary Engineering and maintains the Engineering Experiment Station and the Extension Service. The courses of instruction are grouped into programs of studies or curricula, definitely aimed to prepare for professional service, as:

Engineers in Aviation.

Architect, Architectural and Structural Engineers.

Ceramic Engineers and Technologists and Managers in the Ceramic Industry.

Construction Engineers.

Engineers and Managers in Chemical Industries and in the Vegetable Oil Industry.

Engineers in Professional Practice and as Consulting Engineers.

Engineers in Hydro-Electric Developments.

Engineers in Electrical Manufacturing and Contracting and in Central Electric Station and Telephone Service, in the Maintenance and Operation of Electrically-driven Mill Equipment, in Lighting and Illumination, and in Railway Signaling.

Engineers in the Construction, Maintenance, and Operation of Steam and Electrical Railways.

Engineers in the Design and Manufacture of Machinery, in the Operation of Shops, and in the Furniture Industry.

Geological Engineers.

Highway Engineers.

Industrial Engineers and Engineers in the management of industries.

Municipal Engineers, Sanitary Engineers, City Managers, and Engineers in Public Utility and Health Services.

Sales Engineers.

Research Engineers.

CURRICULA

All of the curricula contain courses of general educational value for the purpose of preparing students for those activities which constitute the duties of citizenship in a democracy. However the curricula are primarily technical and practical, and designed to prepare young men for professional practice and for definite vocations as well as for leadership in the industrial advancement of the State.

The instruction is such as will foster the individual talent, imagination, and initiative of students and instill in them ideals of accomplishment, service, and good citizenship, while assuring to them that scientific education and practical training which will prepare them for professional service and leadership in engineering and in industry. In this way the School of Engineering aids in the advancement of commerce and industry and furthers the development and economic utilization of the State's resources for the general welfare.

All the engineering curricula emphasize thoroughness in the study of English and of the sciences—Mathematics, Physics, and Chemistry—with a thorough drill in the application of fundamental principles to engineering and industrial problems. Engineering is taught as a profession, and the students come to realize that it is both honorable and learned, and that it offers exceptional opportunities for service.

The several engineering curricula have a common freshman year and differ only slightly in the sophomore year, in which the students study English, Mathematics, Drawing, Shop Work, Physics, and Chemistry. In the junior and senior years the students are directed definitely to the professional aims in the carefully considered and well-balanced curricula in Architectural, Ceramic, Chemical, Civil, Construction, Electrical, Geological, Highway, Industrial, Mechanical, and Sanitary Engineering. Arrangements have been made for instruction in the design and manufacture of furniture and in the manufacture of vegetable oils.

REQUIREMENT OF SUMMER WORK

At least six weeks of summer employment under the direction of the School of Engineering, preferably in the summer following the junior year, is a specific requirement for graduation in Engineering.

The purpose of this is to have every student before graduation get the valuable experience of actual work with responsibility and pay in the field of his vocation. Departmental advisers will aid in securing summer employment and will supervise and direct it.

INSPECTION TRIPS

In order to familiarize himself with the practice of his profession, each senior in Engineering is required as a part of his curriculum to go on the departmental inspection trips. None will be excused except for grave reasons.

ENGINEERING CURRICULA FOR UNIVERSITY AND COLLEGE GRADUATES

Selected courses leading to the degree "Bachelor of Science" in Engineering are offered to graduates of universities and standard colleges.

These are arranged in accordance with the vocational aim of the individual student, and in the light of credits presented from the institution from which the student has geen graduated, subject to the approval of his adviser and the director of instruction. In cases where the student presents enough credits which may be used for courses required in his curriculum he may be graduated with a B.S. degree in one year. In no case should it take more than two years to complete the work for his B.S. degree.

SHORT COURSE FOR ELECTRICAL METERMEN

A school for electrical metermen, lasting one week, is conducted during the second term. The work consists of lectures by meter experts and members of the faculty, demonstrations of metering apparatus and inspection, calibration and adjustments of meters of all types. The Electrical Engineering laboratories are well equipped with rotating standards of all makes, voltage regulators, phase shifters, load boxes, and phantom loads, and a large collection of watt-hour meters.

DEGREES

Upon the satisfactory completion of one of the curricula in engineering the degree of Bachelor of Science in Engineering is conferred.

The degree of Master of Science in Engineering is offered for the satisfactory completion of one year of graduate study in residence. Candidates for the degree of Master of Science in Engineering enter and are enrolled as graduate students.

The professional degree of Architectural Engineer, Ceramic Engineer, Chemical Engineer, Civil Engineer, Electrical Engineer, or Mechanical Engineer, may be conferred upon graduates after three years professional practice in responsible charge of important work, and upon the acceptance of a thesis on a subject related to the practice in which the applicant has been engaged.

ADMISSION

Each applicant for admission must present evidence that he has satisfactorily completed a four-year course of not less than fifteen units in a secondary school which is approved by the State Department of Education.

Each applicant for admission must be at least sixteen years old and must submit fifteen units of credits from an accredited high school. Of these units 8.5 are in specified subjects and 6.5 in elective subjects.

ADVANCED STANDING

Students who have attended colleges of approved standing will be given appropriate credit for work completed there, upon the presentation of the proper certificate to the Dean of the School of Engineering, who will determine the credits for the curriculum which the student wishes to take.

REQUIREMENTS FOR GRADUATION

The requirements for graduation in Engineering are the satisfactory completion of all the courses in one of the prescribed curricula (see tabulations

of curricula on the pages following), a total of not less than 240 term credits, and also not less than 240 points calculated under the point system.

Of the minimum of 240 term credits required for graduation in Engineering 117 are common to all curricula, that is, 30 term credits in Mathematics, 18 in Language, 9 in Economics, 12 in Chemistry, 12 in Physics, 9 in Mechanics, 9 in Drawing and Descriptive Geometry, 12 in Military Training (or Social Science and Humanities alternatives) and 6 in Physical Education.

Each of the curricula permits election of at least 18 term credits and contains not more than 72 special technical term credits.

CURRICULA IN ENGINEERING

The curricula in engineering have been revised and are in effect in entirety for students beginning them September, 1934, or later.

FRESHMAN YEAR OF ALL CURRICULA IN ENGINEERING

COURSES	CREDITS		
	First Term	*Second Term*	*Third Term*
Algebra, Trigonometry, Analytical Geometry, Math. 101, 102, 103	6	6	6
Composition, Eng. 101	3	3	3
General Inorganic Chemistry, Chem. 101, 103, and 105	4	4	4
Engineering Drawing II, M.E. 102	3	3	0
Descriptive Geometry, M.E. 103	0	0	3
Military Science I, Mil. 101, or World History, Hist. 104	2	2	2
Fundamental Activities and Hygiene, P.E. 101	1	1	1
	19	19	19

Summer requirement following the freshman year in Architectural, Ceramic, and Electrical Engineering:

Surveying—C.E. s102, 3 credits.

ARCHITECTURAL ENGINEERING

The instruction in this curriculum is arranged mainly to lay a broad foundation for the subsequent professional life of its graduates. The curriculum is based on the belief that an architect should have an education in liberal studies, as well as a fundamental and technical knowledge; the other arts and sciences in their relation to architecture, and that his training in design should teach him to regard building construction as an expression of his art as well as a useful accomplishment.

Architecture is generally recognized as the first and greatest of the Fine Arts, and hence a wide sympathy with every form of culture is regarded as essential. The practice of the profession presents many aspects of an exacting and thoroughly scientific nature, and the training of the architect must combine those things which are useful with those that are purely ornamental. The aim is to train men for the practice of their profession, and the curriculum is designed so that a just relation and balance may be maintained between the practical and the æsthetic.

Facility in the technique of drawing is emphasized, and carefulness and exactitude are demanded in the treatment of the various fundamental problems of construction.

CURRICULUM IN ARCHITECTURAL ENGINEERING

Freshman Year

For the freshman year, refer to page 112.

Surveying, C.E. s102, 3 credits, is required in the summer immediately following the freshman year.

Sophomore Year

COURSES	CREDITS First Term	Second Term	Third Term
Differential Calculus, Integral Calculus I and II, Math. 201, 202, 203	4	4	4
*Business English, Public Speaking, and English or American Literature, Eng. 120, 160 and 220 or 221 or 337	3	3	3
Physics for Engineers, Phys. 104	4	4	4
Wood Working, M.E. 108	3	0	0
Engineering Mechanics, E.M. 211, 212	0	3	3
Introduction to Architecture, A.E. 100	3	0	0
Elements of Architecture, A.E. 101	0	3	3
Shades and Shadows, A.E. 102	2	0	0
Elementary Rendering, A.E. 103	0	2	0
Perspective Drawing, A.E. 201	0	0	2
**Military Science II, Mil. 102	2	2	2
Sport Activities, P.E. 102	1	1	1
	22	22	22

Junior Year

Engineering Mechanics, E.M. 213	3	0	0
Strength of Materials, C.E. 221, 222	0	3	3
Materials Testing Laboratory, H.E. 204	0	1	0
Materials of Construction, C.E. 201	3	0	0
Sanitary and Mechanical Equipment of Buildings, C.E. 202	0	0	3
***Social Science Options	3	3	3
Freehand Drawing, I, II, and III, Pen and Pencil, Water Color, Charcoal, A.E. 104, 105, 106	2	2	2
Architectural Details, A.E. 111	0	0	2
Practical Photography, A.E. 112	1	0	0
Architectural Design I, A.E. 202	3	3	3
History of Architecture, A.E. 205	3	3	0
History of Ornament, A.E. 206	0	3	0
Domestic Architecture, A.E. 209	0	0	2
Electives	3	3	3
	21	21	21

Summer requirement: six weeks industrial employment.

Senior Year

Reinforced Concrete, C.E. 204	3	0	0
Graphic Statics, C.E. 209	1	0	0
Theory of Structures, C.E. 313	3	3	0
Specifications, C.E. 309	0	3	0
Electrical Equipment of Buildings, E.E. 105	0	0	3
General Economics, Econ. 103	3	3	3
Advanced Rendering, A.E. 203	1	1	1
Architectural Design II, A.E. 204	3	3	3
Architectural Office Practice, A.E. 210	2	2	2
Architectural Composition, A.E. 211	0	2	0
Architectural Estimates, A.E. 212	0	0	2
Electives	3	3	6
	19	20	20

All seniors will be required to go on the inspection trip as part of their curriculum.

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* Students who have been certified by the Department of English as proficient in English may substitute for the course listed French M.L. 101. Those who substitute M.L. 101 for the sophomore English, will have to elect M.L. 201 in the junior or senior year to complete the requirement of two years of a Modern Language.

** Or 6 credits in one or two of the following departments: Economics, Psychology, History, Modern Language, Sociology.

***These options may be selected from courses in Economics, Education, History, Psychology, or Sociology.

CERAMIC ENGINEERING

Ceramic Engineering includes the different phases of engineering which have to do with the study of all the materials and the manufacture of products of the silicate or non-metallic industries. The non-metallic minerals compose over 90 per cent of the earth's surface, and the industries based on them rank with the automobile and iron and steel industries in value of product. Principal among these products are those made of clay and minerals associated with clay, such as building brick, hollow tile, sewer pipe, refractories, wall and floor tile, tableware, pottery, electrical porcelain, chemical and sanitary stoneware, flat glass, chemical and table glassware, enameled iron and steel, Portland and hydraulic cements, and limes.

North Carolina has enormous deposits of shale, clay, kaolin, feldspar, sand, limestone and other ceramic minerals, equal in quality to any in the United States, and with the introduction of modern processes and methods will produce in the future quantities of ceramic products and adequately develop its ceramic industries.

The demand for ceramic engineers has far exceeded the supply for a number of years past, there being less than 100 Ceramic engineers graduated in the United States each year, and it is with the idea of supplying this demand and developing the latent resources of North Carolina that a four-year curriculum in Ceramic Engineering, leading to the degree of Bachelor of Science in Engineering, is offered.

The instruction in Ceramic Engineering is enriched by the intensive investigation of ceramic resources and manufactures constantly under way in connection with the Engineering Experiment Station. Students will have the great advantage of these investigations along with their other instruction.

Courses in advanced subjects for graduate students are offered in Advanced Refractories and Furnaces, Industrial Adaptability of Clays, Designing of Ceramic Equipment and Plants, Glazes and Colors, Glass Technology, and Ceramic Research.

The curriculum in Ceramic Engineering contains fundamental courses and courses in Ceramic, Geological, Civil, Electrical, and Mechanical Engineering, as well as Economics, to provide for the general training in engineering with the particular study of Ceramic Engineering. The Ceramic Engineering courses consist of the theoretical and practical study of the mining, manufacturing, and testing of ceramic materials and products as well as the design of ceramic equipment and plants.

Graduates in Ceramic Engineering are employed in the ceramic industries as plant executives, research engineers, plant control engineers, sales engineers, product control engineers, plant designers and constructors, equipment manufacturers, consulting engineers, ceramic chemists, and technologists. Graduates of the department at State College, which now ranks fourth in registration in the United States, are successfully holding positions in all of these branches.

CURRICULUM IN CERAMIC ENGINEERING

Freshman Year

For the freshman year, refer to page 112.

Surveying, C.E. s102, 3 credits, is required in the summer immediately following the freshman year.

Sophomore Year

COURSES	CREDITS *First Term*	*Second Term*	*Third Term*
Differential Calculus, Integral Calculus, I and II, Math. 201, 202, 203	4	4	4
Qualitative Analysis, Chem. 211	4	0	0
Quantitative Analysis, Chem. 212	0	4	0
Physics for Engineers, Phys. 104	4	4	4
Engineering Geology, Geol. 201	3	0	0
Mineralogy, Geol. 230	0	0	3
*Business English, Public Speaking, and English Literature, Eng. 120, 160 and 220	3	3	3
Ceramic Materials, Cer.E. 103	0	3	0
Ceramic and Mining Processes, Cer.E. 104	0	0	3
**Military Science II, Mil. 102	2	2	2
Sport Activities, P.E. 102	1	1	1
	21	21	20

Junior Year

Engineering Mechanics, E.M. 201, 202	3	3	0
Strength of Materials, C.E. 221	0	0	3
General Economics, Econ. 103	3	3	3
Mechanical Drawing, M.E. 110	2	2	0
Drying Technology, Cer.E. 208	3	0	0
Firing Technology, Cer.E. 213	0	3	0
Ceramic Calculations, Cer.E. 209	0	0	3
Ceramic Products, Cer.E. 212	0	0	3
Heat Engineering III, M.E. 201	3	3	0
Mechanical Engineering Laboratory II, M.E. 202	1	1	0
Materials Testing Lab., H.E. 204	0	0	1
Thermal Mineralogy, Geol. 238	0	3	0
Physical Chemistry, Chem. 231	0	0	5
Business Law, Econ. 211	3	0	0
Electives	3	3	3
	21	21	21

Summer requirements: six weeks industrial employment.

CERAMIC ENGINEERING OPTION

Senior Year

Refractories, Cer.E. 301	0	0	3
Metal Enamels, Cer.E. 210	0	3	0
Bodies, Glazes, Colors, Cer.E. 207	3	0	0
Ceramic Lab., Cer.E. 300	3	3	3
Ceramic Designing, Cer.E. 303	0	5	5
Pyrometry, Cer.E. 214	1	0	0
Technical Writing I, Eng. 324	3	0	0
Elements of Electrical Engineering I, E.E. 220	0	3	3
Strength of Materials, C.E. 222	3	0	0
Optical Mineralogy, Geol. 301	3	3	3
Electives	3	3	3
	19	20	20

All seniors will be required to go on the inspection trip as part of their curriculum.

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* Students who have been certified by the Department of English as proficient in English may substitute for the courses listed Elementary German, M.L. 102. Such students are expected to take two years of German.

** Or 6 credits in one or two of the following departments: Economics, Psychology, History, Modern Language, Sociology.

CERAMIC TECHNOLOGY OPTION

Senior Year

Metal Enamels, Cer.E. 210	0	3	0
Refractories, Cer.E. 301	0	0	3
Bodies, Glazes, Colors, Cer.E. 207	3	0	0
Ceramic Lab., Cer.E. 300	3	3	3
Pyrometry, Cer.E. 214	1	0	0
Physical Chem., Chem. 331	0	4	4
Optical Mineralogy, Geol. 301	3	3	3
Technical Writing, Eng. 324	3	0	0
Metallurgy, M.E. 109	2	0	0
Metallography, M.E. 320	0	3	3
Electives	3	3	3
	18	19	19

All seniors will be required to go on the inspection trip as part of their curriculum.

CHEMICAL ENGINEERING

North Carolina is rapidly becoming the industrial and manufacturing center of the South. A large per cent of the total manufactured products of the State is chemical, with an annual valuation of over two hundred million dollars. Some of the largest chemical industries of the United States are located in North Carolina. Many other industries employ chemical engineering processes and principles. The municipalities are awake to the fact that chemical engineers are necessary to safeguard the healthfulness of the community by proper design and supervision of the water supplies. Competition is forcing the industries to abandon rule-of-thumb methods and to seek men trained in the principles of chemical engineering for supervision and exact control of their processes, plants, and operation. Chemical Engineering, therefore, offers inviting opportunities for employment and promotion in a profession which is rendering a distinct service to the welfare and comfort of the people of the State.

Chemical Engineering pertains to the engineering problems of chemical industries and chemical processes. The curriculum offers technical training in the fundamentals of Chemical Engineering. It is arranged to equip trained engineers for any field of applied chemical work.

The chemical engineer is expected to determine the process, the material, design, and the economic capacity of the equipment needed. Efficient production requires exact control in every stage of the process. The student is taught the importance of devising efficient and economical methods, machinery and appliances; of discovering sources of loss and the remedy; of by-products; of recovering and converting waste products into useful substances, as well as industrial calculations of input, output, efficiency, and quality.

Instruction is given in the processes of manufacturing industrial chemical products and in the waterpower and fuel resources for such production. North Carolina is rapidly increasing its electro-chemical plants and its plants for manufacturing such products as paper, pulp, fertilizers, vegetable oils, leather, rubber goods, aluminum, metallurgical products, gas, asbestos products, fire extinguishers, paints, varnishes, shoe polish, fish oil and scrap, and tanning extracts. Careful study is made of industrial opportunities, and research is carried on to further the utilization of the natural resources of the State.

This department coöperates closely with several State Departments in such investigations as the complete analysis of fuel purchased for State Institutions, on materials used in highway work, in stream pollution and industrial studies of water supplies, in boiler feed waters, in corrosion resistance, and in examination of materials bought by the State on specification.

Graduates in Chemical Engineering may expect to find employment in such fields as chemical engineers in control work, industrial research, technologists, superintendents of chemical industries, and municipal engi-

neers, engineers in the State and Federal health service, consulting chemical engineers, manufacturers of chemicals and of chemical equipment, chemical salesmen and representatives, and as promoters of new chemical industries in the South. The curriculum includes basic courses in Chemistry, Physics, Mathematics, and fundamental engineering as a background for professional Chemical Engineering training, so that the graduate is prepared to enter successfully into any field of chemical activity.

CURRICULUM IN CHEMICAL ENGINEERING

Freshman Year

For the freshman year, refer to page 112.

Sophomore Year

COURSES	CREDITS First Term	Second Term	Third Term
Differential Calculus, Integral Calculus I and II, Math. 201, 202, 203	4	4	4
*Business English, Public Speaking, and English or American Literature, Eng. 120, 160 and 220 or 221 or 331	3	3	3
Introduction to Chemical Engineering, Chem.E. 101	1	1	1
Physics for Engineers, Phys. 104	4	4	4
Qualitative Analysis, Chem. 211	4	0	0
Quantitative Analysis, Chem. 212, 213	0	4	4
Shopwork, M.E. 104	1	1	1
**Military Science II, Mil. 102	2	2	2
Sport Activities, P.E. 102	1	1	1
	20	20	20

Junior Year

Engineering Mechanics, E.M. 211, 212	4		
Strength of Materials, C.E. 220	0		3
Organic Chemistry, Chem. 321	4	4	4
Industrial Chemistry, Chem.E. 201	3	3	3
Industrial Stoichiometry, Chem.E. 210	0	0	3
Chemical Engineering Laboratory I, Chem.E. 202	1	1	1
Physical Chemistry, Chem. 241	4	4	4
Mineralogy, Geol. 230	0	0	3
Elements of Electrical Engineering I, E.E. 220	3	3	0
Machine Shop, M.E. 218	1	1	0
Electives	3	3	3
	22	22	21

Summer requirement: six weeks industrial employment.

Senior Year

Principles of Chemical Engineering, Chem.E. 300	3	3	3
Water Treatment, Chem.E. 204	3	0	0
Chemistry of Engineering Materials, Chem.E. 205	0	3	0
Electrochemical Engineering, Chem.E. 301	0	0	3
Chemical Engineering Lab. and Design II, Chem.E. 307	2	2	2
Heat Engineering III, M.E. 201	3	3	0
Hydraulics, C.E. 230	0	0	3
General Economics, Econ. 103	3	3	3
Elementary Modern Physics, Phys. 206	3	3	
***Technical Writing I, Eng. 324	0	0	0
***Business Law, Econ. 211	0	0	3
Electives	3	3	3
	20	20	20

All seniors will be required to go on the inspection trip as part of their curriculum.

* Students who have been certified by the Department of English as proficient in English may substitute for the courses listed German, M.L. 102. Such students are expected to take two years of German.

** Or 6 credits in one or two of the following departments: Economics, Psychology, History, Modern Language, Sociology.

*** With the approval of the advisor, courses in Education, English, History, German, Advanced Mathematics, Botany, and Library Methods may be substituted for Technical Writing, and Business Law.

CIVIL ENGINEERING

I. General Civil Engineering
II. Highway Engineering
III. Construction Engineering
IV. Sanitary Engineering

The aim of the curricula in Civil Engineering is to give such training as will enable young men to take an active part in the work of advancing our State along material lines, such as developing its waterpower, building railroads and public highways, and constructing water supply and sewerage systems for our towns.

The theoretical and classroom work is supplemented with practical work in the field, drawing-rooms, and laboratories to demonstrate the relations existing between theory and practice. At the same time it is recognized that a successful engineer requires a well-trained mind—one that reasons logically, accurately, and quickly. Therefore, a thorough course is given in all those branches of applied mathematics which are used in the solution of engineering problems.

The work, accompanied as it is by the cultural training acquired through the instruction in Mathematics, English, Chemistry, Economics, Modern Languages, and Military Science, especially equips a young man to fit into the present-day needs of the country.

The curricula are arranged to give the student an understanding of the principles underlying the various branches of the profession and at the same time teach him to apply these principles to the practical problems with which the Civil Engineer has to deal.

Those students taking the general Civil Engineering curriculum may at the beginning of the senior year elect the Highway Engineering option, as set forth in the curriculum of Civil Engineering II, Highway Engineering.

Those students taking the general Civil Engineering curriculum may at the beginning of the junior year elect the Construction Engineering option, as set forth in the curriculum of Civil Engineering III, Construction Engineering.

Those students taking the general Civil Engineering curriculum may at the beginning of the sophomore year elect the Sanitary Engineering option, as set forth in the curriculum of Civil Engineering IV, Sanitary Engineering.

For instruction in Civil Engineering to demonstrate classroom problems the following are provided: Surveying instruments, plane tables, current meters, sextants, cement laboratory apparatus for demonstrating classroom problems.

Particular attention is called to the engineering construction options to the general curriculum in Civil Engineering, which have been introduced in response to the State-wide demand for education for building construction, and contracting.

CURRICULUM IN CIVIL ENGINEERING

Freshman Year

For the freshman year, refer to page 112.

Sophomore Year

COURSES	CREDITS *First Term*	*Second Term*	*Third Term*
Differential Calculus, Integral Calculus, I and II, Math. 201, 202, 203	4	4	4
*Business English, Public Speaking, and English or American Literature, Eng. 120, 160 and 220 or 221 or 337	3	3	3
Physics for Engineers, Phys. 104	4	4	4
Metal Work, M.E. 108a	3	0	0
Theoretical Surveying, C.E. 206	3	3	3
Field Surveying, C.E. 207	1	1	1
Engineering Mechanics, E.M. 211, 212	0	3	3
**Military Science II, Mil. 102	2	2	2
Sport Activities, P.E. 102	1	1	1
	21	21	21

Surveying, C.E. s240, concurrent with Summer School—3 credits.

Junior Year

Elements of Electrical Engineering, I, E.E. 220	3	3	0
Engineering Mechanics, E.M. 213	3	0	0
Materials of Construction, C.E. 201	3	0	0
Strength of Materials, C.E. 221, 222	0	3	3
Engineering Drawing, C.E. 208	1	1	1
Hydraulics, C.E. 231	0	3	3
General Economics, Econ. 103	3	3	3
Highway Engineering, H.E. 201	0	3	3
Heat Engineering II, M.E. 115	0	0	3
Technical Writing I, Eng. 324	3	0	0
†Electives	3	3	3
	19	19	19

Summer requirement: six weeks industrial employment.

Senior Year

Engineering Geology, Geol. 201	3	0	0
Reinforced Concrete, C.E. 204	3	0	0
Theory of Structures, C.E. 313	3	3	0
Structural Design, C.E. 314	0	3	3
Railroad Economics, C.E. 306	0	3	0
Transportation, H.E. 302	0	0	3
Applied Astronomy, C.E. 301	0	0	4
Graphic Statics, C.E. 209	1	0	0
Materials Testing Laboratory, H.E. 204	0	1	1
Water Works, C.E. 305	0	3	0
Sanitary Engineering Laboratory, C.E. 307	1	1	0
Sewerage, C.E. 308	3	0	0
Business Law, Econ. 211	0	0	3
†Electives	6	6	6
	20	20	20

All seniors will be required to go on the inspection trip as part of their curriculum.

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* Students who have been certified by the Department of English as proficient in English may substitute for the courses listed Spanish, M.L. 103. Such students are expected to take two years of Spanish.

** Or 6 credits in one or two of the following departments: Economics, Psychology, History, Modern Language, Sociology.

† At least 6 electives must come from Social Science Group.

CIVIL ENGINEERING II—HIGHWAY ENGINEERING

North Carolina has, during the past fifteen years, made remarkable progress in the building of good roads, and the beneficial effect of these well-constructed highways is being shown in the development of the State along social and industrial lines. Not only has the State undertaken, on a large scale, the building of an adequate highway system, but most of the counties and cities in the State have spent large sums in the building of new roads or the improvement of old roads. And what has already been done is possibly only a beginning, for it is likely that even larger road construction programs by the State and its political subdivisions will be necessary if the material prosperity of the State—dependent so largely on adequate transportation facilities is to continue.

The building of roads and their proper maintenance are engineering problems to be handled by technically trained men. To meet the need and demand for such men the North Carolina State College offers a four-year curriculum in Highway Engineering. Since Highway Engineering is, fundamentally, a special division of the broad field of Civil Engineering, the curriculum for the first three years is identical with the regular Civil Engineering curriculum. In the fourth year, however, the student who specializes in Highway Engineering is given more specific instruction in those subjects pertaining to Highway Engineering. The entire curriculum is arranged so that graduates in this department will not only be well trained technically, but will have that broad general education so essential to success in engineering.

State College, due to its favorable location, offers unusual opportunities to young men to study Highway Engineering. Not only are the necessary facilities available for theoretical instruction, but there are in and near Raleigh many opportunities for studying the practical application of the principles of highway construction. Raleigh and Wake County have built, or have under construction, most of the different types of road surfaces; the laboratories of the State Highway Commission are available for inspection, and numerous experimental sections of road constructed by the Commission near Raleigh can be examined.

CURRICULUM IN HIGHWAY ENGINEERING

Freshman Year

For the freshman year, refer to page 112.

Sophomore Year

COURSES	CREDITS *First Term*	*Second Term*	*Third Term*
Differential Calculus, Integral Calculus I and II, Math. 201, 202, 203	4	4	4
*Business English, Public Speaking, and English or American Literature, Eng. 120, 160 and 220 or 221 or 337	3	3	3
Physics for Engineers, Phys. 104	4	4	4
Metal Work, M.E. 108a	3	0	0
Theoretical Surveying, C.E. 206	3	3	3
Field Surveying, C.E. 207	1	1	1
Engineering Mechanics, E.M. 211, 212	0	3	3
**Military Science II, Mil. 102	2	2	2
Sport Activities, P.E. 102	1	1	1
	21	21	21

Surveying C.E. s240, concurrent with Summer School 3 credits.

Junior Year

Elements of Electrical Engineering I, E.E. 220	3	3	0
Engineering Mechanics, E.M. 213	3	0	0
Materials of Construction, C.E. 201	3	0	0
Strength of Materials, C.E. 221, 222	0	3	3
Engineering Drawing, C.E. 208	1	1	1
Hydraulics, C.E. 231	0	3	3
General Economics, Econ. 103	3	3	3
Highway Engineering, H.E. 201	0	3	3
Heat Engineering II, M.E. 115	0	0	3
†Electives	6	3	3
	19	19	19

Summer requirement: six weeks industrial employment.

Senior Year

Engineering Geology, Geol. 201	3	0	0
Reinforced Concrete, C.E. 204	3	0	0
Theory of Structures, C.E. 313	3	3	0
Structural Design, C.E. 314	0	3	3
Applied Astronomy, C.E. 301	0	0	4
Graphic Statics, C.E. 209	1	0	0
Materials Testing Laboratory, H.E. 204	0	1	1
Highway Engineering II, H.E. 301	3	3	0
Transportation, H.E. 302	0	0	3
Highway Office Practice & Design, H.E. 303	1	1	0
Modern Language	3	3	3
Business Law, Econ. 211	0	0	3
†Electives	3	6	3
	20	20	20

All seniors will be required to go on the inspection trip as part of their curriculum.

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* Students who have been certified by the Department of English as proficient in English may substitute for the courses listed Courses in a Modern Language. Such students are expected to take two years of the Modern Language.

** Or 6 credits in one or two of the following departments: Economics, Psychology, History, Modern Language, Sociology.

† At least 6 electives must come from Social Science Group.

CIVIL ENGINEERING III—CONSTRUCTION ENGINEERING

This curriculum is offered in order to educate men for the profession of Engineering, particularly as it is related to construction.

North Carolina's progress indicates great increase in building and general construction. Construction needs more and better trained men to meet the immediate demands as well as to anticipate the greatly increased demands of the future. Builders, as few others, need to know at all times exactly where they stand on the projects they undertake. The contractor, to be successful, must conduct his business systematically and economically. Therefore, he must learn not only general engineering technique, but also something of Architecture and business methods and practices; he must delve further into construction and learn the principles involved, the methods, practices, and successful policies in use.

Combined into this curriculum are the fundamental courses in the Civil Engineering curriculum, a few courses in Architecture, a few additional courses dealing with business, and special courses in Construction Engineering in the junior and senior years.

The theory in the Construction Engineering courses is supplemented by frequent inspection trips to projects under construction, and particular emphasis is placed upon estimating, modern methods, and management of operations.

This curriculum is designed to prepare the student to enter the work of actual construction of modern structures and to lay a foundation for future work as owners, managers, or executives in the construction industry.

CURRICULUM IN CONSTRUCTION ENGINEERING

Freshman Year

For the freshman year, refer to page 112.

Sophomore Year

COURSES	CREDITS *First Term*	*Second Term*	*Third Term*
Differential Calculus, Integral Calculus I and II, Math. 201, 202, 203	4	4	4
*Business English, Public Speaking, and English or American Literature, Eng. 120, 160 and 220 or 221 or 337	3	3	3
Physics for Engineers, Phys. 104	4	4	4
Metal Work, M.E. 108a	3	0	0
Theoretical Surveying, C.E. 206	3	3	3
Field Surveying, C.E. 207	1	1	1
Engineering Mechanics, E.M. 211, 212	0	3	3
**Military Science II, Mil. 102	2	2	2
Sport Activities, P.E. 102	1	1	1
	21	21	21

Surveying, C.E. s240, concurrent with Summer School 3 credits.

Junior Year

Engineering Mechanics, E.M. 213	3	0	0
Strength of Materials, C.E. 221, 222	0	3	3
Elements of Electrical Engineering I, E.E. 220	3	3	0
Electrical Equipment of Buildings, E.E. 105	0	0	3
Construction Engineering I, C.E. 211	3	3	3
Engineering Geology, Geol. 201	3	0	0
Hydraulics, C.E. 230	0	3	0
Structural Clay Products, Cer.E. 105	0	1	0
Architectural Details, A.E. 111	0	0	2
Materials of Construction, C.E. 201	3	0	0
General Economics, Econ. 103	3	3	3
Industrial Psychology, Psychol 238	0	0	3
Electives	3	3	3
	21	19	20

Summer requirement: six weeks industrial employment.

Senior Year

Reinforced Concrete, C.E. 204	3	0	0
Theory of Structures, C.E. 313	3	3	0
Structural Design, C.E. 314	0	3	3
Graphic Statics, C.E. 209	1	0	0
Materials Testing Laboratory, H.E. 204	0	1	1
Architectural Office Practice, A.E. 210	2	2	2
Construction Engineering II, C.E. 302	3	3	3
Construction Equipment, C.E. 303	3	0	0
Accident Prevention in Construction, C.E. 312	0	0	3
Sanitary and Mechanical Equipment of Buildings, C.E. 202	0	0	3
Specifications, C.E. 309	0	3	0
†Economics or Social Sciences	3	3	3
Electives	3	3	3
	21	21	21

All seniors will be required to go on the inspection trip as part of their curriculum.

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* Students who have been certified by the Department of English as proficient in English may substitute for the courses listed Courses in a Modern Language. Such students are expected to take two years of the Modern Language.

** Or 6 credits in one or two of the following departments: Economics, Psychology, History, Modern Language, Sociology.

† To be selected with the advice of the head of the division of Construction Engineering.

CIVIL ENGINEERING IV—SANITARY ENGINEERING

The importance of Sanitary Engineering as it affects the health and life of the people needs no emphasis. The progress of the State of North Carolina in matters affecting health is known the country over. There is need for many more men trained in Sanitary Engineering. To meet this need, the curriculum in Sanitary Engineering is offered. In the main it is the curriculum in General Civil Engineering with selected courses in Bacteriology, Chemical Engineering, and Sanitary Engineering.

As there is a large demand in this State for men familiar with the design and operation of water and sewage plants, special attention will be given to the actual design and practical operation of water purification and sewage disposal plants.

The Sanitary Engineering Laboratory equipment is similar to that used in water and sewage plant laboratories, and the student makes the same tests, using standard methods as are made in water and sewage plant laboratories.

The City of Raleigh water purification plant and the College gymnasium swimming pool filter plant are available for practical demonstration and instruction. Through the coöperation of the Bureau of Sanitary Engineering, State Board of Health, located in Raleigh, the student has a chance to study all phases of its work not only in Sanitary Engineering, but also in the broad field of public health.

Upon graduation, students are prepared to accept positions as water and sewage plant operators, assistant resident engineers with private consulting engineers, junior engineers with state boards of health, and with the United States Public Health Service. After a few years of experience graduates may be expected to advance to positions as superintendents of waterworks, city engineers and city managers, consulting engineers, state sanitary engineers, and senior engineers with the United States Public Health Service.

CURRICULUM IN SANITARY ENGINEERING

Freshman Year

For the freshman year, refer to page 112.

Sophomore Year

The sophomore year is the same as the sophomore year in Civil Engineering. See page 121. Surveying, C.E. s240, concurrent with Summer School 3 credits.

Junior Year

COURSES	CREDITS *First Term*	*Second Term*	*Third Term*
Effective for the academic year 1936-37.			
Elements of Electrical Engineering, I, E.E. 220	2	3	0
Engineering Mechanics, E.M. 213	2	0	0
Materials of Construction, C.E. 201	2	0	0
Strength of Materials, C.E. 221, 222	0	3	3
Engineering Drawing, C.E. 208	1	1	1
Hydraulics, C.E. 231	0	3	3
Highway Engineering, H.E. 201	0	3	3
General Bacteriology, Bot. 203	0	1	0
Aquatic Biology, Bot. 210	0	0	2
Sanitary Engineering, C.E. 215	0	0	3
Engineering Geology, Geol. 201	3	0	0
Treatment of Water and Sewage, Chem.E. 208	3	0	0
Technical Writing I, Eng. 324	0	0	3
Electives	3	3	3
	19	20	21

Summer requirement: six weeks industrial employment.

Senior Year

Effective for the academic year 1937-38.			
Reinforced Concrete, C.E., 204	3	0	0
Theory of Structures, C.E. 313	3	3	0
Structural Design, C.E. 314	0	3	3
Graphic Statics, C.E. 209	1	0	0
Materials Testing Laboratory, H.E. 204	0	1	1
Sanitary Engineering Laboratory, C.E. 307	1	1	0
Water Works, C.E. 305	0	3	0
Water Purification, C.E. 310	0	0	3
Sewerage, C.E., 308	3	0	0
Sewage Disposal, C.E. 311	0	3	0
General Economics, Econ. 103	3	3	3
Business Law, Econ. 211	3	0	0
Financing of Sanitary Utilities, C.E. 304	0	0	3
Electives	3	3	6
	20	20	19

All seniors will be required to go on the inspection trip as part of their curriculum.

ELECTRICAL ENGINEERING

The training of young men for active work in a field as wide and diversified as the Electrical Industry demands, above all else, a thorough preparation in the sciences underlying all branches of engineering, a broad foundation in fundamental electrical theory and a clear understanding of the characteristics of electrical machinery and systems. These factors are essential for success, whether it be in the design and manufacture of electrical equipment, in power production and utilization or the fields of communication and signaling, as in all these branches of the industry technical advances are being made with increasing rapidity. With this object in view the curriculum in Electrical Engineering includes comprehensive training in mathematics, physics and chemistry, the fundamental sciences, and adequate training in allied branches of engineering. All courses are accompanied by coördinated work in the laboratory and intensive drill in the applications of theory by means of carefully planned problems. In the Senior year the student is offered two options, one looking toward employment in the fields of design, transmission, or communication, and the other in the field of industrial applications.

The curriculum includes a thorough drill in the preparation of technical reports, courses in economics, and opportunity is offered during the junior and senior years for further study of industrial organizations and management.

Each student is also required to spend at least six weeks in satisfactory industrial employment before receiving his degree, and during the senior year to make an inspection trip to a number of modern electric installations, and submit a report upon these.

Close coördination in the work of the American Institute of Electrical Engineers is secured through a student branch at the College, which meets twice a month, through the State section of the Institute, which meets several times during the year, and through the regional meetings of the Institute, one section of which is organized as a student activities conference.

CURRICULUM IN ELECTRICAL ENGINEERING

Freshman Year

For the freshman year, refer to page 112.

Surveying, C.E., s102, 3 credits, is required in the summer immediately following the freshman year.

Sophomore Year

COURSES	CREDITS *First Term*	*Second Term*	*Third Term*
Differential Calculus, Integral Calculus I and II, Math. 201, 202, 203	4	4	4
Physics for Engineers, Phys. 104	4	4	4
*Business English, Public Speaking, and English or American Literature, Eng. 120, 160 and 220 or 221 or 337	3	3	3
Economic History, Hist. 101	3	3	3
Metal Work, M.E., 108a	0	0	3
**Electrical Engineering Fundamentals, E.E. 101	3	3	0
***Military Science, II, Mil. 102	2	2	2
Sport Activities, P.E. 102	1	1	1
	20	20	20

Junior Year

Engineering Mechanics, E.M. 211, 212, 213	3	3	3
Heat Engineering IV, M.E. 204	3	3	3
Mechanical Engineering Laboratory II, M.E. 202	1	1	1
Technical Writing, Eng. 324	0	3	0
Differential Equations, Math. 301	3	0	0
Elementary Modern Physics, Phys. 206	0	0	3
General Economics, Econ. 103	3	3	3
Principles of Electrical Engineering, E.E. 201	3	3	3
Electrical Engineering Problems, E.E. 202	1	1	1
Electrical Engineering Laboratory, E.E. 203	2	2	2
Electives	3	3	3
	22	22	22

Summer requirement: six weeks industrial employment.

Senior Year

Engineering Economics, I.E. 213	3	0	0
Strength of Materials, C.E. 220	3	0	0
Electrical Industry, I.E. 222	0	3	0
Hydraulics, C.E. 231	0	3	3
Illumination, E.E. 307	3	0	0
Electric Transmission, E.E. 304	0	0	4
Electric Distribution, E.E. 301	0	0	3
Alternating Current Machinery, E.E. 302	4	4	0
Electrical Engineering Laboratory, E.E. 303	2	2	2
First Option			
Electric Communication, E.E. 306	3	3	3
Second Option			
Electric Power Applications, E.E. 305	3	3	3
Electives	3	6	6
	21	21	21

All seniors will be required to go on the inspection trip as part of their curriculum.

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* Students who have been certified by the Department of English as proficient in English may substitute for the courses listed French, M.L. 101. Such students are expected to take two years of French.

** Sophomore class is divided into two sections, one half taking Fundamentals and Metal Shop as scheduled, the other half taking the Metal Shop during Fall Term and the Electrical Engineering Fundamentals the second and third terms.

*** Or 6 credits in one or two of the following departments: Economics, Psychology, History, Modern Language, Sociology.

GEOLOGICAL ENGINEERING

This curriculum is designed to give young men the training in geology and engineering that will fit them to meet the practical problems of field geology and mineral deposits.

The mineral resources of the State, both metallic and non-metallic, offer important possibilities for future developments. In the western part of the State there exist valuable deposits of copper, nickel, iron, mica, feldspar, kaolin, cyanite, barite, granite, limestone, and other minerals; in the central part, coal deposits of promising quantity and quality and large areas of pyrophyllite, granite, and other valuable building stones; and in the eastern part, phosphate and marls.

The curriculum in Geological Engineering is designed to meet the geological and mining conditions in North Carolina and the South. There is always a moderate demand for men well trained in geology and engineering in connection with State and Federal geological surveys, oil and mining companies, industrial companies, the leading railways, hydropower companies on dam work, and as teachers of geology. Students will also have the additional advantage of coming in close contact with the research which is being done on the geology of the State and which of necessity will be greatly enlarged within the next few years.

CURRICULUM IN GEOLOGICAL ENGINEERING

Freshman Year

For the freshman year, refer to page 112.

Sophomore Year

COURSES	CREDITS *First Term*	*Second Term*	*Third Term*
Differential Calculus, Integral Calculus I and II, Math. 201, 202, 203	4	4	4
*Business English, Public Speaking, and English or American Literature, Eng. 120, 160 and 220 or 221 or 337	3	3	3
Qualitative Analysis, Chem. 211	4	0	0
Quantitative Analysis, Chem. 212, 213	0	4	4
Physics for Engineers, Phys. 104	4	4	4
Engineering Geology, Geol. 201	3	0	0
Historical Geology, Geol. 125	0	3	0
Mineralogy, Geol. 230	0	0	3
**Military Science II, Mil. 102	2	2	2
Sport Activities, P.E. 102	1	1	1
	21	21	21

Junior Year

Engineering Mechanics, E.M. 201, 202	3	3	0
General Economics, Econ. 103	3	3	3
Heat Engineering II, M.E. 115	3	0	0
Physical Chemistry, Chem. 231	0	0	5
Advanced Mineralogy, Geol. 235	0	3	0
Theoretical Surveying, C.E. 206	3	3	0
Field Surveying, C.E. 207	1	1	0
Engineering Drawing, C.E. 208	1	1	1
Physiography, Geol. 205	0	0	3
Petrology, Geol. 303	3	0	0
Structural Geology, Geol. 250	0	3	0
Ceramic and Mining Processes, Cer. E. 104	0	0	3
Electives	3	3	3
	20	20	18

Summer requirement: six weeks industrial employment.

Senior Year

Economic Geology, Geol. 305, 306	0	3	3
Optical Mineralogy, Geol. 301	3	3	3
Business Law, Econ. 211	0	0	3
Mining Engineering, Geol. 310	3	3	3
Elements of Electrical Engineering I, E.E. 220	3	3	0
Technical Writing I, English 324	0	0	3
Hydraulics, C.E. 230	3	0	0
Geological Research, Geol. 320	3	3	3
***Social Science Options	3	3	0
Electives	3	3	3
	21	21	21

All seniors will be required to go on the inspection trip as part of their curriculum.

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* Students who have been certified by the Department of English as proficient in English may substitute for the courses listed French, M.L., 101. These students are expected to take two years of French.

** Or 6 credits in one or two of the following departments: Economics, Psychology, History, Modern Language, Sociology.

*** These options may be selected from courses in Economics, Education, History, Psychology or Sociology.

INDUSTRIAL ENGINEERING

For a number of years there has been increasing application of engineering methods and approach to the solution of the problems of industries, with marked success; thus has developed the technic known as Industrial Engineering, instruction in which is offered in many engineering schools, in order more definitely to prepare young men for this field of activity.

There is an imperative demand in industries for men of trained intelligence and high character, not only well grounded in engineering, but also informed about and directed to industries, where they may serve well because of their combined knowledge of engineering, economics and industrial relations.

The aim of the curriculum in Industrial Engineering is to prepare students to enter the employ of industries as engineering graduates and, through experience, develop into positions of responsibility and service; and thus to meet the demands of small as well as large industries for men educated as engineers with special preparation for the activities of industries.

Consequently, the curriculum provides thorough education in the subjects fundamental to engineering, basic engineering courses, courses in Psychology, Economics and Accounting, and besides, special Industrial Engineering courses which apply engineering methods and principles to the study of industries; so that students may learn to make engineering, economic and social analyses concurrently, and to apply them to the conduct of enterprises.

Electives, to be selected from engineering and other College courses with the definite approval of the adviser, offer opportunity for the development of individual aptitudes.

CURRICULUM IN INDUSTRIAL ENGINEERING

Freshman Year

For the freshman year, refer to page 112.

Sophomore Year

COURSES	CREDITS *First Term*	*Second Term*	*Third Term*
Differential and Integral Calculus I and II, Math. 201, 202, 203	4	4	4
*Business English, Public Speaking, and English or American Literature, Eng. 120, 160 and 220 or 221 or 337	3	3	3
Physics for Engineers, Phys. 104	4	4	4
General Economics, Econ. 103	3	3	3
Shopwork, M.E. 105, 106, 107	2	2	2
Industrial Organization, I.E. 101	2	2	2
**Military Science II, Mil. 102	2	2	2
Sport Activities, P.E. 102	1	1	1
	21	21	21

Junior Year

Engineering Mechanics, E.M. 211, 212, 213	3	3	3
Engineering Thermodynamics, M.E. 207	3	3	3
Mechanical Engineering Laboratory II, M.E. 202	1	1	1
Machine Shop III, M.E. 220	2	2	2
Accounting I, Econ. 201	3	3	3
Management Engineering, I.E. 220	3	3	3
Electives	6	6	6
	21	21	21

Summer requirement: six weeks industrial employment.

Senior Year

Technical Writing I, Eng. 324	0	3	0
Business Law, Econ. 211	3	0	0
Industrial Psychology, Psychol. 238	0	0	3
Strength of Materials, C.E. 220	3	0	0
Elements of Electrical Engineering II, E.E. 230	4	4	4
Engineering Economics, I.E. 213	3	0	0
Electrical Industry, I.E. 222	0	3	0
Industrial Engineering Problems, I.E. 330	0	3	3
Investigation and Report, I.E. 331	0	0	3
Electives	6	6	6
	19	19	19

All seniors will be required to go on the inspection trip as part of their curriculum.

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* Students who have been certified by the Department of English as proficient in English may substitute for the courses listed French M.L. 101. These students are expected to take two years of French.

**Or 6 credits in one or two of the following departments: Economics, Psychology, History, Modern Language, Sociology.

MECHANICAL ENGINEERING

The Mechanical Engineer is primarily a designer and builder of machines and other equipment for use in manufacturing processes, transportation, and the generation of power. He is responsible for the conservation and economical use of the power-producing resources of the world, through the application of the proper kind of equipment in each field of production. He is called upon to take charge of the executive management of the manufacturing, transportation, and power industries. For the Mechanical Engineer to be well grounded in his profession he must be thoroughly familiar with both the science and the art of engineering.

The curriculum in Mechanical Engineering begins with a thorough training in mathematics, physics, and chemistry as a foundation for the technical work which is later developed along several parallel lines. The student is taught how these fundamental sciences are applied to the physical properties of the materials of construction, and to the transformation of heat energy into work and power. This is accomplished by means of courses in drafting, metallurgy, mechanics, and thermodynamics; by the work in the wood shop, forge shop, foundry, and machine shop, and by the tests performed in the mechanical laboratory.

An option is offered in the Mechanical Engineering curriculum for students who desire special training in furniture design and construction. It is the purpose of the option to prepare the students for administrative and executive positions in the furniture industry. The option includes the fundamental laws of design through the study of good examples and through the practice in construction. It also includes a study of the characteristics of the different periods, which enables the student to identify an article by its style and to name and understand its different style points. The furniture used in the dormitories and special equipment for the laboratories and offices is manufactured in our woodworking department. This gives a student special advantage in this phase of the work.

CURRICULUM IN MECHANICAL ENGINEERING

Freshman Year

For the freshman year, refer to page 112.

Sophomore Year

COURSES	CREDITS *First Term*	*Second Term*	*Third Term*
Differential Calculus, Integral Calculus, I and II, Math. 201, 202, 203	4	4	4
*Business English, Public Speaking, Eng. 120, 160	3	3	0
Physics for Engineers, Phys. 104	4	4	4
Mechanical Drawing, M.E. 110	2	2	2
Metallurgy, M.E. 109	2	2	2
Shopwork, M.E. 105, 106, 107	2	2	2
Engineering Mechanics, E.M. 211	0	0	3
**Military Science, Mil. 102	2	2	2
Physical Education, P.E. 102	1	1	1
	20	20	20

Surveying, C.E. s102, Summer Camp 3 credits.

Junior Year

General Economics, Econ. 103	3	3	3
Engineering Mechanics, E.M. 212, 213	3	3	0
Machine Shop II, M.E. 219	1	1	1
Engineering Thermodynamics, M.E. 207	3	3	3
Mechanical Engineering Laboratory II, M.E. 202	1	1	1
‡Kinematics, M.E. 203	3	3	3
Materials of Construction, C.E. 201	3	0	0
Strength of Materials, C.E. 221, 222	0	3	3
English or American Literature, Eng. 220 or 221 or 237	0	0	3
Electives	3	3	3
	20	20	20

Summer requirement: six weeks industrial employment or ten hours solo flying for Aeronautical Option.

Senior Year

Power Plants, M.E. 305	3	3	3
Hydraulics, C.E. 231	3	3	0
Heating and Ventilation, M.E. 303	0	3	0
†Machine Design, M.E. 206	3	3	3
†Refrigeration, M.E. 304	0	0	3
Mechanical Engineering Laboratory III, M.E. 301	1	1	1
Elements of Electrical Engineering II, E.E. 230	4	4	4
Business Law, Econ. 211	0	0	3
Technical Writing I, Eng. 324	3	0	0
Electives	3	3	3
	20	20	20

All seniors will be required to go on the inspection trip as part of their curriculum.

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* Students who have been certified by the Department of English as proficient in English may substitute for the courses listed French M.L. 101. Such students are expected to take two years of French.

**Or 6 credits in one or two of the following departments: Economics, Psychology, History, Modern Language, Sociology.

‡ Furniture Option, M.E. 205, or Aero. Option, M. E. 211

† Furniture Option, M.E. 215.

MECHANICAL ENGINEERING II—AERONAUTICAL OPTION

The continual development in aeronautics is constantly producing a demand for men with aeronautical training. To meet this demand, the Mechanical Engineering Department is offering an option in Aeronautics. This course is designed to train engineers for the design and practice in this field.

The option offered is essentially the Mechanical Engineering Curriculum, being almost identical for the first three years. In the fourth year, however, special emphasis is placed upon the studies pertaining to aircraft engines, the design and aerodynamics of airplanes. In addition to theoretical instruction, practical experiments and tests are made in the laboratories.

A large and well-equipped airport near the campus adds interest and offers an opportunity for practical instruction. In view of the fact that Raleigh is favorably situated on the North South airplane course, the student will have a wonderful opportunity to inspect the various types of airplanes that make calls at the local airport.

AERONAUTICAL OPTION

Freshman, sophomore, and junior years identical with Mechanical Engineering.

Senior Year

COURSES	CREDITS *First Term*	*Second Term*	*Third Term*
Effective for the academic year 1937-38.			
Aircraft Engines, M.E. 310	3	3	3
Airplane Design, M.E. 312	3	3	3
Aerodynamics, M.E. 313	3	3	3
Aeronautical Laboratory, M.E. 311	1	1	1
Elements of Electrical Engineering II, E.E. 230	4	4	4
Business Law, Econ. 211	0	3	0
Hydraulics, C.E. 230	3	0	0
Technical Writing I, Eng. 324	0	0	3
Electives	3	3	3
	20	20	20

All seniors will be required to go on the inspection trip as part of their curriculum.

THE ENGINEERING EXPERIMENT STATION

The Engineering Experiment Station of the North Carolina State College of Agriculture and Engineering was established in 1923, as provided by the General Assembly of that year. It is an integral part of the School of Engineering, and is engaged in an organized program of research consisting of individual projects carefully defined and approved, which are carried on by engineering teachers. The Station fits uniquely into the program of instruction, research, and extension of State College.

Purpose

The efforts of the Engineering Experiment Station are directed along the following lines:

(a) The investigation of resources and processes, through experimentation and tests, with the object of opening and developing wider fields for the use of the natural resources of the State.

(b) Coöperation with industrial organizations in the solution of technical problems, which require such facilities and equipment as are available at State College.

(c) The coördination of research work undertaken by the Engineering School.

(d) The publication of the results of experimental and research projects made by the Engineering Experiment Station and the several engineering departments of State College.

THE SCHOOL OF SCIENCE AND BUSINESS

BENJAMIN FRANKLIN BROWN, *Dean*

The curricula in Biology, Chemistry, Industrial Chemistry, Physics, and Industrial Management will be discontinued in their entirety after the school year 1937-38. No new students will be admitted who cannot graduate with the class of 1938. See pages 128 and 129 of the catalog dated April 1936 for the requirements for graduation.

[3] CURRICULUM IN BIOLOGY

(Not offered after 1938.)

Freshman Year

COURSES	CREDITS *First Term*	*Second Term*	*Third Term*
Composition, Eng. 101	3	3	3
Zoology, Botany, and Geology, Zool. 101, Bot. 102, Geol. 101	4	4	4
Chemistry, Chem. 101, 103, 105	4	4	4
Economic History, Hist. 101	3	3	3
Mathematical Analysis, Math. 100	3	3	3
Military Science I, Mil. 101, or Human Relations, Soc. 101	2	2	2
Fundamental Activities and Hygiene, P.E. 101	1	1	1
	20	20	20

Sophomore Year

English or Modern Language	3	3	3
General Physics, Phys. 101	4	4	4
Economics, Econ. 103, or Sociology, Soc. 103, and elective	3	3	3
Botany 101	4	0	0
Zoology 102	0	4	0
Systematic Botany, Bot. 204, or Entomology, Zool. 204	0	0	4
Physiology, Plant, Bot. 209, or Animal, Zool. 201	0	0	5
Elective	3	3	0
Military Science II, Mil. 102, or World History, Hist. 104	2	2	2
Sport Activities, P.E. 102	1	1	1
	20	20	22

Junior Year

[1]English or Modern Language	3	3	3
Genetics, Zool. 304	4	0	0
Comparative Anatomy, Zool. 205	0	4	4
Plant Morphology, Bot. 303 and 304	4	0	4
General Bacteriology, Bot. 203	0	4	0
[2]Electives	7	7	7
	18	18	18

Senior Year

Biology	6	6	6
[2]Electives	12	12	12
	18	18	18

[1] French 2 years or German 2 years required.

[2] Nine credits to be chosen from Group II in either the junior or senior year.

NOTE: Group I: Literature and Modern Language. Group II: Social studies. Group III: Mathematics and Natural Sciences.

[3] In 1937-38, students will be admitted to the senior year only.

CHEMISTRY

The curriculum in Chemistry is designed to train students who desire to become analysts, experiment station workers, research chemists, United States Government chemists, State chemists, teachers of Chemistry, or who expect to continue their work for advanced degrees.

Students intending to study medicine may take this curriculum, using the electives to satisfy the biological requirements.

As the curriculum is arranged there is a large proportion of time for electives. This makes it an excellent basis for a cultural course in college work.

[3] CURRICULUM IN CHEMISTRY

(Not offered after 1938.)

Freshman Year

COURSES	CREDITS *First Term*	*Second Term*	*Third Term*
Composition, Eng. 101	3	3	3
General Inorganic Chemistry, Chem. 101, 103, 105	4	4	4
Algebra, Trigonometry, and Analytics, Math. 101, 102, 103	6	6	6
Economic History, Hist. 101	3	3	3
Human Relations, Soc. 101, or Military Science I, Mil. 101	2	2	2
Fundamental Activities and Hygiene, P.E. 101	1	1	1
	19	19	19

Sophomore Year

Qual. and Quan. Analysis, Chem. 211 and 212	4	4	4
Physics or Biological Science	4	4	4
General Economics, Econ. 103, or General Sociology, Soc. 103, and elective	3	3	3
[1]English or French or German	3	3	3
Military Science II, Mil. 102, or World History, Hist. 104	2	2	2
Sport Activities, P.E. 102	1	1	1
	18	18	18

Junior Year

Organic Chemistry, Chem. 321	4	4	4
Biological Science or Physics	4	4	4
German or French	3	3	3
Mineralogy, Geol. 230	0	0	3
[2]Electives	9	9	6
	20	20	20

Senior Year

Physical Chemistry, Chem. 331	4	4	4
Chemistry elective	6	6	6
[2]Electives	10	10	10
	20	20	20

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[1] German or French required for two years.

[2] Nine credits to be chosen from Group II in either the junior or senior year.

NOTE: Group I: Literature and Modern Language. Group II: Social studies. Group III: Mathematics and Natural Sciences.

[3] In 1937-38, students will be admitted to the senior year only.

INDUSTRIAL CHEMISTRY

This curriculum in Industrial Chemistry is designed for students who prefer the industrial and plant management in the chemical field rather than the more strictly theoretical field.

The students are given a thorough knowledge of analytical, organic, and physical chemistry so that they may understand and do successfully the chemistry required in the study of plants. Courses in Social Studies are given so that the students taking this course have a strong foundation for managerial, executive, and sales positions.

[2] CURRICULUM IN INDUSTRIAL CHEMISTRY

(Not offered after 1938.)

Freshman Year

COURSES	CREDITS *First Term*	*Second Term*	*Third Term*
Composition, Eng. 101	3	3	3
General Inorganic Chemistry, Chem. 101, 103, 105	4	4	4
Algebra, Trigonometry, and Analytics, Math. 101, 102, 103	6	6	6
Economic History, Hist. 101	3	3	3
Military Science I, Mil. 101, or Human Relations, Soc. 101	2	2	2
Fundamental Activities and Hygiene, P.E. 101	1	1	1
	19	19	19

Sophomore Year

Qualitative and Quantitative Analysis, Chem. 211, 212, 213	4	4	4
Physics or Biological Science	4	4	4
General Economics, Econ. 103	3	3	3
English or Modern Language	3	3	3
Sociology 103 and elective	3	3	3
Military Science II, Mil. 102, or World History, Hist. 104	2	2	2
Sport Activities, P.E. 102	1	1	1
	21	21	21

Junior Year

Accounting I, Econ. 201	3	3	3
Organic Chemistry, Chem. 321	4	4	4
Biological Science or Physics	4	4	4
Statistical Methods, Econ. 312	0	3	0
Intr. to Psychology, Psychol. 101	0	0	3
Money Credit and Banking, Econ. 221	3	0	0
[1]Electives	6	6	6
	20	20	20

Senior Year

Physical Chemistry, Chem. 331	4	4	4
Business Finance, Econ. 223	0	0	3
Industrial and Personnel Management, Econ. 231	3	3	3
[1]Electives	12	12	9
	19	19	19

[1] Nine credits to be chosen from Group I in either the junior or senior year.

NOTE: Group I: Literature and Modern Language. Group II: Social studies. Group III: Mathematics and Natural Sciences.

[2] In 1937-38, students will be admitted to the senior year only.

PHYSICS

There is an ever-increasing demand for men trained in the more theoretical side of engineering and the foundation of the physical sciences. Such men are generally trained as expert physicists. For example, radio experts and men employed in the most exact measurements of electrical, heat and light devices usually prepare themselves by taking undergraduate and graduate courses in Physics. The United States Bureau of Standards, United States Patent Office, United States Geodetic Survey, research laboratories, as well as scores of manufacturing concerns, each year look for trained men. The course in Physics prepares students for these positions. It also is offered for students who wish to teach Physics.

This curriculum also affords a student who is scientifically inclined and yet not decided as to his specific line in science an opportunity to acquire a broad foundation in cultural subjects and a good start in at least two of the physical sciences.

[3]CURRICULUM IN PHYSICS

(Not offered after 1938.)

Freshman Year

COURSES	CREDITS *First Term*	*Second Term*	*Third Term*
Composition, Eng. 101	3	3	3
General Physics, Phys. 101	4	4	4
Algebra, Trigonometry, Analytics, Math. 101, 102, 103	6	6	6
Economic History, Hist. 101	3	3	3
Shop Work, M.E. 104	1	1	1
Military Science I, Mil. 101, or Human Relations, Soc. 101	2	2	2
Fundamental Activities and Hygiene, P.E. 101	1	1	1
	20	20	20

Sophomore Year

English	3	3	3
Advanced Physics, Phys. 201	4	4	4
Differential and Integral Calculus, Math. 201 and 202	4	4	4
General Chemistry, Chem. 101, 103, 105	4	4	4
Meterology, Photography, and Descriptive Astronomy, Phys. 209, Phys. 203, Phys. 107	3	3	3
Military Science, Mil. 102, or World History, Hist. 104	2	2	2
Sport Activities, P.E. 102	1	1	1
	21	21	21

Junior Year

Social Science	3	3	3
Biological Science	4	4	0
Earth History, Geol. 101	0	0	5
Heat and Mechanics, Phys. 303 and 301	3	3	3
Adv. Calculus and Dif. Equations, Math. 301 and 303	0	3	3
Physics Elective	3	0	0
Elementary German, M.L. 102	3	3	3
Mechanical Drawing, M.E. 110	2	2	0
Electives	3	3	3
	21	21	20

Senior Year

Electricity and Magnetism, Phys. 302	4	4	0
Light, Phys. 305	0	4	4
German Prose, Elem. Scient. German, M.L. 205 and 207	3	3	3
Research and Physics Elective, Phys. 309	3	0	3
*†Electives	8	7	8
	18	18	18

*Nine credits to be chosen from Group I and Group II.

†Physical Chemistry, 231, 4-4-4, is suggested.

NOTE: Group I: Literature and Modern Language. Group II: Social studies. Group III: Mathematics and Natural Sciences.

[3] In 1937-38 students will be admitted to the senior year only.

INDUSTRIAL MANAGEMENT

The Industrial Management curriculum is designed to train students for managerial and executive positions in industry, with special emphasis on the production side of manufacturing. Basic preparation is sought in production through engineering subjects, and in departmental and general administration through economic and management subjects. Electives in engineering and social studies give a training in production, business methods, and practices in textile, tobacco, furniture, metal, automotive, ceramic, and other general industries.

The curriculum gives training for the future executive through a progression of basic engineering and social studies. Graduates should expect to gain practical experience and learn industrial techniques by entering the industrial or commercial departments of manufacturing concerns in subordinate positions.

[6] CURRICULUM IN INDUSTRIAL MANAGEMENT

(Not offered after 1938.)

Freshman Year

COURSES	CREDITS *First Term*	*Second Term*	*Third Term*
Composition, Eng. 101	3	3	3
[1]Economic History, Hist. 101	3	3	3
[1]Algebra, Trigonometry, and Analytics, Math. 101, 102, 103, or	6	6	6
[2]Mathematical Analysis, Math. 100	3	3	3
General Chemistry, Chem. 101, 103, 105	4	4	4
Engineering Drawing II, M.E. 102	3	3	0
Descriptive Geometry, M.E. 103	0	0	3
Military Science, Mil. 101, or Human Relations, Soc. 101	2	2	2
Fundamental Activities and Hygiene, P.E. 101	1	1	1
	19	19	19

Sophomore Year

Language or Literature	3	3	3
General Economics, Econ. 103	3	3	3
Accounting I, Econ. 201	3	3	3
[4]Differential and Integral Calculus I and II, Math. 201, 202, 203, or Zoology, Physiology, Psychology, Zool. 101, Zool. 201, Psychol. 101 or an approved elective	4	4	4
Physics 101 or 104	4	4	4
Military Science, Mil. 102, or World History, Hist. 104	2	2	2
Sport Activities, P.E. 102	1	1	1
	20	20	20

Junior Year

Principles of Cost Accounting, Econ. 303	3	3	0
Statistical Methods, Econ. 312	0	3	3
Time Study, Econ. 242	0	0	3
General Sociology, Soc. 103	3	3	0
Industrial Sociology, Soc. 310	0	0	3
Industrial Psychology, Psychol. 238	3	0	0
Business Law, Econ. 211	0	0	3
[5]Heat Engineering III, M.E. 201, or Heat Engineering I, M.E. 112	2–3	2–3	2–0
Mechanical Engineering Lab. I, M.E. 114	1	1	0
[3]Electives	7–6	7 6	5 7
	19	19	19

Senior Year

Industrial Management, Econ. 230	3	3	3
Personnel Management, Econ. 340	0	3	3
Labor Problems, Econ. 239	3	0	0
Marketing Methods and Sales Management, Econ. 216	3	3	3
Elements of Electrical Engineering, I, E.E. 220	3	3	0
Heating and Ventilating, M.E. 303 or M.E.	0	0	3
[3]Electives	7	7	7
	19	19	19

[1] Students taking Math. 6-6-6 will take their History in the sophomore year.

[2] If student takes Math. 100, he will take elective for Calculus, and Physics 101 for 104 during the sophomore year; M.E. 110 for M.E. 201 during the junior year; and E.E. 104 for 102, and M.E. ? (to be arranged) for M.E. 103.

[3] Nine credits to be chosen from Group I and Group II.

Group 1: Literature and Modern Language. Group II: Social studies. Group III: Mathematics and Natural Sciences.

Mechanics, C.E. 200 must be taken if Strength of Materials, M.E. 208 is to be elected in the senior year.

Power Plants, M.E. 305, or other equivalent engineering subject is suggested.

[4] If junior and senior electives are to be taken in Mechanical Engineering, Differential and Integral Calculus are required as prerequisites. If junior and senior electives are to be taken in Chemical Engineering, Chemistry 111, 112, and 114 are required as prerequisites. If junior and senior electives are to be taken in Ceramic Engineering, Chemistry 131 is required as prerequisite. If junior and senior electives are to be taken in Textile Chemistry and Dyeing, Chemistry 111, 112, and 114 are required as prerequisites. Calculus is not required if junior and senior electives are to be taken in textiles.

[5] Students with the necessary mathematical prerequisites may substitute the more advanced Heat Engines IV, M.E. 204, which must be accompanied by Mechanical Engineering Laboratory, M.E. 202. Those who have had only Mathematical Analysis or equivalent may substitute Heat Engines I, M.E. 110.

[6] In 1937-38, students will be admitted to the senior year only.

THE TEXTILE SCHOOL

THOMAS NELSON, *Dean and Director of Textile Research*

ORGANIZATION

Instruction in textile work has been given at State College since 1900, at which time the Textile Department was organized. The Board of Trustees at its meeting, June 8, 1925, decided to expand the Textile Department, and the Textile School is now one of the three major divisions of the College.

The Textile Building was enlarged, new equipment added, and other facilities, especially those for research, have been increased in order to serve adequately the textile industry. A complete program of instruction, research, and extension has been developed to meet the great opportunities and needs of the textile industry in the State and in the South.

The Textile School comprises the following divisions: (a) Yarn Manufacture and Knitting, (b) Weaving and Designing, (c) Textile Chemistry and Dyeing, (d) Textile Research. The aim of each division is definite, and the courses and curricula offered make special contribution to the profession.

THE PURPOSE OF THE SCHOOL

The purpose of the Textile School is: (1) to promote the textile interests of the State by giving instruction in the theory and practice of all branches of the textile industry; (2) to coöperate with the textile mills of the State in securing, through scientific research and experimentation, reliable data pertaining to the textile industry; (3) to educate men for professional service in Textile Manufacturing, Textile Management, Yarn Manufacturing, Weaving and Designing, Knitting, Textile Chemistry and Dyeing, and at the same time develop their capacities for intelligent leadership so they may participate in public affairs; (4) to demonstrate the value of economic diversification and to aid in the development of the textile industry through research and experimentation.

North Carolina is the largest textile manufacturing State in the South and has more mills than any other State in America. It has the largest towel, damask, denim and underwear mills in America, and has more mills that dye and finish their own products than any other Southern State. A great diversification of manufactured textile products is being made in cotton, rayon, silk, and worsted.

Never before in the history of America have more opportunities been offered to young men of North Carolina and the South than are available today to graduates of the Textile School.

The courses of instruction are arranged and grouped so that students may get the best results from their work, and accumulate the necessary knowledge, which, together with actual experience after graduation, enables them to fill such positions as:

Owners of mills;

Secretaries and treasurers of mills;

Managers, superintendents, and department foremen in cotton, rayon, silk and hosiery mills;

Superintendents and foremen in mercerizing, bleaching, dyeing and finishing plants;

Designers and analysts of fabrics;

Technical demonstrators in dyestuff industry;

Textile chemists;

Textile cost accountants in mills;

Purchasing agents for mills;

Salesmen of machinery, yarn, cloth, rayon, dyestuffs, and chemicals;

Positions in yarn and fabric commission houses and with fabric converters;

Specialists in government service;

Representatives for manufacturers of machinery, rayon, dyestuffs, and mill supplies.

INSPECTION TRIP

Each student is required to make an inspection trip during his senior year to mills making various classes of fabrics, also to bleaching, finishing, and hosiery plants.

RAYON

Rayon is an important factor in the development of the Southern Textile Industry as it is used extensively in the manufacture of fabrics, hosiery and underwear. It has opened up new fields of creative effort and greatly broadened the scope of textile manufacturing.

The Textile School is cognizant of this development and offers instruction in designing, warp preparation, weaving, dyeing and finishing of rayon fabrics and hosiery.

CURRICULA

The freshman and sophomore work is the same for all students in the Textile School. The training is general, and gives the student a good opportunity to make a wise choice in the selection of the particular field in which he desires to specialize.

TEXTILE CURRICULA FOR UNIVERSITY AND COLLEGE GRADUATES

Selected courses leading to the degree "Bachelor of Science" in Textiles are offered to graduates of universities and standard colleges. These are arranged in accordance with the vocational aim of the individual student and in the light of credits presented from the institution from which the student has been graduated, subject to the approval of his adviser and the director of instruction. In cases where the student presents enough credits which may be used for courses required in his curriculum he may be graduated with a B.S. degree in one year. In no case should it take more than two years to complete the work for his B.S. degree.

SHORT COURSE FOR TEXTILE MILL MEN

Instruction in yarn manufacturing, weaving, designing, fabric analysis and dyeing, lasting two weeks in the second term, is offered for textile mill men who wish to make a short and intensive study of any of these subjects. The subject matter will be selected to suit the requirements of each individual.

DEGREES

Upon the completion of any one of the curricula in Textiles the degree of Bachelor of Science in Textiles is conferred.

The degree of Master of Science in Textiles is offered for the satisfactory completion of one year of graduate study in residence. Candidates for the degree of Master of Science in Textiles enter and are enrolled as graduate students in the Graduate School.

The professional degree of Master of Textiles may be conferred upon graduates of the Textile School after three years of professional practice in charge of important work and upon the acceptance of a satisfactory thesis.

ADMISSION

Each applicant for admission must present evidence that he has satisfactorily completed a four-year curriculum of not less than fifteen units in a secondary school which is approved by the State Department of Education.

Each applicant for admission must be at least sixteen years old and must submit fifteen units of credit from an accredited high school. Of these units 8.5 are in specified subjects and 6.5 in elective subjects.

ADVANCED STANDING

Students who have attended colleges of approved standing will be given appropriate credit for work completed there upon the presentation of the proper certificate to the Dean of the Textile School, who will determine the credits for the curriculum which the student wishes to take.

REQUIREMENTS FOR GRADUATION

The requirements for graduation in the Textile School are the satisfactory completion of all the courses in one of the prescribed curricula (see tabulations of curricula on the pages following), a total of not less than 230 term credits, and also not less than 230 points calculated under the point system.

Of the minimum of 230 term credits required for graduation in the Textile School 153 are common to all curricula, that is, 12 term credits in Mathematics, 18 in Language, 36 in Economics, History and Psychology, 12 in Chemistry, 15 in Physics, 12 in Engineering, 6 in Agriculture, 24 in Textile, 12 in Military Training (or Social Science alternatives) and 6 in Physical Education.

Each of the curricula permits election of 18 term credits and contains not more than 70 special technical credits.

CURRICULUM IN TEXTILE MANUFACTURING

Freshman Year

COURSES	CREDITS *First Term*	*Second Term*	*Third Term*
Composition, Eng. 101	3	3	3
Physics for Textile Students, Phys. 103	4	4	4
Algebra, Trigonometry, Math. 101, 102	6	6	0
Engineering Drawing I, M.E. 101	2	2	2
Shopwork, M.E. 104	1	1	1
Textile Principles, Tex. 101, 115	1	1	4
Military Science I, Mil. 101, or World History, Hist. 104	2	2	2
Fundamental Activities and Hygiene, P.E. 101	1	1	1
	20	20	17

Sophomore Year

Economic History, Hist. 101	3	3	3
Decorative Drawing, A.E. 109, or Light in Industry, Phys. 205	3	0	0
Light in Industry, Phys. 205, or Decorative Drawing, A.E. 109	0	0	3
General Inorganic Chemistry, Chem. 101, 103, 105	4	4	4
Cotton, Cotton Classing II, F.C. 105, 225	3	3	0
Yarn Manufacture I, Tex. 102, 103	1	0	4
Power Weaving, Tex. 107, 108	0	3	1
Fabric Structure & Analysis, Tex. 106	0	2	2
Knitting I, Tex. 104, 105	3	1	1
*Military Science II, Mil. 102	2	2	2
Sport Activities, P.E. 102	1	1	1
	20	19	21

Junior Year

English or Modern Language	3	3	3
General Economics, Econ. 103	3	3	3
Textile Calculations II, Tex. 316	0	0	3
Yarn Manufacture II, Tex. 201, 202	1	4	1
Dobby Weaving, Tex. 207, 208	1	1	4
Fabric Design and Analysis I, Tex. 205	3	3	0
Dyeing I, Tex. 112, 113	4	1	1
Electives	3	3	3
	18	18	18

Senior Year

Industrial Management, Personnel Management, Econ. 230A, 240	3	3	3
Psychology, Psychol. 101, 238, 269, or Accounting I, Econ. 201	3	3	3
Yarn Manufacture IV, Tex. 301, 302	4	1	1
Leno Design, Tex. 320	3	0	0
Dobby Design, Tex. 321	0	3	0
Jacquard Design, Tex. 322	0	0	3
Cotton & Rayon Weaving, Tex. 312, 313	1	1	4
Cotton & Rayon Dyeing I, Tex. 210, 211	1	4	1
Fabric Analysis, Tex. 311	2	2	0
Fabric Testing, Tex. 109	0	0	1
Electives	3	3	3
	20	20	19

* Or 6 credits in one or two of the following departments: Economics, Psychology, History, Modern Language, Sociology.

CURRICULUM IN TEXTILE CHEMISTRY AND DYEING

(The freshman and sophomore years are the same as for Textile Manufacturing.)

Junior Year

COURSES	CREDITS		
	First Term	*Second Term*	*Third Term*
English or German	3	3	3
General Economics, Econ. 103	3	3	3
Psychology, Psychol. 101, or Textile Courses	0	0	3
Qualitative & Quantitative Analysis, Chem. 211, 212, 214	4	4	4
Dyeing II, Tex. 212, 213	5	5	2
Electives	3	3	3
	18	18	18

Senior Year

Industrial Management, Personnel Management, Econ. 230A, 240	3	3	3
Organic Chemistry, Chem. 321	4	4	4
Psychology, Psychol. 238, 269, or Textile Courses	0	3	3
Textile Microscopy, Tex. 114	1	1	0
Fabric Testing, Tex. 109	0	0	1
Textile Printing, Tex. 214, 215	4	1	1
Cotton & Rayon Dyeing II, Tex. 317, 318	2	5	5
Electives	6	3	3
	20	20	20

CURRICULUM IN TEXTILE MANAGEMENT

(The freshman and sophomore years are the same as for Textile Manufacturing.)

Junior Year

COURSES	CREDITS *First Term*	*Second Term*	*Third Term*
English or Modern Language	3	3	3
Accounting I, Econ. 201	3	3	3
General Economics, Econ. 103	3	3	3
Textile Courses	6	6	6
Electives	3	3	3
	18	18	18

Senior Year

Industrial Management, Personnel Management, Econ. 230A, 240	3	3	3
Marketing Methods, Econ. 215	3	3	3
Psychology, Psychol. 101, 238, 269	3	3	3
Textile Courses	8	8	7
Electives	3	3	3
	20	20	19
Textile courses to be selected from:			
Fabric Design & Analysis I, Tex. 205	3	3	0
Yarn Manufacture II, Tex. 201, 202	1	4	1
Dobby Weaving, Tex. 207, 208	1	1	4
Dyeing, Tex. 112, 113	4	1	1
Textile Calculations, Tex. 307 or 316	3	or	3
Yarn Manufacture IV, Tex 301, 302.	4	1	1
Leno Design, Tex 320	3	0	0
Dobby Design, Tex. 321	0	3	0
Jacquard Design, Tex. 322.	0	0	3
Calculating Fabric Costs, Tex. 330	0	3	0
Cotton & Rayon Weaving, Tex. 312, 313	1	1	4
Cotton & Rayon Dyeing, Tex. 210, 211	1	4	1
Fabric Anaylsis, Fabric Testing, Tex. 311, 109	2	2	1

CURRICULUM IN WEAVING AND DESIGNING

(The freshman and sophomore years are the same as for Textile Manufacturing.)

Junior Year

COURSES	CREDITS *First Term*	*Second Term*	*Third Term*
English or Modern Language	3	3	3
General Economics, Econ. 103	3	3	3
Appreciation of Fine Arts, A.E. 208, or Textile Courses	3	3	0
Textile Calculations II, Tex. 316	0	0	3
Fabric Design and Analysis, Tex. 205	3	3	0
Jacquard Design, Tex. 322	0	0	3
Dobby Weaving, Tex. 207, 209	2	2	5
Electives	3	3	3
	17	17	20

Senior Year

Industrial Management, Personnel Management, Econ. 230A, 240	3	3	3
Psychology, Psychol. 101, 269, 238	3	3	3
Leno Design, Tex. 320	3	0	0
Dobby Design, Tex. 321	0	3	0
Fabric Design and Analysis II, Tex. 206	0	0	3
Jacquard Design Lab., Tex. 310	1	1	1
Color in Woven Design, Tex. 315	3	3	0
Cotton & Rayon Weaving, Tex. 312, 314	2	2	5
Fabric Analysis, Tex. 311	2	2	0
Fabric Testing, Tex. 109	0	0	1
Electives	3	3	3
	20	20	19

CURRICULUM IN YARN MANUFACTURING

(The freshman and sophomore years are the same as for Textile Manufacturing.)

Junior Year

COURSES	CREDITS *First Term*	*Second Term*	*Third Term*
English or Modern Language	3	3	3
General Economics, Econ. 103	3	3	3
Accounting I, Econ. 201	3	3	0
Yarn Manufacture III, Tex. 203	0	3	3
Yarn Manufacture Lab. III, Tex. 204	2	2	2
Dobby Weaving, Tex. 207, 208	1	1	4
Dyeing I, Tex. 112, 113	4	1	1
Electives	3	3	3
	19	19	19

Senior Year

Industrial Management, Personnel Management, Econ. 230A, 240	3	3	3
Psychology, Psychol. 101, 238, 269	3	3	3
Machine Shop II, M.E. 219	1	1	1
Elements of Electrical Engineering I, E.E. 220	0	3	3
Textile Calculations I, Tex. 307	3	0	0
Yarn Manufacturing V, Tex. 303, 304	5	5	2
Manufacturing Problems, Tex. 308	0	0	3
Electives	6	3	3
	21	18	18

TEXTILE RESEARCH

One of the most important developments in connection with the Textile School is the expansion of Textile Research. This will have a decided influence on cotton production as well as cotton manufacturing.

The aims of this research are:

1. A study of the cotton fibre from various sections of the cotton-growing areas of North Carolina and elsewhere, with special emphasis on their affinity for bleaching, dyeing, and mercerization.

2. Testing yarns and fabrics from different cottons to determine shrinkage, standard breaking strength, etc.

3. Testing starches used in sizing, and testing dyes and their properties.

4. Studying the problem of waste, due to selection of imperfect fibre, and improper use of machinery.

5. Testing the uses of the cotton fibre for mechanical as well as domestic uses and extending the research into market demands.

6. Studying designs and methods of finishing goods and the economic advantage to be derived from manufacturing fabrics of higher standards.

7. Studying the cotton mills of North Carolina, their mechanical equipment, and what gradual changes may be effected in order to meet the market demands of the future.

8. Investigating the possible mechanical uses of the cotton fibre, with a view to enlarging the demands for the fibre, thus making it possible to increase cotton production without creating a depressing effect on the producer.

State College has an ideal environment for the Textile School that will be helpful alike to the manufacturer and the cotton farmer. We have the cotton produced at the Experiment Station, and specialists in plant breeding, seed selection, soils, proper use of fertilizers, etc.

Other departments of the College are well equipped to give aid along mechanical and scientific lines.

The Textile Research Department is equipped with a full complement of machinery for yarn manufacturing, and also with the necessary apparatus for testing fibres, yarns, fabrics, analysis of starches and oils, photomicrography, and for other research.

It is, therefore, possible to make a complete study of fibre from the field to the finished fabric.

GRADUATE SCHOOL OF THE UNIVERSITY OF NORTH CAROLINA

WILLIAM WHATLEY PIERSON, JR., *Dean*
Graduate Instruction at N. C. State College

COMMITTEE ON GRADUATE INSTRUCTION

Graduate Instruction in this institution is organized to formulate and develop graduate study and research in the fields primarily of Agriculture, Engineering, and Textile Manufacturing, and in the basic Sciences and the training of teachers related to these subjects. The State of North Carolina holds a place of prestige among the states of the southeast in Agriculture and in Engineering and Manufacturing. The urgent need for graduate instruction and research in these fields is recognized by the workers and especially by the leaders in the occupations which depend upon the development of these branches of knowledge. This institution, therefore, offers training for teachers, investigators, and leaders in Agriculture, Engineering, Education, Manufacturing, and the basic Sciences; and in these pursuits the College aims to maintain sound standards, principles, and ideals.

Unless graduate study and research in the technological and related fields are provided, the institutions of higher learning in this section of the country will look elsewhere for trained men, and there should be a fair balance of such men from every section of the country.

ADMINISTRATION

Subject to the final approval of the Faculty Council, graduate work is directed by a Committee on Graduate Instruction. All subjects to be taken by graduate students are passed upon by the College Committee on Courses of Study. Actual instruction is given by the regular members of the faculty under the supervision of the Director of Instruction, the Head of the Department, or the Dean of the School in which the student is working.

FACILITIES FOR RESEARCH

State College offers exceptional facilities and opportunities for research. The Agricultural Experiment Station of North Carolina, the Engineering Experiment Station, and the Research Laboratories of the Textile School are integral parts of the College. In the Textile School, besides the research carried on by regular members of the staff, the Bureau of Agricultural Economics and other bureaus at Washington have, for some years, used the facilities of the School for special research. Graduate students have the advantages offered by all these agencies in addition to the regular laboratories used for instruction.

In its undeveloped resources and raw materials, as well as in its going concerns in business and industry, in its varied topography and products, North Carolina is a rich field for research. The State is already imbued with a spirit of progress stimulating to intellectual growth.

SCHOLARSHIPS AND FELLOWSHIPS

The College offers annually graduate fellowships and a number of teaching and research fellowships. Besides these, special fellowships are supported by large business organizations.

College Fellowships give tuition and a stipend of $450 an academic year, paid in nine equal installments, a month apart, beginning October 25. The holder of a fellowship may be required to render a maximum of ten hours a week of service to the department in which he is specializing.

Teaching and Research Fellowships give tuition and $500 or more an academic year. The holder of one of these fellowships may not carry more than half a full schedule of graduate studies. The rest of his time must be given to teaching in classroom or laboratory or to research in one of the Experiment Stations.

The Honor Society of Phi Kappa Phi Fellowship. The State College chapter offers $50 annually, preferably to a member of the society, for the purpose of assisting in the promoting of research and advanced training of worthy students.

Special Fellowships have for some years been maintained by business or manufacturing organizations desirous of having research made on certain problems pertaining to their interests. Some organizations maintaining these scholarships have been the National Fertilizer Association, The N. V. Potash Export My., The American Cyanimid Company, The Superphosphate Institute, E. I. DuPont de Nemours Company, The Niagara Sprayer and Chemical Company, The Eli Lilly and Company, and the North Western Yeast Company. The stipends afforded by these fellowships have varied from $720 to $1,500 for twelve months. It is hoped that some of these may be available for the year 1937-38.

REQUIREMENTS FOR ADMISSION AND DEGREES

Degrees

The College grants degrees for work done in residence and for work done during the practice of a profession, as follows:

Degrees In Residence

Master of Science in Agriculture — Master of Science in Education
Master of Science in Engineering — Master of Science in Textiles
Master of Science (pure, not applied)

Professional Degrees

Master of Agriculture — Chemical Engineer
Master of Textiles — Ceramic Engineer
Civil Engineer — Electrical Engineer
Mechanical Engineer

DEGREES IN RESIDENCE

Admission

1. A candidate for admission to graduate study must present an authorized transcript of his collegiate record as evidence that the candidate holds a bachelor's degree for a four years' undergraduate course from a college whose standards are equivalent to those of State College.

2. Admission to courses of graduate work does not necessarily mean that a student may immediately become a candidate for an advanced degree. If the student is not prepared to do graduate work at once he may pursue undergraduate courses which will best fit him for advanced work.

3. A member of the senior class of State College may, upon the approval of the Committee on Graduate Instruction, register for graduate courses to fill a roster of studies not to exceed eighteen credits for any term.

Credits

1. For all master of science degrees, forty-five term credits are required, a credit being given for an hour of class work successfully completed through a term. Besides the term credits, for all master of science degrees a thesis must be written and approved.

2. Not more than ten of the academic credits required for a graduate degree will be accepted from other institutions.

3. No graduate credit will be allowed for excess undergraduate credit from any other institution unless the institution is giving graduate work, conferring graduate degrees, and certifies that the credit offered is of graduate grade.

Courses of Study

As designated in the College Catalog under Description of Courses, the courses numbered 400 to 499 are for graduate students only and those numbered 300 to 399 are for graduate and advanced undergraduates.

The program of the student shall contain at least twelve credits in courses of the 400 group. Nine credits in this group may be obtained in approved research courses. A maximum of 33 credits, upon which a minimum grade of C must be made, may be gained in the 300 group.

The student's program of studies, made under the supervision of the student's adviser, must be approved by the Dean of the School in which the student is specializing and finally by the Committee on Graduate Instruction.

Language Requirements

A reading knowledge of at least one modern foreign language is required for candidates for the Master's degree. The knowledge will be tested by a special examination by the language department.

Thesis

A graduate student, candidate for the Master's degree, must prepare under the supervision of the student's adviser a thesis upon a subject, approved by the adviser, in the field of the student's special work. Two

copies, the original and the first carbon, of the completed thesis must be presented to the Committee on Graduate Instruction at least one month before the degree is awarded.

Residence

A candidate for a degree of Master of Science is required to be in residence at the College, pursuing graduate work, one full academic year of three terms. The candidate is not permitted to take course leading to the forty-five credits in a shorter time.

Six summer schools of six weeks in residence at the College are reckoned sufficient to fulfill the residence requirement. By specific approval of the Committee on Graduate Instruction, one summer period may be spent away from the College if devoted to the preparation of the thesis required for graduation.

In special cases it is possible for graduate students to do twelve weeks work during a summer session, provided instructors will remain at the College throughout the summer. Under these provisions a minimum of four summer sessions, two of twelve weeks and two of six weeks, are required for residence.

Class Work and Examinations

As a mature student admitted to graduate study only after ability and earnestness are established, the graduate student is expected to assume greater individual responsibility, and since specializing, to work in a more comprehensive manner than the undergraduate. However, in preparation, in attendance, and in all the routine of class work, the graduate student is subject to the regulations observed in other divisions of the College.

Besides the examinations in class, the graduate student, at least two weeks prior to graduation, has a general examination on his work.

PROFESSIONAL DEGREES

Significance of Professional Degrees

The professional degrees are not honorary; they are tests of ability and testimonials of accomplishment. To merit the professional degree, a candidate must, in his thesis, demonstrate his ability to attack and to solve a new problem of sufficient complexity to require distinctly original processes of thought, and the solution of which shall make, however small, yet a real contribution to his profession. The record of his work must demonstrate his power to conceive, to plan, to organize, to carry through to completion a project of considerable magnitude. The candidate should quite obviously have grown professionally since his graduation and evince intellectual vitality to guarantee the continuance of his growth.

The conditions for awarding the degrees are as follows:

Requirements for Professional Degrees

1. A professional degree may be conferred upon a graduate of State College in the School in which the candidate received the Bachelor's degree; besides, the degree of Master of Agriculture may be conferred upon graduates of other institutions who have performed outstanding professional service in agriculture for the State of North Carolina for a continuous period of not less than five years.

2. The degree of Master of Agriculture may be conferred upon graduates after five years of service in agriculture and upon the acceptance of a thesis.

The degree in engineering or in textiles may be conferred upon graduates of State College after five years' professional practice in responsible charge of important work, and upon the acceptance of a thesis on a subject related to the practice in which the applicant has been engaged.

3. Application for the degree must be presented to the Committee on Graduate Instruction not less than nine months before the degree may be conferred.

4. With the application (for a degree) the candidate must present, as preliminary basis for the degree, (1) the subject of a thesis he purposes to write, and (2) a statement in outline of his professional work since graduation, both of which must be approved by the committee.

5. The completed thesis must be submitted, on or before May 1, to the committee for consideration, and with it a detailed statement, duly certified, of the candidate's professional work since graduation, upon which, in addition to the thesis, the degree is to be awarded.

6. Upon notification that thesis and work have been approved by the committee as worthy basis for the degree, the candidate shall, upon a specified date, appear before the committee for oral or written examination on his work and his thesis.

Correspondence about graduate work preferably should be addressed to the Dean of the School concerned.

COLLEGE EXTENSION DIVISION

EDWARD W. RUGGLES, *Director*

PURPOSE

The North Carolina State College of Agriculture and Engineering offers technical education in Agriculture, Engineering, Science and Business to all properly qualified students who come within its walls. There are many persons in North Carolina, however, who for various reasons cannot attend classes on the campus, although they have a desire and a need for the type of training which is offered by this institution. Therefore, the College offers correspondence courses, lecture courses and extension class instruction to the citizens of the State in the fields of Agriculture, Engineering, Science and Business.

FOR WHOM INTENDED

The College Extension Division offers courses similar to those given on the campus to any one who desires to take such courses and who is qualified to do the work. The courses offered, although making a general appeal, will be particularly helpful for the following classes of persons:

1. College students who are unable to pursue continued resident study.
2. Rural grade and high school teachers who cannot avail themselves of resident instruction.
3. Teachers and others who have partially completed work for a college degree and who desire to pursue work along some special line, or who desire further training to better equip themselves for their vocations.
4. Professional and business men who wish to supplement their training with technical information.
5. Farmers, county agents, and others who desire additional information and training in any phase of agricultural work.
6. Practical men engaged in the various industries who want to become more efficient in their occupations.

CREDITS

For admission to courses for college credit, the student must meet the regular College entrance requirements, and file a transcript of his previous school record. Persons of mature age, however, who are qualified to do the work may be admitted without meeting the regular entrance requirements. The ability of the student to enter upon the work of any individual course is passed upon by the instructor in charge of the course. Not more than fifty term credits may be earned by correspondence, and not more than sixty by correspondence and extension. Not more than six credits and (or) eighteen points may be earned toward graduation after a student's last residence at this institution. Extension work cannot be taken while a student is in residence without special permission.

Collegiate credit for courses completed by correspondence shall conform as nearly as possible to the same regulations that govern resident

work. Correspondence courses are based upon the unit course, which is divided when practicable into sixteen assignments, representing a three-credit course for one term in residence. Variations from the unit course are indicated by the number of credits, or by the number of assignments or class meetings when College credit is not given. No student will be allowed to take more than two courses by correspondence at one time, and it is recommended that one course be completed before beginning another.

A correspondence course must be completed within one year, unless further time is granted by the Director of Extension, in which case a renewal fee will be required.

No correspondence course may be completed in less than one month from date of registration.

Those who wish credit for correspondence work must take a final examination upon the completion of all assignments in a course. This examination may be taken at the College or at home under conditions approved by the College authorities.

Before receiving credit for any correspondence course all corrected assignments must be returned to the College Extension Division.

The Division of Certification of the State Department of Public Instruction will credit toward State teachers' certificates courses completed by correspondence or extension classes for which the College gives credit toward a degree, but not to exceed twelve term credits in any one school year if the teacher is regularly employed. It is possible, therefore, for teachers to earn both certification and degree credits at the same time.

FEES

For courses involving five term hours of credit a fee of $12 is charged, and a proportionate fee is charged for courses of less than five credit hours, based on a fee of $2.50 per term hour credit. No fees can be refunded after a course is once begun. The registration fee holds good for twelve months only, unless further time is granted by the Director of Extension.

COURSES

Any person who desires to obtain College credit by means of extension classes or by correspondence courses should write to the College Extension Division, requesting one of the extension bulletins which contains complete information concerning methods of instruction, fees, and the conditions upon which College credit will be granted. In all cases where College credit is desired a final examination must be taken by the student, either at State College or under the supervision of some one in the community designated by the College. The examination given will be parallel with that given for the same course at the College.

The courses for correspondence study and extension classes are listed below:

Agricultural Economics 261, 268*, 302*; *Animal Husbandry* 102*, *Architectural Engineering* 107, 206*, 209; *Botany Ex.* 199; *Ceramic Engineering* 103*, 104*, 208*, 213*, 207*, 214*, 210*, 301*; *Chemical Engineering* 201*; *Chemistry Ex.* 199, 240, 341, 344; *Economics* 103, 102*, 211*; *Education* 101, 203*, 208, 269, s303, 320*, 321*, 322, 327, 330, 331, s337, 340, Ex. 342, 342, Ex. s352*, Ex. s354, s364, 368, 370, 371*, Ex. 375*, 376, 377; *English* 101, 120*, 130, 150*, 160, s202, 220, 221*, 223, 226, 227, 235, 236, 238, 251, 253, Ex. 261, 269, 319, 320, 330, 332, 333, 334, 335, 336, 337, 364; *Field Crops* 101*; *Geology* 101, 120*, 125, 205, 207, 230, 280, s291; *History* 101*, 104, 201*, 209*, 212, 301, 302*, 303*, 307*, 310, 315; Ex. 320, Ex. 321*, Ex. 322; *Horticulture* 101, 209*, 228*; *Mathematics* 100, 101, 102, 103, 201, 202, 203; *Mechanical Engineering* 101*, 102*; *Modern Language* 101*, 102, 103*, 104, 105, 106*, 107, 208, 209, 310, 311, 312, 313, 314, 315, Ex. 316, Ex. 317; *Physics Ex.* 199, 312; *Poultry* 101*, 303*, 305*; *Sociology* 101*, 102, 103*, 300*, 301*, Ex. 302*, 305, Ex. 306*, 307, 308, 310*, 312; *Soils* 110, Ex. 120, Ex. 215, Ex. 220, 270*, 310*, 315, 320*; *Zoology* Ex. 199, Ex. 107, Ex. 108, Ex. 220, 208.

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* Courses available by correspondence.

Practical Courses Industrial Electricity*, Practical Engineering Drawing*, Practical Land Surveying*, Practical Mathematics*, Plumbing*, Electrical Meters*, Air-Conditioning*, Photography*, Elementary Radio*, Non-Credit Reading Courses are available in American History, American Literature, American Men of Science, Economics, Natural Science, on Intelligent Buying, Psychology, Sociology and Useful Arts.

NOTE: A Correspondence Course Catalog giving full details and descriptions of these courses may be obtained from The College Extension Division.

1937 SUMMER SESSIONS

of the

CONSOLIDATED UNIVERSITY OF NORTH CAROLINA

The Summer Sessions of the three units of The University of North Carolina will be operated as integral parts of the Institution, and will be administered by the regular administrative officers of the University, just as other phases of University activity, with the exception that Dr. E. W. Knight of Chapel Hill has been elected Director of the Summer Schools. The Deans of Administration at Chapel Hill, Greensboro, and Raleigh, together with their regular administrative Council, will have charge of the activities upon the campuses. Each unit will endeavor to use its faculty and physical equipment to the fullest extent toward the realization of the educational goals of the State.

The State College Summer Session—June 14-July 23, 1937

The distinctive work of the State College unit of the Summer Session will be to serve the people of North Carolina who are interested in technical education. However, the Summer Session will continue to provide courses for its own students in practically all fields of study offered during the regular session, thus providing opportunities for students to remove conditions, or to take special courses which will enrich their college education.

Special courses for teachers in industrial arts and guidance and character education will be provided.

Fees and Expenses for Six Weeks Period

All fees and other charges are payable in advance or upon registration, and all checks should be payable to North Carolina State College.

Room Rent (per person)	$ 7.50
Board at College Cafeteria (Estimate)	30.00

All students occupying a room alone will be charged $10.00.

COLLEGE FEES

Registration fee	$ 3.00
Course fee (each quarter hour credit)	3.00
Medical fee	1.00

For Summer Session Catalogue and additional information write Office of Registration, N. C. State College, Raleigh, N. C.

DESCRIPTION OF COURSES

AGRICULTURAL ECONOMICS

Courses for Advanced Undergraduates

Agr. Econ. 260. Agricultural Economics. 0-0-3

Required of sophomores in Agriculture. Prerequisite: Econ. 102 or 103.

A study of the economics of agricultural production, the marketing of farm products, farm credit, land tenure and other major economic problems of the farmer. Messrs. Clement, Forster, Leager.

Agr. Econ. 261. Farm Management I. 0-0-3

Required of juniors in Agricultural Economics, Agriculture and Vocational Education. Prerequisite: Econ. 102 or 103.

The principles involved in the successful operation of the farm, farm planning, management of labor, farm work programs, use of machinery, and farm administration. Mr. Forster.

Agr. Econ. 262. Farm Accounting. 0-0-3

Required of juniors in Vocational Agriculture. Prerequisite: Econ. 102.

The practical aspects of farm accounting, preparation of inventories of farm property, simple financial statements, method of keeping farm records, analysis and the interpretation of results obtained from farm business transactions. Mr. Leager.

Agr. Econ. 263. Farm Cost Accounting. 0-3-3

Required of seniors in Agricultural Economics. Prerequisite: Econ. 102 or 103, and 201.

The principles of accounting applied to farm transactions, the preparation of financial statements, the methods of keeping farm records, analysis of an individual farm record, and the interpretation of cost accounting results. Mr. Leager.

Agr. Econ. 265. Agricultural Marketing. 3-0-0

Required of seniors in Agricultural Economics, Agriculture, and Vocational Education. Prerequisite: Econ. 102 or 103.

The economic principles underlying successful marketing of farm products, market organization and control, price-making forces and critical examination of the present system of marketing farm products.

Mr. Leager.

Agr. Econ. 268. Grades, Standards, and Inspection. 0-3-0

Required of seniors in Agricultural Economics. Prerequisite: Econ. 102 or 103.

History of the grades and standards of important agricultural products, together with the technic of inspection. Mr. .....

Agr. Econ. 269. Land Economics. 0-0-3

Required of Sophomores in Forestry. Prerequisite: Econ. 102 or 103.

The problems of land economics including land classification and land use with special emphasis on forest land, land ownership and control, the principles of land valuation, policies of land settlement and development, the taxation of forest lands. Mr. Forster.

Courses for Graduates and Advanced Undergraduates

Agr. Econ. 362. Farm Management II. 0-0-3

Required of seniors in Agricultural Economics. Prerequisite: Agr. Econ. 261.

The application of farm management principles to the management and organization of farms in typical regions of the State. Mr. Forster.

Agr. Econ. 363. Agricultural Coöperation. 0-3-0

Required of seniors in Agricultural Economics. Prerequisite: Econ. 102 or 103.

Specific consideration is given to local community coöperation, both economic and social, farmers' buying, selling, and service organizations. Mr. Clement.

Agr. Econ. 364. Land Economics. 0-0-3

Elective. Prerequisite: Econ. 103, Agr. Econ. 260, and 6 additional term credits in Economics.

The economic problems of land classification, ownership and acquisition of land, tenancy and land ownership, the functions of the landlord and the tenant, land valuation and land speculation. Mr. Forster.

Agr. Econ. 366. Marketing Methods and Problems. 3-0-0

Required of seniors in Agricultural Economics.

Prerequisite: Econ. 103, Agr. Econ. 260, and 6 additional term credits in Economics.

A careful study of the problems and methods involved in the marketing of farm products. Suggestions for improvement will be stressed. Mr. Smith.

Agr. Econ. 367. Agricultural Finance. 0-3-0

Elective. Prerequisite: Econ. 102, Agr. Econ. 260, and 6 additional term credits in Economics.

Principles involved in financing the production and marketing of agricultural products. Consideration of farm mortgage credit, personal and intermediate credit, and agricultural taxation. Mr. Forster.

Agr. Econ. 368. Cotton and Tobacco Marketing. 3-0-0 or 0-3-0

Required of seniors in Agricultural Economics. Prerequisite: Econ. 102, Agr. Econ. 260, Agr. Econ. 265, and 3 additional credits in Economics.

Problems arising in connection with the marketing of cotton and tobacco. Particular attention is given to the methods and practices used in the marketing of tobacco and cotton.

Mr. Forster and Mr. Smith.

Agr. Econ. 369. Agricultural Extension Methods. 3 credits

A study of office record systems, office management, program determination, program development, reports and their use; and the obtaining, preparation, and use of material in Extension teaching.

Dean of the School of Agriculture and his staff.

Courses for Graduates Only

Agr. Econ. 403. Economics of Agricultural Production. 3-0-0

Prerequisite: Econ. 103, Agr. Econ. 260, and 6 additional term credits in Economics.

Economic theories applicable to agricultural production. The nature and characteristics of the factors of production, the law of variable proportion, the law of diminishing return, and the theory of least cost.

Mr. Forster.

Agr. Econ. 404. Farm Organization and Management. 0-3-0

Prerequisite: Econ. 102, Agr. Econ. 261, 362, 403 and 6 additional term credits in Economics.

The extension of the economic principles discussed in Agr. Econ. 403 and the application of these principles to the problems of farm organization and management. Mr. Forster.

Agr. Econ. 405. Agricultural Finance and Taxation. 0-0-3

Prerequisite: Econ. 103, Agr. Econ. 367, and 6 additional term credits in Economics.

Problems in financing agricultural production and marketing, and methods of taxation as they affect agriculture. A history of the development of financial institutions designed to serve agriculture.

Mr. Clement.

Agr. Econ. 406. Coöperative Marketing Methods and Practices. 0-0-3

Prerequisite: Econ. 103, Agr. Econ. 265, and 6 additional term credits in Economics.

A critical study of the methods and practices used by large agricultural coöperatives. Mr. Clement.

Agr. Econ. 407. Research Method and Procedure in Agricultural Economics and Rural Sociology. 2-2-2

Prerequisite: Economics 103, 312, and 6 additional term credits in Economics.

A consideration of the research method and procedure now being employed by research workers in the field of Agricultural Economics,

including qualitative, quantitative, inductive, and deductive methods of research procedure, choice of projects, planning, and execution of the research project. Mr. Forster and Mr. Smith.

Agr. Econ. 408. National Economic Policies Affecting Agriculture. 0-3-0

Prerequisite: Econ. 103, Agr. Econ. 260, Agr. Econ. 265.

A critical analysis of the various farm relief proposals with special reference to those made to control production, assist in the marketing of farm products and to supply farmers with various kinds of credit.

Mr. Forster.

AGRICULTURAL ECONOMICS—RURAL SOCIOLOGY

Courses for Graduates and Advanced Undergraduates

Rural Soc. 302. Rural Sociology. 0-3-0 or 0-0-3

Prerequisites: Soc. 103 or Econ. 103. Required of juniors in Rural Sociology, seniors in Agricultural Economics, and juniors in certain Education curricula.

The culture, social organization, and social problems of rural people with special reference to Southern rural life and proposed programs of development. Mr. Matthews.

Rural Soc. 303. Farmers' Movements. 0-0-3

Prerequisite: Rural Soc. 302. Required of seniors in Agricultural Economics and Rural Sociology.

The origin, growth, and the present status of such national farmers' organizations and movements as: the Grange, the Farmers' Alliance, the Populist Revolt, the Agricultural Wheel, the Farmers' Union, the Society of the Equity, the Non-Partisan League, the Farm Bureau, the Farm-Labor Union, and the Coöperative Marketing Movement.

Mr. Clement.

Rural Soc. 304. Rural Social Traits and Attitudes. 0-3-0

Prerequisite: Rural Soc. 302. Required of seniors in Rural Sociology.

The characteristic social traits and attitudes of rural people in relation to rural social organizations and rural institutions. Mr. Matthews.

Rural Soc. 305. Community Organization. 0-0-3

Prerequisite: Rural Soc. 302. Required of seniors in Rural Sociology and in Agricultural Teaching.

Community organization in North Carolina and other states. Community structure and size, community institutions and service agencies, community disorganization, methods of community organization, leadership and the relation of community organization to state and national agencies. Mr. Matthews.

Courses for Graduates Only

Rural Soc. 410. Advanced Rural Sociology. 0-3-3

Prerequisites: Rural Sociology 302, and 6 additional term credits in either Rural Sociology or Agricultural Economics.

Historical forms of rural society; differentiation and mobility of farmer and peasant classes; bodily, vital, mental, and moral characteristics of rural as compared with urban groups; relation of farm people to other social groups; standards and planes of living; rural institutions and culture; national agrarian policy; and a critical review of current research in rural sociology. Mr. Matthews.

Rural Soc. 412. Research in Agricultural Economics and Rural Sociology. 3-3-3

Research problems in agricultural production, marketing, finance, taxation, population, community organization, family life, standards of living and social attitudes. Staff.

AGRICULTURAL ENGINEERING

Courses for Undergraduates

Agr. Eng. 130. Farm Equipment. 3-0-0 or 0-3-0

Required of sophomores in Agriculture.

A study of modern mechanical equipment for the farm.

Mr. Weaver, Mr. Giles.

Agr. Eng. 135. Terracing and Drainage. 0-0-3

Required of juniors in General Agriculture.

A study of the different methods of disposing of surplus water and the prevention of erosion. Mr. Weaver.

Agr. Eng. 145. Farm Buildings. 0-0-3

Required of seniors in General Agriculture. Elective for all juniors and seniors.

A study of the design, construction, and materials used in modern farm buildings. Mr. Weaver.

Agr. Eng. 147. Farm Conveniences. 0-3-0

Required of seniors in General Agriculture. Elective for all juniors and seniors.

A study of farm water supply systems, electric lighting plants, heating and sewage disposal systems as regards installation, adjustment, and repair. Mr. Giles.

Agr. Eng. 155. Farm Engines. 0-3-0

Elective for all juniors and seniors.

The principle of farm gas engine operation, its application to single and multiple cylinder engines, and the repair and adjustment of engines.

Mr. Giles.

Courses for Advanced Undergraduates

Agr. Eng. 217. Teaching of Farm Shop Work. 3-3-0

Required of juniors in Agricultural Education.

This course is designed for men intending to teach Vocational Agriculture in the high schools of this State. Methods of presenting the subject matter to students as well as the manipulation of woodworking, forging, soldering, pipe fitting, and harness repairing tools. Mr. Giles.

Agr. Eng. 218. Agricultural Drawing. 0-3-0

Elective for juniors and seniors.

Drawing-board work covering both freehand sketching and elementary mechanical drawing. Working and pictorial drawing, lettering, maps, graphs, tracing and blueprinting. Mr. Weaver.

Agr. Eng. 250. Farm Machinery and Tractors. 0-3-0

Prerequisite: Agr. Eng. 155. Elective for juniors and seniors.

A study of the design, construction and operation of modern labor-saving machinery. Mr. Giles.

Courses for Graduates and Advanced Undergraduates

Agr. Eng. 335. Special Problems in Agricultural Engineering. 3-3-3

Prerequisite: Agr. Eng. 130, 135, 145, and 155.

This course is designed to meet the needs of students who desire advanced work in one of the following branches of Agricultural Engineering: Gas Engines, Tractors, Lighting Plants, Farm Machinery, and Drainage. Mr. Giles.

Agr. Eng. 350. Senior Seminar. 1-1-1

Prerequisite: Senior standing in Agricultural Engineering. Elective for seniors.

Students will be assigned special problems the results of which are to be presented to the class. Mr. Weaver.

Agr. Eng. 360. Erosion Prevention. 0-0-3

Prerequisite: Agr. Eng. 130, 135, and Soils 115. Elective for seniors.

The purpose of this course is to go into the causes, effects, and methods of conserving our greatest national resource our fertile soil.

Mr. Weaver.

Agr. Eng. 365. Farm Structures. 0-3-0 or 0-0-3

Prerequisite: Agr. Eng. 130, 145, and A. H. 101. Elective for seniors.

An advanced study of modern building methods as applied to farm structures. The use of labor-saving barn equipment and methods of reducing labor to minimum is stressed. The placing of the farm group in relation to topography and farm activities, from the standpoint of economy, appearance, and utility, is an important phase of the course.

Agr. Eng. 370. Rural Electrification. 0-3-0

Required of seniors in Agricultural Engineering.

A study of problems involved in the distribution, uses and costs of electricity on the farm. Mr. Weaver.

ANIMAL HUSBANDRY

Courses for Undergraduates

A. H. 101. Animal Nutrition I. 0-3-0 or 0-0-3

Required of sophomores in Agriculture.

Prerequisite: Chem. 101.

A study of animal nutrition; composition of animal body; digestion; nutrients; feeding standards; calculating rations. Staff.

Courses for Advanced Undergraduates

A. H. 201. Swine Production. 3-0-0

Elective for juniors and seniors.

A study of adaptability of swine, with emphasis on feeding, judging, and management. Mr. Hostetler.

A. H. 202. Animal Breeding. 4-0-0

Elective for juniors and seniors.

A study of breeding and improvement of our domestic animals; a first-hand study of successful breeding establishments and their problems. Mr. Ruffner.

A. H. 203. Advanced Stock Judging. 0-0-3

Elective for juniors and seniors.

A study of market and show-ring requirements in the selection of horses and mules, beef cattle, dairy cattle, sheep, and swine. Breed characteristics of these animals are studied in detail, and practice judging brings out the relationship of form to function in livestock production. Mr. Haig.

A. H. 204. Dairy Cattle and Milk Production. 3-0-0

Elective for juniors and seniors.

A study of management of dairy cattle for economical milk production, including dairy breed characteristics, adaption, selection, management, feeding, calf raising and dairy barn equipment. Mr. Haig.

A. H. 205. Sheep Production. 0-0-3

Elective for juniors and seniors.

A study of the establishment, care, and management of the farm flock. Mr. Nance.

A. H. 206. Farm Meats I. 3-0-0 or 0-3-0

Elective for juniors and seniors.

A study of the composition and value of meat, with practice work in slaughtering and cutting. Mr. Nance.

A. H. 207. Farm Meats II. 0-3-0

Elective for juniors and seniors. Prerequisite: A. H. 206.

Special study and practice in making retail cuts and in curing pork, beef, and lamb. Mr. Nance.

A. H. 208. Dairying. 3-0-0 or 0-3-0

Required of juniors in Animal Husbandry.

Elective for students in Agriculture.

Fundamentals of dairy herd management in the production of milk and cream on the farm. The use of the Babcock Tests, buttermaking on the farm, operation of cream separators, constitute the laboratory work.

Mr. Haig.

A. H. 209. Horse and Mule Production. 3-0-0

Elective for juniors and seniors.

A study of practical methods in production and management of horses and mules for work on farms under southern conditions. Special study of use of home-grown feeds for horses and mules at work or idle.

Mr. Haig.

A. H. 210. History of Breeds. 0-3-3

Required of juniors in A.H. Elective for students in Agriculture.

A study of types, characteristics, and history of the leading strains and families of the different breeds of animals. Mr. Ruffner, Mr. Haig.

A. H. 211. Animal Nutrition II. 3-0-0

Required of juniors in Animal Husbandry.

Prerequisite: A. H. 101.

A study of all feeding stuffs used in America; laws controlling feeding stuffs; preparation of feeds; home mixed and commercial feeds.

Mr. Ruffner, Mr. Haig.

A. H. 212. Creamery Buttermaking. 4-0-0

This course deals with the principles and practices of factory buttermaking, from the care of the cream on the farm through the different processes until ready for marketing. Mr. Clevenger.

A. H. 213. Testing of Milk Products. 0-4-0

Elective for juniors and seniors.

Lectures and laboratory practice on the testing of milk and milk products for butterfat, acidity, adulteration, preservatives, sediment, etc., that are ordinarily used by dairy manufacturing plants or in milk inspection work. Mr. Clevenger.

A. H. 214. Cheesemaking. 0-0-3

Elective for juniors and seniors.

Lectures and laboratory practice in the making of various soft and hard cheeses usually made on a farm or in a cheese factory.

Mr. Clevenger.

A. H. 215. Dairy Manufacture Practice. 0-3-0

Elective for juniors and seniors.

Lectures and laboratory practice on the business and factory management methods used in dairy plants. Mr. Clevenger.

A. H. 216. City Milk Supply. 0-0-4

Elective for juniors and seniors.

Lectures and laboratory practice; the phases of the city milk supply from the standpoint of the Milk Inspector and Board of Health; the methods and processes used in a central pasteurizing milk distribution plant and the dairymen supplying milk to same; the raw retail milk distributor and his problems. Mr. Clevenger.

A. H. 217. Ice Cream Making. 4-0-0

Elective for juniors and seniors.

Standardizing of mixing and freezing of ice cream, sherbets, and other frozen products, and the physical principles involved; types of freezers, flavoring materials, fillers and binders; ice cream standards. The theory and practice of refrigeration and its use in the ice cream plant.

Mr. Clevenger.

A. H. 218. Comparative Anatomy and Physiology of Domestic Animals. 3-0-0

Prerequisite: Zool. 102.

A course dealing with the structure and functions of the animal body. Laboratory, lectures, and recitations. Mr. Grinnells.

A. H. 219. Common Diseases. 0-3-0

Prerequisite: A. H. 218.

A study of contagious, non-contagious, and parasitic diseases of farm animals. Laboratory, lectures, recitations. Mr. Grinnells.

A. H. 220. Senior Seminar. 1-1-1

Required of seniors in A. H.

Prerequisite: A. H. 101.

A discussion of livestock problems by extension and research workers, together with special assignments to students with regard to various phases of the industry. Animal Husbandry Staff.

A. H. 221. Animal Hygiene and Sanitation. 0-0-3

Prerequisite: A. H. 219, Bot. 203.

Animal health and prevention of disease as affected by environment. Lectures, reference reading, recitations. Mr. Grinnells.

A. H. 222. Dairy Machinery. 0-1-0

Elective for juniors and seniors.

Lecture and demonstration on the installation, kind, care, and handling of dairy plant equipment, including the refrigerating unit, pipe fitting, soldering, etc. Mr. Clevenger.

A. H. 223. Dairy Products Judging. 0-0-1

Elective for juniors and seniors.

A course of training for students in judging all dairy products according to official standards and commercial grades. Mr. Clevenger.

A. H. 224. Beef Cattle Production. 0-3-0

Elective for juniors and seniors.

A study of the feeding, care, and adaption of beef cattle to North Carolina conditions. Mr. Foster.

Courses for Graduates and Advanced Undergraduates

A. H. 301. Dairy Manufactures. 3-3-3

Prerequisite: A. H. 101, and 12 hours of the dairy manufacturing courses.

Special problems dealing with the manufacture and marketing of dairy products. Mr. Clevenger.

A. H. 302. Animal Nutrition III. 0-3-0

Elective for seniors. Prerequisite: A. H. 101, A. H. 211.

A study of the chemistry and physiology of nutrition and the processes of animal life; recent scientific publications are studied. Mr. Ruffner.

A. H. 304. Herd Improvement. 0-0-3

Prerequisite: A. H. 101, 208, 211. Elective for juniors and seniors.

This course is designed for training students as supervisors of Herd Improvement Associations in North Carolina. Rules for Advanced Registry are studied, and practical work in keeping feed costs, the Babcock Test, and bookkeeping necessary for dairy associations.

Mr. Haig.

A. H. 307. Problems in Advanced Animal Breeding. 3-0-0, 0-3-0, 0-0-3

Prerequisite: A. H. 202.

A study of the physiology of reproduction. Methods and problems of breeders; influence of pedigree, herd books, and Mendelism in animal breeding. Mr. Ruffner.

A. H. 308. Stock Farm Management. 0-0-3

Prerequisite: Eighteen term credits in Dairy Manufacturing.

A study of successful methods of operating farms devoted chiefly to livestock production; special reference is made to best systems applied to North Carolina conditions. Mr. Ruffner.

A. H. 309. Home Tanning. 3-0-0 or 0-3-0

Elective for juniors and seniors. Prerequisite: A. H. 206.

Application of different methods in curing and tanning hides and pelts.

Mr. Nance.

A. H. 310. Pure-bred Livestock Production. 0-3-0

Elective for seniors and graduate students. Prerequisite: A. H. 101, 201.

A study of the pure-bred livestock industry. Lectures and discussion supplemented by assignments from current periodicals and breed papers. Special study of the selection of livestock best suited to different localities.

Mr. Ruffner.

Courses for Graduates Only

A. H. 402. Research Studies in Animal Husbandry. 3-0-0, 0-3-0, or 0-0-3

Prerequisite: Eighteen credits in Animal Husbandry.

An intensive study of experimental data. Staff.

A. H. 404. Advanced Nutrition. 3-0-0, 0-3-0, or 0-0-3

Prerequisite: A. H. 101, 211.

A survey of experimental feeding, together with a study of the fundamental and practical feeding problems of the various sections of the country. A study is made of the effects of various feeds on growth and development. Animals are used in demonstrating the effects of these various nutrients and rations. Mr. Ruffner.

A. H. 408. Special Problems in Dairy Manufacturing Practice. 3-3-3

Prerequisite: Eighteen term credits in Dairy Manufacturing.

Available for graduate students interested in special dairy manufacturing problems under definite supervision and approval.

Mr. Clevenger.

A. H. 409. Seminar. 1-1-1

Members of the seminar will be assigned subjects which will be reviewed and discussed. Review of literature, scientific reports and Experiment Station bulletins. Oral and written reports.

Animal Husbandry Staff.

ARCHITECTURAL ENGINEERING

Courses for Undergraduates

A. E. 100. Introduction to Architecture. 3-0-0

Required of sophomores in A. E. and L. A. Prerequisite: M. E. 102. Exercises and studies of architectural elements and details, walls, openings, etc. Mr. Shumaker, Mr. Edwards.

A. E. 101. Elements of Architecture. 0-3-3

Required of sophomores in A. E. and L. A. Prerequisite: M. E. 102, 103. A study of the orders of Architecture and their application to simple problems in composition and design.

Mr. Shumaker, Mr. Edwards.

A. E. 102. Shades and Shadows. 2-0-0

Required of sophomores in A. E. and juniors in L. A. Prerequisite: M. E. 103. The determination of conventional shades and shadows as they occur on rendered drawings. Mr. Shumaker.

A. E. 103. Elementary Rendering. 0-2-0

Required of sophomores in A. E. and juniors in L. A.

The use of various media with special regard for the technique useful for architectural rendering. Mr. Edwards.

A. E. 104. Freehand Drawing I, Pen and Pencil Drawing. 2-0-0

Required of juniors in A. E. and L. A.

Sketching in pencil and pen and ink from models, cast and nature. Emphasis on quality of line and proportion. Lettering. Mr. Edwards.

A. E. 105. Freehand Drawing II, Water Color. 0-2-0

Required of juniors in A. E.

The drawing and rendering in pen and ink of subjects in architecture and nature. The development of good technique. Mr. Edwards.

A. E. 106. Freehand Drawing III. Charcoal Drawing. 0-0-2

Required of juniors in A. E. and L. A.

Charcoal drawing from simple architectural casts and models.

Mr. Edwards.

A. E. 107. Pencil Sketching. 3-0-0, 0-3-0, 0-0-3

Required of seniors in L. A.

Elective for Engineering and Textile students.

Quick sketching of objects as seen and imagined in perspective. Elementary principle of perspective, especially as applied to the visualization of imagined objects. Mr. Paulson.

A. E. 108. Art Principles in Industry. 3-0-0

Elective for Engineering and Textile students.

Line, form, color and æsthetic principles of practical art applicable to the design of articles for manufacture. Mr. Paulson.

A. E. 109. Decorative Drawing. 3-0-0, 0-3-0, 0-0-3

Required of juniors in the Textile School. Freehand drawing and creative designing of decorative motives adaptable to weaving and cloth printing. Mr. Paulson.

A. E. 111. Architectural Details. 0-0-2

Required of juniors in A. E. and Const. Eng. Prerequisite: M. E. 102, 103.

The preparation of working drawings of sections and details of construction. Mr. Shumaker, Mr. Edwards.

A. E. 112. Practical Photography. 1-0-0

Required of juniors in A. E.

The practical use of photography as an aid in architectural rendition.

Mr. Paulson.

Courses for Advanced Undergraduates

A. E. 201. Perspective Drawing. 0-0-2

Required of sophomores in A. E. and juniors in L. A. Prerequisite: Arch. 102. Study of the theory of perspective with special applications to illustration and design. Lectures and drawing. Mr. Shumaker.

A. E. 202. Architectural Design I. 3-3-3

Required of juniors in A. E. Prerequisite: Arch. 101. Problems in elementary composition, design, planning and rendering. Library research. Registration with the Beaux-Arts Institute of Design may be required. Mr. Shumaker, Mr. Edwards.

A. E. 203. Advanced Rendering. 1-1-1

Required of seniors in A. E. Prerequisite: Arch. 103. Study of different methods of presentation. Problems in rendering various types of composition as media, water color, tempera, pastels, charcoal, pencil and ink. Mr. Edwards.

A. E. 204. Architectural Design II. 3-3-3

Required of seniors in A. E. Prerequisite: Arch. 202. Major problems in advanced planning and composition. Sketch problems, Library research. Registration with the Beaux-Arts Institute of Design may be required. Mr. Shumaker, Mr. Edwards.

A. E. 205. History of Architecture. 3-3-0

Required of juniors in A. E. and L. A. Prequisite: Arch. 101.

Origin and development of the historic styles of Architecture, from antiquity to modern times. Lectures. Library research with sketches.

Mr. Shumaker.

A. E. 206. History of Ornament. 0-3-0

Required of juniors in A. E. Prerequisite: Arch. 205.

Analysis and development of the historic styles of ornament.

Mr. Shumaker, Mr. Paulson.

A. E. 207. History of the Decorative Arts. 3-0-0 or 0-3-0

Elective for students of junior standing. Prerequisite: Arch. 205, or 209. Lectures and library research on the history of the decorative arts, including interior architecture, furniture, stained glass, etc.

Mr. Shumaker.

A. E. 208. Appreciation of Fine Arts. 3-0-0, 0-3-0, 0-0-3, or 3-3-3

Elective for students of junior standing.

Principles of art. Study of those qualities which constitute great art. First term, architecture; second term, painting; third term, sculpture and the minor arts. Mr. Paulson.

A. E. 209. Domestic Architecture. 0-0-2

Required of juniors in A. E.

Planning and designing of residences. Construction, orientation, equipment, and finishing. Mr. Shumaker, Mr. Edwards.

A. E. 210. Architectural Office Practice. 2-2-2

Required of seniors in A. E. Prerequisite: Arch. 111.

The preparation of working drawings from sketches, following office routine. Mr. Shumaker, Mr. Edwards.

A. E. 211. Architectural Composition. 0-2-0

Required of seniors in A. E. Prerequisite: Arch. 205. Principles of planning and composition as related to buildings. Architectural motives, group planning. Library research and sketches. Mr. Shumaker.

A. E. 212. Architectural Estimates. 0-0-2

Required of seniors in A. E. Prerequisite: Arch. 111.

Lectures and problems in taking off quantities and in estimating materials and labor cost in building construction. Mr. Shumaker.

A. E. 213. Historic Motives in Textiles. 3-0-0

Elective for students of junior standing.

Chronologic development of ornament motives, and the adaptation of historic motives to modern textile design. Mr. Paulson.

A. E. 214. Art Appreciation for Teachers. 0-0-3

Picture study of the list suggested by the State Board of Education for grade school use, including paintings, architecture, and sculpture. Mr. Paulson.

A. E. 215 Building Materials. 0-3-3

Elective for students of junior standing.

A study of all forms of building materials and methods of application in modern structures, both interior and exterior. Mr. Edwards.

Courses for Graduates and Advanced Undergraduates

A. E. 301. Architectural Design III. 4-4-4

Prerequisite: Arch. 204.

Class A.—Project. Advanced problems in design. Archæology. Measured Drawings. Registration with the Beaux-Arts Institute of Design is required. Mr. Shumaker, Mr. Edwards.

A. E. 401. Historic Research. 4-4-4

Prerequisite: Arch. 204, 205.

Research in Architecture and Art in some important phase of its development. Library work with sketches. Mr. Paulson, Mr. Edwards.

BOTANY

Courses for Undergraduates

Botany 101, 102. General Botany. 4-4-0

Required of freshmen and sophomores in Agriculture.

The first term deals with the nature of the higher (crop type) plants; the second involves a survey of the major lower plant groups with the emphasis upon the economic forms (bacteria and fungi).

Mr. Wells, Mr. Shunk, Mr. Anderson, Mr. Whitford, Mr. Buell.

Courses for Advanced Undergraduates

Botany 201. Diseases of Field Crops. 3-0-0

Elective for juniors and seniors. Prerequisite: Bot. 101, 102, 209.

A study of the more important diseases of field crops, such as cotton, tobacco, corn, small grains, legumes and grasses. Major emphasis is placed on symptoms, cause, and control. Mr. Lehman.

Botany 202. Diseases of Fruit and Vegetable Crops. 0-0-3

Elective for juniors and seniors. Prerequisite: Bot. 101, 102, 209.

Lectures and laboratory studies of importance, causes, symptoms and control of diseases affecting these crops. Mr. Poole.

Botany 203. General Bacteriology. 0-4-0

Prerequisite: Bot. 101, 102, or Zool. 101.

An introduction to the principles of bacteriology. Laboratory work on modern cultural methods of handling and studying bacteria.

Mr. Shunk.

Botany 204. Systematic Botany. 0-0-3

Elective in Agriculture and Science. Prerequisite: Bot. 101, 102.

An introduction to the local flora and the classification of the plants included therein. Mr. Wells, Mr. Shunk, Mr. Whitford, Mr. Buell.

Botany 205. Plant Microtechnique. 0-3-0

Elective in Agriculture and Science. Prerequisite: Bot. 101, 102.

Materials and processes involved in the preparation of plant structures for microscopic examination. Mr. Anderson.

Botany 206. Rural Sanitation. 0-3-0

A combination course on the relation of bacteria and insects to rural public health; meat and other food and water inspection; health laws.

Mr. Shunk, Mr. Grinnells, Mr. Weaver.

Botany 207. Dendrology. 3-0-3

Required of sophomores in Forestry. Prerequisite: Bot. 101, 102, 204.

Introduction to the trees of the eastern United States.

Messrs. Wells, Shunk, Buell.

Botany 208. Diseases of Forest Trees. 3-0-0

Required of seniors in Forestry. Prerequisite: Bot. 101, 102, 209.

Lectures and laboratory studies of importance, causes, symptoms and control of diseases affecting trees and their products. Mr. Poole.

Botany 209. Plant Physiology. 0-0-5

Required of sophomores in Forestry. Prerequisite: Bot. 101, 102.

A study of the activities of living plants with special emphasis upon the fundamental principles concerned. Mr. Anderson.

Botany 210. Aquatic Biology. 0-0-2

Required of Sanitary Engineers. Elective in Agriculture and Science. Prerequisite: Bot. 101, 102.

Identification and control of the aquatic algæ and protozoa which give trouble in reservoirs. A survey of the higher water and marsh plants is also included. Mr. Whitford.

Courses for Graduates and Advanced Undergraduates

Botany 301. Advanced Plant Pathology. 5 or 5 or 5

Elective. Prerequisite: Bot. 101, 102, 201, 209, or 202.

A course designed to give the student training in those methods of investigation which are most useful in the study of plant pathological problems. Mr. Lehman.

Botany 302. Advanced Bacteriology. 0-3-0

Prerequisite: Bot. 101, 102, 203, 209.

A study of the methods used in the bacteriological analysis of water and milk. Mr. Shunk.

Botany 303 and 304. Plant Morphology. 3-3-0

Elective in Agriculture and Science. Prerequisite: Bot. 101, 102, 204.

An advanced survey of plants; the lower groups are given the first term, the higher (land plants) the second. Mr. Wells, Mr. Shunk.

Botany 305. Mycology. 3-3-3

Prerequisite: Bot. 101, 102.

A course dealing with the structure, identification and classification of fungi. Special attention is given to species parasitic on crop plants.

Mr. Lehman.

Botany 306. Advanced Plant Physiology. 3-0-0

Prerequisite: Bot. 101, 102, 209.

A critical and comprehensive treatment of the various aspects of plant physiology. Particular attention is given to basic principles and to recent developments. Mr. Anderson.

Botany 307. Plant Ecology. 3-0-0

Elective in Agriculture and Science. Prerequisite: Bot. 101, 102, 209.

Environmental control of plant distribution with emphasis upon the habitats and vegetations of North Carolina. Mr. Wells.

Botany 308. Microanalysis of Plant Tissue. 0-3-0

Prerequisite: Bot. 101, 102, 209.

The identification in plant tissue of mineral elements and organic compounds and the physiological significance of these materials.

Mr. Anderson.

Botany 309. Soil Microbiology. 0-0-3

Elective in Agriculture and Science. Prerequisite: Bot. 101, 102, 203, 209.

A study of the more important microbiological processes that occur in soils: decomposition of organic materials, ammonification, nitrification and nitrogen fixation. Mr. Shunk.

Botany 310. Advanced Plant Ecology. 0-0-3

Elective in Agriculture and Science. Prerequisite: Bot. 209, 307.

Practice in the use of the instruments necessary in the study of environmental factors. Advanced readings and conferences on plant distribution in relation to these factors. Mr. Wells.

Courses for Graduates Only

Botany 401. Pathology of Special Crops. 3-3-3

Prerequisite: Bot. 201 or 203, 301.

A comprehensive study of the etiology, symptoms, and control of specific diseases. Mr. Lehman or Mr. Poole.

Botany 402. Bacteriology: Special Studies. 3-3-3

Prerequisite: Bot. 203, 302.

Special work on restricted groups of bacteria such as nitrogen bacteria of the soil, milk organisms and special groups of bacteria in water.

Mr. Shunk.

Botany 403. Systematic Botany. 3-0-0 or 0-0-3

Prerequisite: Bot. 204, 303, 304.

An advanced survey of restricted groups of plants involving organization and distribution problems. Mr. Wells.

Botany 404. Plant Physiology. 3-3-3

Prerequisite: Bot. 306, 209.

Critical study of some particular problem, involving original investigation together with a survey of pertinent literature. Mr. Anderson.

Botany 405. Plant Ecology. 3-0-0 or 0-0-3

Prerequisite: Bot. 204, 307.

Minor investigations in vegetation-habitat problems accompanied by advanced reference reading. Mr. Wells.

Botany 406. Research in Botany. 3-3-3

Prerequisite: 30 hours 100-300 courses in Botany. Staff.

Botany 407. Seminar. 1-1-1

Attendance by the student upon the weekly seminar together with the presentation of a paper in his major field of research. Mr. Wells.

CERAMIC ENGINEERING

Courses for Undergraduates

Cer. E. 103. Ceramic Materials. 0-3-0

Required of sophomores in Ceramic Engineering.

Prerequisite: Geol. 201.

The origin and occurrence of ceramic raw materials, their chemical and physical properties and systems of measuring them.

Mr. Greaves-Walker.

Cer. E. 104. Ceramic and Mining Processes. 0-0-3

Required of sophomores in Cer. E. and Geol. E.

The winning and preparation of ceramic materials and the equipment and processes used in manufacturing ceramic products.

Mr. Greaves-Walker.

Cer. E. 105. Structural Clay Products. 0-1-0

Required of juniors in Constr. E.

The manufacture and use of ceramic products used in the construction industries. Mr. Greaves-Walker.

Courses for Advanced Undergraduates

Cer. E. 207. Bodies, Glazes, and Colors. 3-0-0

Required of seniors in Cer. E. Prerequisite: Chem. 231, Cer. E. 209, and Geol. 238.

Lectures on composition and production of ceramic bodies, glazes, and colors. Problems. Mr. Stone.

Cer. E. 208. Drying Technology. 3-0-0

Required of Juniors in Cer. E. Prerequisite: Cer. E. 103.

The theory and practice of drying ceramic products. Problems.

Mr. Greaves-Walker.

Cer. E. 209. Ceramic Calculations. 0-0-3

Required of juniors in Cer. E. Prerequisite: Chem. 212, Cer. E. 103, 208, 213. Solution of chemical and physical problems of the ceramic industries. Mr. Stone.

Cer. E. 210. Metal Enamels. 0-3-0

Required of seniors in Cer. E. Prerequisite: Chem. 212, Cer. E. 209.

Theory and practice of the application of enamels to metals.

Mr. Stone.

Cer. E. 212. Ceramic Products. 0-0-3

Required of juniors in Cer. E. Prerequisite: Cer. E. 104.

A study of the physical, chemical, and artistic requirement of ceramic products. Laboratory practice. Mr. Greaves-Walker, Mr. Stone.

Cer. E. 213. Firing Technology. 0-3-0

Required of juniors in Cer. E. Prerequisite: Cer. E. 103 and 208.

The theory and practice of firing ceramic products. Problems.

Mr. Greaves-Walker.

Cer. E. 214. Pyrometry. 1-0-0

Required of seniors in Cer. E. Prerequisite: Cer. E. 213.

The theory and use of temperature measuring instruments in industry.

Mr. Stone.

Courses for Graduates and Advanced Undergraduates

Cer. E. 300. Ceramic Laboratory. 3-3-3

Required of seniors in Cer. E. Prerequisite: Cer. E. 207, 208, 209, 212, and 213.

Advanced practice in producing and determining the chemical and physical properties of ceramic materials and products.

Mr. Greaves-Walker and Mr. Stone.

Cer. E. 301. Refractories. 0-0-3

Required of seniors in Cer. E. and Geol. E. Prerequisite: Chem. 212, Geol. 238, Cer. E. 103.

Refractory materials and manufacture of refractory products.

Use of refractory products in industrial furnaces.

Mr. Greaves-Walker.

Cer. E. 302. Advanced Glazes and Colors. 3-3-3

Prerequisite: Cer. E. 207.

Advanced laboratory practice in glazes and colors.

Mr. Stone.

Cer. E. 303. Ceramic Designing. 0-5-5

Required of seniors in Cer. E. Prerequisite: M. E. 110, Cer. E. 104, 208, 209, and 213.

Designing of ceramic equipment and structures.

Mr. Greaves-Walker.

Courses for Graduates Only

Cer. E. 400. Designing of Ceramic Equipment and Plants. 3-3-3

Prerequisite: Cer. E. 303.

Advanced study and designing of ceramic machinery, dryers, kilns, and plant structures. Mr. Greaves-Walker.

Cer. E. 401. Advanced Refractories and Furnaces. 3-3-3

Prerequisite: Cer. E. 301.

Advanced study of refractory materials and products and their use.

Mr. Greaves-Walker.

Cer. E. 402. Industrial Adaptability of Ceramic Materials. 3-3-3

Prerequisite: Cer. E. 300.

Laboratory investigations to determine the industrial uses to which various North Carolina ceramic materials can be put.

Mr. Greaves-Walker, Mr. Stone.

Cer. E. 403. Ceramic Research. 3-3-3

Prerequisite: Cer. E. 300.

Research problems in ceramics will be assigned to meet the desire of the student for specialization.

Mr. Greaves-Walker, Mr. Stone.

Cer. E. 404. Glass Technology. 3-3-3

Prerequisite: Chem. 231, Geol. 238, Cer. E. 209, 210, 301.

Advanced study of the manufacture and physical properties of glass.

Mr. Greaves-Walker.

CHEMICAL ENGINEERING

Courses for Undergraduates

Chem. E. 101. Introduction to Chemical Engineering. 1-1-1

Required of sophomores in Chem. E. Prerequisite or concurrent: Math. 201, M. E. 102, M. E. 104.

Introduction to Chemical Engineering work and practice; reactions in chemical processes, illustrative problems, and control methods.

Mr. Randolph.

Courses for Advanced Undergraduates

Chem. E. 201. Industrial Chemistry. 3-3-3

Required of juniors in Chem. E., and of seniors in Textile Chemistry and Dyeing. Prerequisite: Chem. E. 101, or Tex. 212.

Equipment, materials, methods, and processes employed in chemical manufacture; water, fuels, and power; conversion of raw materials into such necessary products as sugar, paper, gas, leather, paint, glass; waste materials and by-products. Mr. Randolph, Mr. Lauer.

Chem. E. 202. Chemical Engineering Laboratory I. 1-1-1

Required of juniors in Chem. E. Prerequisite or concurrent: Chem. E. 201.

A laboratory study of industrial control methods; industrial plant visits; problems and processes solved and presented in technical reports; preparation of products on pilot plant scale; costs studies.

Mr. Lauer, Mr. Van Note.

Chem. E. 204. Water Treatment. 3-0-0 or 0-3-0 or 0-0-3

Required of seniors in Chem. E. Prerequisite: Chem. E. 201.

Supplies of water; filter plant machinery, equipment and practice; water purification and softening; types of filters; requirements of waters for municipal and manufacturing purposes; water analysis; research on water purification and industrial waste treatment.

Mr. Randolph, Mr. Van Note.

Chem. E. 205. Chemistry of Engineering Materials. 3-3-3 or 0-3-0

Required of seniors in Chem. E. Prerequisite: Chem. E. 201, M. E. 102 and 219, and Math. 201.

Technical study of engineering materials, suitable materials for manufacturing plants, machines, and special uses; corrosion and chemical action; paints and protective coatings; metallurgy; strength, toughness, and elasticity of metals; chemical, metallographic, and microphotographic examination of metals and alloys, and other materials; fire assaying.

Mr. Randolph, Mr. Van Note.

Chem. E. 207. Chemical Principles. 0-3-3 or 3-3-3

Prerequisite or concurrent: Chem. E. 201.

Fundamental principles in chemical manufacture and correlation of these principles in unit processes and operation.

Mr. Van Note.

Chem. E. 208. Treatment of Water and Sewage. 3-0-0 or 0-0-3

Required of juniors in San. E. Prerequisite: Ch. E. 201 or C. E. 104.

Principles involved in the control of municipal water supplies and in sewage treatment; reactions involved; chemical nature of water and sewage treatment; methods for removal of the more objectionable materials in industrial waters. Mr. Randolph, Mr. Van Note.

Chem. E. 210. Industrial Stoichiometry. 3-0-0 or 0-3-0 or 0-0-3

Required of juniors in Chemical Engineering. Prerequisite or concurrent: Chem. E. 201.

Industrial calculations and measurements; heat balances; material balances; fuels and combustion processes; principles of chemical engineering calculations. Mr. Lauer.

Courses for Graduates and Advanced Undergraduates

Chem. E. 300. Principles of Chemical Engineering. 3-3-3

Required of seniors in Chem. E. Prerequisite or concurrent: Chem. E. 201, Chem. E. 210, Math. 201.

Survey of field of Chemical Engineering; control in industrial manufacture; flow of fluids and of heat; equipment for, and principles involved in such processes as crushing and grinding, separation, evaporation, distillation, filtration; humidification; drying, absorption, and extraction; chemical engineering calculations; design and efficiency of chemical machinery. Mr. Randolph, Mr. Cooper.

Chem. E. 301. Electrochemical Engineering. 3-3-3 or 0-0-3

Required of seniors in Chem. E. Prerequisite or concurrent: Chem. E. 201.

Theory and practice of electrochemical industries; principles of electrolysis and other electrochemical processes; electric furnace; electrothermal operations, electrometallurgy.

Mr. Randolph, Mr. Cooper, Mr. Van Note, Mr. Lauer.

Chem. E. 302. Industrial Oils, Fats and Waxes. 0-0-3 or 3-0-0

Elective for juniors or seniors in Chem. E.

Prerequisite: Chem. E. 201.

Commercial practice in the manufacture, refining, and conversion of animal and vegetable oils and their by-products; analyses, tests, and methods of preparation for foods and feeds; drying, semi-drying, and essential oils; industrial fats and waxes. Technical study of petroleum refining and products; lubricants. Mr. Lauer.

Chem. E. 303. Gas Engineering. 0-0 3 or 3-3-3

Elective for seniors or graduates in Chem. E.

Prerequisite: Chem. E. 201.

A gas engineering course; manufacture of industrial fuels gases and their distribution; advances made in the industry; apparatus and equipment; general practice in gas plants; application and use of gas and the by-products of its manufacture; pipe lines, service connections, gas meters. Mr. Randolph.

Chem. E. 304. Sanitation Processes. 0-0-3

Prerequisite: Chem. E. 201.

Technical study of the methods of sanitation in industrial plants; equipment and practice in the disposal and treatment of waste materials and sewage; measures necessary in eliminating occupational disease hazards. Mr. Randolph, Mr. Lauer.

Chem. E. 305. Industrial Application of Physical Chemistry.

Prerequisite: Chem. E. 207, 201. 3-3-3 or 0-3-3

Special phases of physical chemistry studied technically, with reference to the practical application of these principles in the industries and in the arts such as industrial catalysis, evaporation principles, absorption, equilibrium, applications of phase rule, physical metallurgy, colloids.

Mr. Cooper, Mr. Van Note.

Chem. E. 306. Fuel and Combustion Engineering. 3-3-3

Prerequisite: Chem. E. 300.

Fundamental principles and mechanism of the combustion reactions; quantitative application to problems of design or use of equipment for fuel processing and utilization; and a thorough study of solid, liquid and gaseous fuels, with complete methods of analysis.

Mr. Randolph, Mr. Cooper.

Chem. E. 307. Chemical Engineering Laboratory and Design II. 2-2-2

Required of seniors in Chem. E. Prerequisite or concurrent: Chem. E. 300.

A laboratory study of measurement of flow of fluids and heat; crushing and grinding, distillation; evaporation; drying; humidity; filtration and mechanical separation; absorption, and extraction, calculations, design and construction of equipment for these fundamental unit operations in chemical industry. Mr. Randolph, Mr. Cooper.

Chem. E. 308. Chemical Engineering Design. 3-3-3

Prerequisite: Chem. E. 201, 300.

Location, layout and complete design of the chemical plant and its process equipment. Materials of construction. Economic factors controlling the chemical industry, and optimum design from the standpoint of economic return, process development, pilot plant production studies.

Mr. Cooper.

Chem. E. 309. Chemical Engineering Thermodynamics. 3-3-3

Prerequisite or concurrent: Chem. E. 300.

A study of the thermal properties of matter and energy relationships underlying chemical processes. A thorough consideration of fundamental laws of energy as applied to Chemical Engineering problems and processes in industry. Mr. Cooper.

Chem. E. 310. Cellulose and Allied Industries. 3-3-0 or 3-3-3

Required of seniors in Forestry. Prerequisite or concurrent: Chem. E. 201 or Forestry 206, 207.

Cellulose and its compounds; forest raw material for chemical industries; methods and processes; control conditions; machinery; equipment; water requirements; processes for manufacture of paper; rayon; tannin; tar; pitch; turpentine; creosote; wood alcohol; acetic acid; acetone; rubber, and cellulose conversion products; distillation, and extract industries. Mr. Randolph, Mr. Lauer.

Chem. E. 311. Corrosion: Causes and Prevention. 3-3-3

Prerequisite: Chem. E. 201.

Theories of corrosion; influences of metal composition and methods of manufacture; external influences; corrosion testing; preventive measures against atmospheric, underground, underwater, closed water system, chemical corrosion. Good practices; comparison of corrosive resisting materials; suitability of materials for corrosion resistance in various chemical and industrial uses. Mr. Van Note.

Courses for Graduates Only

Chem. E. 401. Chemical Technology. 3-3-3

Prerequisite: Chem. E. 300.

An advanced course in problems, processes, and methods of chemical manufacture and production: special problems of local manufacturing plants worked out under plant conditions; optimum production conditions; special study in applied inorganic, applied organic chemistry, and research in applied chemistry. Mr. Randolph, Mr. Lauer.

Chem. E. 402. Industrial Chemical Research. 3-3-3

Prerequisite: Chem. E. 201.

Chemical research on some industrial problem relating to North Carolina resources; practice in industrial plants, control analyses, estimate of losses, costs, data sheets, technical report. Staff.

Chem. E. 403. Chemical Engineering Research. 3-3-3

Prerequisite: Chem. E. 300.

Some plant problem studied exhaustively by making investigations at the chemical plant, and by supplementary experiments and research in the laboratory; measurements, tabulation, graphs, and calculation of some actual plant problem. Staff.

Chem. E. 404. Advanced Chemical Engineering. 3-3-3

Prerequisite: Chem. E. 300, Chem. E. 307.

Advanced study of process equipment, theory and practice in operation and design for the unit operations evaporation, distillation, absorption, filtration, drying, crystallization, and air conditioning; Chemical Engineering thermodynamics; coefficients of heat transfer; heat of reactions; evaporators; stills; condensers; and heat exchangers; interrelationships between heat transfer and fluid friction. Mr. Randolph, Mr. Cooper.

CHEMISTRY

Courses for Undergraduates

Chem. 101, 103, and 105. General Inorganic Chemistry. 4-4-4

Recitations and laboratory work; theories and laws, history, occurrence, preparation, properties, and uses of the more important elements and their compounds; formulæ, valence, equations and calculations.

Messrs. Caveness, Reid, Jones, Jordan, Satterfield, Singer, Showalter, Wilson, Williams, and Flanders.

Chem. 109. Chemical Calculations. 0-3-0 or 0-0-3

Prerequisite: Chem. 101, 103, 105.

Chemical problems, especially in analytical work. Lectures are given in principles, theories, laws, etc., upon which the problems are based; assigned problems for discussion. Mr. Caveness.

Chem. 211. Qualitative Analysis. 4-0-0

Required of sophomores in Ceramic, Chemical, and Mining Engineering and those majoring in chemistry and of sophomores in Textile Chemistry and Dyeing.

Prerequisite: Chem. 101, 103, 105.

Chemical analysis: identification and separation of more common ions and analysis of mixtures of salts and of commercial products.

Messrs. Wilson, Caveness, Singer.

Chem. 212. Quantitative Analysis. 0-4-0

Required of sophomores in Ceramic Engineering, Chemistry, Chemical Engineering, and Textile Chemistry and Dyeing.

Prerequisite: Chem. 211.

Gravimetric and volumetric methods of analysis, including alkalimetry, acidimetry, oxidation, and reduction methods.

Messrs. Wilson, Caveness, Singer.

Chem. 213. Quantitative Analysis. 0-0-4

Required of sophomores in Chemical Engineering and those majoring in Chemistry. Prerequisite: Chem. 211.

A continuation of Chem. 212. Substances of more difficult nature are analyzed, as minerals, steel, alloys, limestone, Paris green, etc.

Messrs. Wilson, Caveness, Singer.

Chem. 214.—Quantitative Analysis. 0-0-4

Required of students in Textile Chemistry and Dyeing.

A continuation of Chem. 212. Substances of more difficult nature are analyzed, as sulphites, sulphides, bleaching powder, Turkey Red Oil, soaps, etc. Messrs. Wilson, Caveness, Singer.

Chem. 215. Quantitative Analysis. 0-0-4

Prerequisite: Chem. 211. Elective for agricultural students.

Course allows student to choose field of analysis, such as soil analysis, fertilizers, feedstuffs, insecticides, and fungicides. Mr. Wilson.

Chem. 231. Physical Chemistry. 0-0-5

Required of Cer. E.; elective to others. Prerequisite: Chem. 101, 103, 105.

Fundamental chemical principles from a physiochemical viewpoint; special attention to silicate analysis, colloids, and phase rule.

Mr. Jordan.

Chem. 241. Introduction to Organic Chemistry. 0-4-0 or 0-0-4

Required of sophomores in Agriculture. Elective for others. Prerequisite: Chem. 101, 103, 105.

Hydrocarbons, alcohols, aldehydes, ketones, acids, ethers, esters, amino acids, and benzine derivatives; carbohydrates, fats, proteins, and related compounds. Mr. Williams.

Courses for Graduates and Advanced Undergraduates

Chem. 303. Historical Chemistry. 2-0-0

Prerequisite: Chem. 101, 103, 105.

Development of Chemistry and the history of men instrumental in the progress of Chemistry. Mr. Williams.

Chem. 304. Theoretical Chemistry. 0-2-2

Prerequisite: Chem. 101, 103, 105.

Atoms and molecules, chemical reactions and conditions influencing them, electronic conception of valence, radio activity, etc.

Mr. Williams.

Chem. 311. Advanced Qualitative Analysis. 4-0-0

Prerequisite: Chem. 211 or its equivalent.

Theory and reactions in analysis of more complex compounds.

Mr. Wilson.

Chem. 315. Advanced Quantitative Methods. 0-3-0 or 0-0-3

Prerequisite: Chem. 213 or its equivalent.

Methods and apparatus in advanced quantitative analysis; heat of combustion, colorimetry, hydrogen ion concentration, electric combustion of steel, etc. Mr. Wilson.

Chem. 321. Organic Chemistry. 4-4-4

Required of juniors in Chemical Engineering, Chemistry, and Textile Chemistry and Dyeing. Elective for others. Prerequisite: Chem. 101, 103, 105.

Aliphatic and aromatic compounds; practical applications; methods of preparation and purification of compounds, and their structures.

Mr. Williams.

Chem. 331. Physical Chemistry. 4-4-4 and 4-4-0

Three terms required of seniors in Chemistry; the first two terms only required of Chemical Engineers. Prerequisite: Chem. 213.

Principles of Physical Chemistry; laws and theories, application to various branches of chemistry and to industrial processes. Mr. Jordan.

Chem. 335. Chemistry of Colloids. 0-3-0

Prerequisite: Chem. 241 or 321.

Colloidal behavior, osmotic pressures, dialysis, sols and gels, membranes and membrane equilibria, proteins, and Donnan equilibrium.

Mr. Jones.

Chem. 340. Food Products and Adulterants. 3-0-0 or 0-3-0

Designed for students in all schools. Prerequisite: Chem. 241.

Food principles, cereals, starches, sugars, fats, milk and milk products, the packing house, food preservation, beverages, spices and condiments; food legislation. Mr. Satterfield.

Chem. 341. Chemistry of Vitamins. 0-3-0 or 0-0-3

Prerequisite: Chem. 241 or 321.

Application of vitamin hypothesis to human nutrition; history, nomenclature, properties, distribution, effects of deficiencies, and vitamin values. Mr. Satterfield.

Chem. 342. Physiological Chemistry. 3-3-0

Prerequisite: Chem. 241 or 321.

Essential chemical facts pertaining to life processes; digestion, absorption, metabolism, secretions, and excretions; lectures and laboratory.

Mr. Satterfield.

Chem. 343. Blood Analysis. 0-3-0 or 0-0-3

Prerequisite: Chem. 212 or 321.

Hemoglobin, sugar, urea, uric acid, cholesterol, creatine, creatinine, non-protein nitrogen, amino acid nitrogen, calcium, etc.; Folin-Wu system is emphasized; lectures and laboratory. Mr. Satterfield.

Chem. 344. Food and Nutrition. 0-3-3

Prerequisite: Chem. 241 or 321.

Open to all students desiring a practical knowledge of the subject.

Carbohydrates, fats, proteins, amino acids, minerals, fiber, vitamins and enzymes; nutritive value of food materials; digestion, food idiosyncrasy; acidosis and alkalosis. Mr. Satterfield.

Chem. 345. Agricultural Chemistry. 3-0-0

Prerequisite: Chem. 101, 103, 105, and 241.

Feeding the plant; insecticides and fungicides; transforming the plant into human food and animal food. Composition of plants; relation between composition and uses. Mr. Satterfield.

Courses for Graduates Only

Chem. 417. Micro-chemical Analysis. 0-0-3

Prerequisite: Chem. 213.

Inorganic micro qualitative analysis; fibres, starches, etc. Mr. Wilson.

Chem. 421. Organic Chemistry, Advanced. 3-3-3

Prerequisite: Chem. 321.

Principles of Organic Chemistry, current literature; laboratory work and preparation in quantity. Mr. Williams.

Chem. 422. Organic Qualitative Analysis. 3-0-0

Prerequisite: Chem. 321.

Detection of elements and radicals, group characteristics.

Mr. Williams.

Chem. 423. Organic Quantitative Analysis. 0-3-0

Prerequisite: Chem. 212, 321.

Analysis of organic compounds for carbon, hydrogen, nitrogen, the halogens, sulfur, etc. Mr. Williams.

Chem. 424. Organic Micro-Analysis. 0-0-3

Prerequisite: Chem. 321.

Tests for compounds, and impurities in quantities too small to be detected by ordinary methods. Mr. Williams.

Chem. 441. Biochemistry. 0-3-3

Prerequisite: Chem. 321 and 344.

Special topics in Biochemistry. Advanced study in the fields of Biochemistry. Mr. Satterfield.

Chem. 451. Chemical Research. 3-3-3

Prerequisite: 54 term credits in Chemistry. Open to all graduates.

Special problems that will furnish material for a thesis.

Mr. Jordan, Mr. Satterfield, Mr. Williams, Mr. Wilson.

Chem. 491. Seminar. 1-1-1

Required of graduate students specializing in Chemistry.

Preparation and presentation of abstracts of current publications in the field of Chemistry.

CIVIL ENGINEERING

Courses for Undergraduates

C. E. 100. Drawing. 1-1-1

Required of Freshmen in Forestry.

Plain lettering, common symbols, platting of areas from compass survey notes furnished, filling in contours from notes furnished, tracing, calculation of areas—by planimeter. Finished maps.

Mr. Fontaine.

C. E. s101. Surveying and Mapping. 3 credits.

Required in summer immediately following sophomore year in Forestry.

Prerequisite: C. E. 206, C. E. 207, and C. E. 208a.

Boundary; topographical surveys, and calculations of sections of College Experimental Forestry Lands. Finished section maps. Staff.

C. E. s102. Surveying. 3 credits.

Required in the summer immediately following the freshman year in Agr. Eng., A. E., Cer. E., and E. E. and M. E. following the sophomore year.

The use, care and adjustment of surveying instruments; elementary land surveying, traverse lines, leveling, topographical surveying and stadia measurements. Mr. Mann and Staff.

Note: Two sessions, (a) Full time 3 weeks immediately following close of College third term; (b) Half time, 6 weeks concurrently with the College Summer School term in order to allow students to schedule summer school work.

Courses for Advanced Undergraduates

C. E. 201. Materials of Construction. 3-0-0

Required of juniors in C. E., H. E., and Constr. E., San. E., M. E. and A. E.

The study of materials used in buildings and other engineering structures, with particular reference to their methods of manufacture and physical properties. Two periods lecture and recitation; one period laboratory. Mr. Geile and Mr. Tucker.

C. E. 202. Sanitary and Mechanical Equipment of Buildings. 0-0-3

Required of seniors in Constr. E. and juniors in Arch. E. Prerequisite: E. M. 211, 212, 213.

A study of water supply, soil, waste, and vent-pipe systems, principles and practice of heating and ventilating and a discussion of various other mechanical equipment of a building, such as elevators, dust-collecting systems, etc. Mr. Geile.

C. E. 204. Reinforced Concrete. 3-0-0

Required of all Seniors in Department of Civil Engineering and Architectural Engineering.

Prerequisite: E. M. 211, 212, 213, C. E. 221, 222.

Derivation of formulas used in reinforced concrete design, use of diagrams and curves. Illustrative problems in design.

Mr. Mann, Mr. Geile.

C. E. 206. Surveying, Theoretical. 3-3-3

Required of sophomores in Civil, Construction, Highway and Sanitary Engineering. First and second terms required in Forestry, Geol. Eng., and Landscape Architecture.

Use, care and adjustment of surveying instruments, Land Surveying, Topographical Surveying, Leveling and Theory of stadia measures, plane table, etc.

Third term, railroad surveys, including simple, compound, reverse, and spiral curves, turnouts, etc. Staff.

C. E. 207. Field Surveying. 1-1-1

Required in C. E., Constr. E., San. E., H. E., and Landscape Architecture. First and second terms required in Geol. E. Required in Forestry, first term only.

Surveying field practice, topographical surveys, railroad and highway curves. Profiles, cross-sections. Staff.

C. E. 208a. Topographic Drawing. 0-1-0

Required in Forestry, Landscape Architecture, Geological Engineering.

Plotting by coördinates; contours and general topography. Staff.

C. E. 208. Engineering Drawing. 1-1-1

Required of all students in Civil, Sanitary, and Highway Engineering.

Prerequisite: C. E. 206-207.

Conventional signs and lettering, complete topographic map, plans, profile, cross-sections for railroads or highways; calculation of areas and volumes for grading and plans for drainage structures. Mr. Tucker.

C. E. 209. Graphic Statics. 1-0-0

Required of all students in Departments of Civil and Architectural Engineering.

Principles involved in the solution of problems by graphical methods. Moments, shears. Resultant pressure on retaining walls. Stress diagrams. Mr. Mann.

C. E. 211. Construction Engineering I. 3-3-3

Required of Juniors in Constr. E.

Study of working drawings, good practice in masonry and frame construction, estimating quantities. Mr. Geile.

C. E. 214. Mill and Mill Village Sanitation. 3-0-0

Required of students in Textile Chemistry and Dyeing.

Prerequisite: Chem. 105.

Mill and mill village water supply and sewage disposal, mosquito and fly control, sanitary milk supply, industrial hygiene. This course given for textile students. Mr. Johnson.

C. E. 215. Sanitary Engineering. 0-0-3

Required of juniors in San. E. Prerequisite: Chem. 105.

This course covers, in a general way, the field of Sanitary Engineering, including: water supply and sewage disposal; ventilation; mosquito and fly control; refuse disposal; public health laws and organization.

Mr. Johnson.

C. E. 220. Strength of Materials (Abridged). 3-0-0 or 0-0-3

Required of Engineering students in Chem E., E. E., and Ind. E. Prerequisites: E. M. 202 or E. M. 212, Math. 203.

A study of the stresses and strains in engineering materials. The study includes tension, compression, shear and torsion; also bending moments and shear in beams. The fibre stresses in simple beams and their distribution throughout the cross section are analyzed. An elementary conception of the deflection of beams and working principles for the design of columns are discussed. Messrs. Mann, Smith, Bramer.

C. E. 221. Strength of Materials. 0-3-0 or 0-0-3

Required of all students in Engineering except Chem. E., E. E., Geol. E., and Ind. E. Prerequisites: E. M. 212, and Math. 203. Co-requisite: E. M. 213.

A study of the stresses and strains in engineering materials. The study includes tension, compression, shear, and torsion, with emphasis on the applications to engineering structures. Bending moments and shear in simple beams. The fibre stresses in beams and their distribution throughout the cross section are studied in detail.

Messrs. Mann, Smith, Bramer.

C. E. 222. Strength of Materials. 3-0-0 or 0-0-3

Required of all students in Engineering except Chem. E., E. E., Geol. E., and Ind. E. Prerequisites: C. E. 221, E. M. 202 or 213.

A continuation of C. E. 221. Various methods are studied for finding the deflection of beams. The determination of stresses in statically indeterminate beams; the study of columns. Combined stresses.

Messrs. Mann, Smith, Bramer.

C. E. 230. Hydraulics. 3-0-0 or 0-3-0

Required of juniors in Construction Engineering; seniors in Ch. E., Geol. E., and M. E., Aero. option.

Prerequisites: E. M. 211, 212; Math. 201, 202.

Fluid pressure, laws governing flow in pipes and conduits, flow through orifices and nozzles and over weirs; losses from friction and other sources. Methods of measuring the flow of streams; determination of waterpower. Laboratory experiments. Mr. Riddick.

C. E. 231. Hydraulics. 3-3-0 or 0-3-3

Required of juniors in Civil Engineering, Highway Engineering, and Sanitary Engineering; seniors in Electrical Engineering and Mechanical Engineering.

Prerequisites: E. M. 211, 212, 213; Math. 201, 202.

Fluid pressure, laws governing flow in pipes and conduits, flow through orifices and nozzles and over weirs; losses from friction and other sources. Methods of measuring the flow of streams; determination of waterpower. The dynamic action of water including a study of various types of hydraulic motors and pumps. Laboratory experiments. Mr. Riddick.

C. E. s240. Advanced Surveying. 3 credits

Required in the summer immediately following the sophomore year in Civil Engineering.

Prerequisite: C. E. 206 and 207.

Plane table practice, special problems in surveying practice; triangulation, railroad and highway spirals; hydrographic surveying with sextant; plane table problems; the use and rating of current meters; measurement of stream flow; drainage problems.

Laying out proposed construction work. Topography, details, special problems. Mr. Mann and Staff.

Courses for Graduates and Advanced Undergraduates

C. E. 301. Applied Astronomy. 0-0-4

Required of seniors in C. E. and H. E. Prerequisite: C. E. 206, 207.

The application of astronomy in determining latitude, azimuth, longitude and time; astronomical observations with transit and sextant; reduction of observations. One credit given for observations.

Mr. Tucker.

C. E. 302. Construction Engineering II. 3-3-3

Required of seniors in Constr. E. Prerequisite: E. M. 211, 212, 213, C. E. 221, 222.

Study of construction of reinforced concrete and steel framed structures. Estimation, cost analysis, organization, management of construction plants, field methods, proposals and contracts. Mr. Geile.

C. E. 303. Construction Equipment. 3-0-0

Required in Construction Engineering.

A study of hoists, concrete mixers, excavators, tools, and general equipment used on construction. Mr. Geile.

C. E. 304. Financing of Sanitary Utilities. 0-0-3

Required in Sanitary Engineering.

Rates and service charges, collections, operating cost control, bond issues, and budgets. Mr. Johnson.

C. E. 305. Waterworks. 0-3-0

Required of seniors in C. E. and San. E. Prerequisite: C. E. 231.

Municipal waterworks; quantity; sources of supply, collection; purification, distribution. Mr. Johnson.

C. E. 306. Railroad Economics. 0-3-0

Required of seniors in Civil Engineering. Prerequisite: C. E. 206.

Economics of railroad location; construction, maintenance and operation; betterment and valuation surveys. Mr. Mann.

C. E. 307. Sanitary Engineering Laboratory. 1-1-0

Required in Civil Engineering and Sanitary Engineering.

Laboratory analysis of sewage and sludge. Inspection trips to sewage disposal plants. Laboratory analysis for determining quality and safety of water. Inspection of waterworks in various cities. Mr. Johnson.

C. E. 308. Sewerage. 3-0-0

Required in C. E. and San. E. Prerequisite: C. E. 231, Chem. E. 208.

Separate and combined sewer systems; principles of design and construction; sewer appurtenances; disposal plants. Mr. Johnson.

C. E. 309. Specifications. 0-3-0

Required of seniors in Constr. E. and Arch. E.

Preparation of specifications and legal documents for building operations. Mr. Geile.

C. E. 310. Water Purification. 0-0-3

Required of seniors in San. E. Prerequisite: C. E. 231.

Design and operation of water purification plants: sedimentation, coagulation, filtration, and sterilization of water. Recent treatment processes. Inspection trips to various plants. Mr. Johnson.

C. E. 311. Sewage Disposal. 0-3-0

Required of seniors in San. E. Prerequisite: C. E. 308.

Design and operation of sewage disposal plants; treatment processes and devices; efficiencies and costs of plants; public health, legal and economic problems involved. Inspection trips to disposal plants. Mr. Johnson.

C. E. 312. Accident Prevention in Construction. 0-0-3

Required in Construction Engineering.

Causes and costs of accidents in construction. A study of methods used in accident prevention work. Mr. Geile.

C. E. 313. Theory of Structures. 3-3-0

Required of seniors in C. E., H. E., Constr. E., San. E. Prerequisite: C. E. 203.

Roof trusses; bridge trusses; three hinged arch, lateral bracing and portals; rigid frame, wind stresses in tall buildings, indeterminate trusses, secondary stresses. Mr. Geile.

C. E. 314. Structural Design. 0-3-3

Required of seniors in C. E., H. E., Constr. E., San. E. Prerequisite: C. E. 221, 222, and first term C. E. 313.

Design of beams, columns, tension members, plate girders, trusses and structures. Mr. Mann.

Courses for Graduates Only

C. E. 401. Advanced Sewage Disposal. 3-3-0

Prerequisite: C. E. 311.

Study of sewage, sludge, and industrial wastes, efficiencies obtained by different types of disposal plants, treatment processes and their results, sludge conditioning, digestion and disposal. Mr. Johnson.

C. E. 402. Advanced Water Purification. 0-3-3

Prerequisite: C. E. 310.

Study of water purification processes, primary and secondary treatments control of tastes and odors, and treatment of colored waters.

Mr. Johnson.

C. E. 403. Sanitary Engineering Research. 3-3-3

Prerequisite: C. E. 215, 310, 311.

In the first term a study of recent developments and research in Sanitary Engineering is made from current literature. In the second term a research problem is selected and data on the problem is compiled from literature. In the third term individual research work is done.

Mr. Johnson.

C. E. 404. Advanced Structural Theory. 3-3-3

Prerequisite: C. E. 313.

Stress analysis in continuous frames and arches; secondary stresses; wind stresses and space frame-work. Analyses by use of Beggs' Deformeter. Mr. Geile.

C. E. 405. Construction Engineering Research. 3-3-3

Prerequisite: C. E. 302.

Study of recent advancement and developments in Construction. Original research. Mr. Geile.

ECONOMICS

Courses for Undergraduates

Econ. 102. Introduction to Economics. 3-0-0 or 0-3-0 or 0-0-3

Required of students in Forestry, Land. Arch., and Ind. Arts.

It treats of the business aspects and economic organization of society; production, distribution, and value of economic goods. Mr. Green.

Econ. 103. General Economics. 3-3-3

Required of sophomores in Constr. E., I. E., juniors in Agricultural Teaching, Cer. E., C. E., E. E., Geol. E., H. E., M. E. and Textile curricula, and of seniors in A. E., Chem. E. and San. E.

A study of economic institutions and general principles governing production and distribution of wealth under the existing economic organization. Messrs. Green, McNatt, Moen, Leager, and Brown.

Econ. 112. Accounting for Engineers. 3-0-0 or 0-3-0 or 0-0-3

A survey of accounting and financial statements and records; devices, statements, and cost records; their construction, their use and interpretation. Mr. Shulenberger.

Courses for Advanced Undergraduates

Econ. 201. Accounting I. 3-3-3

Required of juniors in Industrial Engineering, Textile Mgt., and Yarn Mfg.

Fundamental principles of theory and practice; interpretation of structure, form and use of business statements. Mr. Shulenberger.

Econ. 210. Business Organization. 0-3-0

Required of seniors in Highway Engineering. Prerequisite: Econ. 102 or 103.

Forms of business enterprises; single enterprises, partnerships, joint-stock companies and corporations; and principles of business management. Mr. Green.

Econ. 211. Business Law. 3-0-0 or 0-3-0 or 0-0-3

Required of seniors in Engineering, and Industrial Management.

Sources of law, fields of law, contracts, agency, sales, negotiable documents, and the law as it controls business transactions.

Messrs. Green and McNatt.

Econ. 215. Marketing Methods. 3-3-3

Prerequisite: Econ. 102 or 103.

Marketing functions, agencies. systems, retailing, market analysis, markets. Mr. Moen.

Econ. 216. Marketing Methods and Sales Management. 3-3-3

Required of seniors in Industrial Management. Prerequisite: Econ. 102 or 103.

Marketing methods; problems in industrial marketing; sales management in industry. Mr. Moen.

Econ. 217. Advertising. 3-0-0

Required of seniors in Business Administration, Marketing Group.

Principles and practice of Advertising. Mr. Moen.

Econ. 218. Sales Management. 0-3-3

Required of seniors in Business Administration, Marketing Group.

Administrative policy and organization; sales methods, planning and research; sales control. Mr. Moen.

Econ. 221. Money, Credit, and Banking. 3-3-0

Prerequisite: Econ. 102 or 103.

Banking and credit institutions, price changes, monetary and banking developments; Federal Reserve System and money market. Mr. Moen.

Econ. 223. Business Finance. 0-0-3

Prerequisite: Econ. 102 or 103.

Raising and spending of funds, and standards of control. Mr. Moen.

Econ. 229. Purchasing and Storeskeeping.

Elective. Prerequisite: Econ. 102 or 103.

Standards and specifications, requisitions, purchase orders, and their applications. Mr. . . ..

Econ. 230. Industrial Management. 3-3-3

Required of juniors in Industrial Management. Prerequisite: Econ. 103.

Internal working of industrial enterprises; control through budget-making, production and planning methods; industrial problems.

Mr. Henninger.

Econ. 230-A. Industrial Management. 3-3-0

Required of seniors in Textile Engineering. Prerequisite: Econ. 102.

A more specialized course than Econ. 230. Industry in general with emphasis and application to textile industry. Mr. . ... ..

Econ. 231. Industrial and Personnel Management. 3-3-3

Prerequisite: Econ. 103.

More general treatment of Economics 230 and Economics 340; administrative features. Personnel management, and production controls.

Mr. Henninger.

Econ. 233. Office Management. 0-0-3

Elective. Prerequisite: Econ. 102 or 103.

Principles of management, office arrangements, filing methods, office personnel, business documents, reports, dictation and correspondence.

Mr. Green.

Econ. 239. Labor Problems. 3-0-0

Required of seniors in Industrial Management; elective for others. Prerequisite: Econ. 102 or 103.

History, organization, activities, and policies of organized labor. Recent developments. Mr. ....

Econ. 240. Personnel Management. 0-0-3

Required of Textile seniors. Elective for Engineering students. Prerequisite: Econ. 102 and Soc. 102.

This course will follow as closely as possible Economics 340; subject-matter as related to a proper background for successful Personnel Management. Mr. Henninger.

Econ. 241. Traffic Management. 3-0-0

Required of seniors in Industrial Management. Prerequisite: Econ. 103.

Functions of traffic departments, shipping, transportation management, rates, etc. Mr. ....

Econ. 242. Time Study. 0-3-0

Required of seniors in Industrial Management. Prerequisite: Econ. 102 or 103.

Analysis of shop operation in elements, and the determination of the time for each element; emphasis on factors affecting job specification, and wage rate setting. Mr. Henninger.

Econ. 256. Real Estate. 3-3-3

Prerequisite: Econ. 103.

Buying, selling, building, and managing real property; laws affecting property; real estate as a profession. Mr. Moen.

Econ. 270. Rural Law. 0-0-3

Elective. Prerequisite: Econ. 102 or 103.

Contracts, agency, sales, land transfers, mortgages, and other instruments, legal aspects of the business of farming. Mr. ... .

Courses for Graduates and Advanced Undergraduates

Econ. 301. Accounting II. 3-3-3

Prerequisite: Econ. 201 and 6 hours in Economics.

Problems of asset valuation such as depreciation, replacements, fire losses, amortization, etc., found in all types of business organizations. Mr. Shulenberger.

Econ. 302. Modern Accounting Systems. 3-3-3

Prerequisite: Econ. 201.

Principles of system building, structure and expansion; individual studies of representative business systems. Mr. Shulenberger.

Econ. 303. Principles of Cost Accounting. 3-3-3

Required of seniors in Yarn Manufacturing. Prerequisite: Econ. 201.

Cost finding, material costs, labor costs, burden and overhead costs; cost accounting system for manufacturing and extractive industries. Mr. Shulenberger.

Econ. 304. Auditing. 3-3-3

Elective. Prerequisite: Econ. 201.

Cases, records, working papers, verification, adjustment, composition, preparation, and rendition. Mr. Shulenberger.

Econ. 312. Statistical Method. 3-3-0

Required of juniors in Agricultural Administration (one term). Prerequisite: Econ. 102, 103.

Statistical methods, statistical types, collection and analysis of statistical data. Mr. Leager.

Econ. 314. Business Statistics. 0-0-3

Prerequisite: Econ. 312.

Statistical methods and data; price levels, the business cycle, and business barometers in forecasting business conditions. Mr. Leager.

Econ. 321. Principles of Money and Banking. 3-3-3

Analysis and research in the field of money and banking. Selected readings and reports. Mr. Moen.

Econ. 323. Business Finance II. 3-0-0

Prerequisite: Econ. 223.

Financial Administration and policies as applied in Modern Business. Mr. Moen.

Econ. 324. Foreign Exchange and Trade. 0-0-3

Prerequisite: Econ. 221.

Theory of foreign trade, commercial policies, and balance of international payments. Mr. Moen.

Econ. 325. Investments. 0-3-0

Prerequisite: Econ. 221.

Different types of investment securities and methods of judging them. Mr. Moen.

Econ. 326. Public Finance I. 0-3-0

Elective. Prerequisite: Econ. 103 and 6 additional credits in Economics.

Classes of income and expenditure; incidence of different classes of taxes. Mr. Moen.

Econ. 327. Public Finance II. 0-0-3

Elective. Prerequisite: Econ. 326.

A continuation course for Public Administration. Mr. Moen.

Econ. 330. Principles of Insurance. 0-0-3

Elective. Prerequisite: Econ. 103.

Risk is an element of all agricultural and industrial activity. Such risks as can be covered by insurance are discussed, with the appropriate form of insurance, e.g., employer's liability, workmen's compensation, fire, life, and other forms. Mr. Shulenberger.

Econ. 338. Conservation of Natural Resources. 0-2-0

Elective. Prerequisite: Econ. 103; senior standing.

The extent, uses, rates of consumption, and probable exhaustibility of our most important resources; utilization for welfare of the race.

Mr. Brown.

Econ. 340. Personnel Management. 0-3-3

Required of seniors in Industrial Management. Prerequisite: Econ. 103 and 12 additional credits in Economics and Sociology.

Students desiring to take this course are advised to take one or more of the following: Psychol. 238, Econ. 239, and Soc. 310.

Principles of effective management of men, including selection, progressive adjustment, and motivation of personnel in industry.

Mr. .. ..

Courses for Graduates Only

Econ. 401. Advanced Economic Theory. 3-3-0

Prerequisite: Eighteen (18) credits in Economics.

Recent and current economic theory; principal schools of economists; theory of prices under the system of free enterprise. Mr. McNatt.

Econ. 402. History of Economic Doctrines. 0-0-3

Prerequisite: Econ. 401.

History of economic doctrines from the Mercantilists to the period of Ricardo. Mr. McNatt.

Econ. 415. The Economics of Distribution. 3-3-3

Prerequisite: Econ. 103 and 215.

An advanced study of theory and practice of economic distribution.

Mr. Moen.

Econ. 424. Advanced Economic Statistics. 3-3-3

Prerequisite: Econ. 312 or equivalent.

Application of statistical methods to the solution of more complex agricultural and economic problems. Mr. Leager.

Econ. 430. Industrial Management—Advanced. 0-3-0

Prerequisite: Econ. 103 and 230, or graduation in Engineering.

Industrial problems and scientific systems, applied to textile, metal, and furniture trades. Individual assignments and analysis of definite situations. Mr. . ...

Econ. 439. Labor Problems—Advanced. 0-3-0

Prerequisite: Econ. 103, 239, and 9 credits in Sociology and 9 credits in Psychology.

Analysis of problems confronting organized and unorganized workers in all industries. Mr. . . . . .

Econ. 440. Personnel Management—Advanced. 0-0-3

Prerequisite: Econ. 103, 230, 340, and 439.

Methods of personnel management, differences between industries and between plants, and scientific training of personnel manager.

Mr. ....

EDUCATION

For description of summer school (s) courses see Summer School Bulletin.

Courses for Undergraduates

Ed. 106. Industrial Arts. 3-3-3

Required in Industrial Arts curriculum.

Lectures, laboratory work, and visitations. Emphasis on wood, metal, electrical, and printing shop work as meeting needs of general shop teaching. Required as major or minor in Industrial Arts Education.

Mr. Boshart.

Courses for Advanced Undergraduates

Ed. 203. Educational Psychology. 3-3-0

Required of students in Education; elective for others.

The meaning of education, child development, problems of adjustment and educational guidance; problems of learning, motivation, interests, and the measurement of educational efficiency. Mr. Garrison.

Ed. 208. Visual Aids. 0-0-3

Required of students in Agricultural Education.

Prerequisite: junior standing.

Methods and technique of visual instruction; lettering; statistical illustrating; chart, graph, and poster-making; photography; lantern-slide making; projector operation, care and use. Designed for teachers and extension workers. Mr. Armstrong.

Ed. 232. Project Design, A, B. 0-3-3

Required in Industrial Arts. Prerequisite: M. E. 102 and 103.

The designing of projects suitable for the general industrial arts laboratory of the junior and senior high school or specialized class work. Suitable materials, types of construction, and utility of projects will be considered. Mr. Boshart.

Ed. 233. Practices in Industrial Arts Teaching, A, B. 0-3-3

Prerequisite: Ed. 232.

Designed to meet the needs of teachers and principals of schools where shop work and drawing are taught. Much attention will be given to the working out of suitable problems and the types of equipment best adapted for the work. Mr. Boshart.

Ed. 250. Trade and Job Analysis. 3-0-0

Elective.

Deals with the analysis of trades and jobs, endeavoring to determine how they may be broken up into units for teaching purposes. Will consider the trade demands of the worker and the essential materials to be used. Intended for students in Textiles and Engineering who expect to teach evening or day classes in vocational work. Mr. Boshart.

Ed. 260. Course Making and Lesson Planning. 3-0-0

Deals with the arrangement of subject matter into courses and lessons for instructional purposes. Consideration will be given to the preparation of outlines, job sheets, and the materials to be used in teaching of shop and related subjects. Intended for those who expect to teach in day and evening classes. Mr. Boshart.

Courses for Graduates and Advanced Undergraduates

Ed. 306. Principles of Teaching. 3-0-0

Required of seniors in Agr. Ed. Prerequisite: Ed. 203.

Principles of teaching related to job of teaching vocational agriculture; motivation, directing study, teaching technique, lesson planning.

Mr. Cook.

Ed. 307. Methods of Teaching Agriculture. 5-0-0

Required of students in Agricultural Education. Prerequisite: Ed. 203, 208, or equivalents, and at least 12 credits in Agriculture.

Organization of subject matter; teaching techniques; supervised practice; textbooks and reference material; Future Farmers of America; room arrangement and equipment. Mr. Cook.

Ed. 308. Observation and Directed Teaching. 0-5-0

Required of seniors in Agr. Ed. Prerequisite: Ed. 203, 306, 307, and at least 12 credits in Agriculture.

Observation and teaching vocational agriculture under supervision, participation in the varied activities of the teacher of vocational agriculture. Mr. Cook.

Ed. 311. Evening Classes and Community Work. 0-5-0

Required of seniors in Agr. Ed. Prerequisite: Ed. 203, 306, 307, and at least 12 credits in Agriculture.

Community activities of teachers of vocational agriculture, organization and teaching evening and part-time classes. Mr. Cook.

Ed. 312. Materials and Methods in Teaching Agriculture. 0-5-0

Required of seniors in Agr. Ed. Prerequisite: Ed. 203, 306, 307, and 12 credits in Agriculture.

Use of illustrative and actual materials in teaching vocational agriculture; collection and preservation of specimens; chart making; practice in use of materials in directed teaching. Mr. Armstrong.

Ed. 320. Vocational Guidance. 0-3-0 or 0-0-3

Required of students in Industrial Arts, and elective for others. Prerequisite: Ed. 203, 321, 332, or equivalent.

The course in vocational guidance is intended to give emphasis to the place of guidance in the school program. It will treat of the development of educational and vocational guidance, its relation to personnel work, principles and practices of guidance and employment, child labor legislation, and forms and records for school use. Mr. Boshart.

Ed. 321. Vocational Education. 0-3-0

Required of students in Industrial Arts. Prerequisite: Ed. 203, 332, and 6 additional credits in Education.

This course dealing with the problems of vocational education is intended to give acquaintance with its underlying philosophy, its place in our education, the laws governing it, and the prevailing practices and administration. It is of particular interest to administrators and teachers who have or expect to have to do with the direction of educational work in Agriculture, Homemaking, Industry, and Commerce. It deals with all day, evening, part-time, and general continuation class work.

Mr. Boshart.

Ed. 322. Methods in Industrial Arts Teaching. 4-0-0

Required of seniors in Industrial Arts and those preparing to teach vocational classes in trades and industries.

The basic principles of teaching in the classroom or shop; selection and arrangement of material; lesson planning; and conduct of class work. Mr. Boshart.

Ed. 324. Occupational Studies. 0-0-3

Required of students of Industrial Arts and elective for others. Prerequisite: Ed. 320 and six additional hours in education.

A comprehensive study of the field of occupations. The work will consist of readings, reports, discussions, lectures, and visitations. Analysis of leading occupations will be made with the idea of selecting and preparing teaching units for related subject matter courses. Mr. Boshart.

Ed. 326. Secondary Education in Agriculture. 0-0-3

Prerequisite: Ed. 203 and 6 other credits in Education.

School organization in the United States with special reference to agricultural education, curricula; elimination; movements in guidance and character education, with particular reference to agricultural teaching.

Mr. Cook.

Ed. Ex. 330. Visual Instruction. 3-0-0 or 0-3-0 or 0-0-3

Ed. 331. Visual Aids in the Social Sciences. 0-0-3

Prerequisite: Ed. 203.

A study of materials, devices and procedures applicable to teaching the social sciences, including geography. Emphasis will be given to motivation, facilitating the learning process, and fixation. Various devices will be used by the class. Mr. Armstrong.

Ed. 332. Problems in Secondary Education. 0-0-3

Required of juniors in High School Teaching. Prerequisite: Ed. 203.

Historical perspective; issues in and special functions of secondary education; curriculum; different types of teaching; basic principles; systematic procedure. Mr. Showalter.

Ed. 333. Field Work in Secondary Education. 0-3-0

Required of seniors in High School Teaching. Prerequisite: Ed. 203.

Systematic study of physical and instructional factors in selected high schools. Mr. Showalter.

Ed. 338. Laboratory Practice in Science.

B.	**Botany**	2-2-0
Z.	**Zoology**	1-1-0
C.	**Chemistry**	1-1-1
P.	**Physics**	1-1-1

Five credits required of double majors in science teaching. Prerequisite: Ed. 332; approval of instructor.

Apprentice work in laboratory management and instruction.
Mr. Showalter and teachers of the respective sciences.

Ed. 339 to 343. Special Methods for High School Teachers.

Required of juniors or seniors in High School Teaching in the respective fields of specialization. Prerequisite: Ed. 332, approval of instructor.

For the respective teaching fields: determining influences in development; educational values and objectives; curriculum materials; teaching practices, including planning and testing.

Ed. 339. The Teaching of Science in the Secondary School. 3-0-0
Mr. Showalter.

Ed. 340. The Teaching of English in the Secondary School. 0-0-3
Mr. Clark.

Ed. 341. The Teaching of Mathematics in the Secondary School. 0-0-3
Mr. Mumford.

Ed. 342. The Teaching of History in the Secondary School. 3-0-0
Mr. Barnhardt.

Ed. 343. The Teaching of French in the Secondary School. 0-0-3
Mr. Hinkle.

Ed. 344. Observation and Directed Teaching. 0-6-0

Elective for students who desire a Class A certificate to teach in North Carolina high schools. Prerequisite: Ed. 332, 333; Special Methods; subject matter required for certification; approval of instructor.

Observation of and active participation in all phases of teacher activity; emphasis on systematic procedure to develop ability to study and work independently. Mr. Showalter and training teachers.

Ed. 350. Special Methods Laboratory. 0-3-0

Required of seniors in High School Teaching. Prerequisite: Ed. 332, approval of instructor.

Thorough study of the high school textbooks to be used in the respective subject matter fields.

Mr. Showalter and teachers of the respective subject matter fields.

Ed. Ex. s352. Theory of Industrial Arts. 3 credits

Ed. Ex. s354. Practical Arts Problems. 3 credits

Ed. s355. Art Studies in Industrial Art Problems. 1½ or 3 credits

Ed. 357. The Problems of the General and Unit Shops. 3-0-0

Intended for those who are teaching or expect to teach shop work and drawing. Its purpose is to acquaint students with the possibilities of the general shop as compared with those of the unit shop and to aid in setting up procedures for each type of shop under conditions where they can best function. Those taking this course should take parallel courses in shop instruction unless they have had considerable experience. Problems of organization, equipment, instruction sheets and their uses, and courses of study will be considered. Mr. Boshart.

Ed. s360. Special Problems in Teaching Agriculture. 3 credits

Ed. 376. Psychology of Adolescence. 3 0-0

Prerequisite: Ed. 203 and 6 credits in Education or Psychology.

A study of the nature, growth, social development, and interests of adolescent boys and girls. Especially designed for those concerned with the organization and direction of group activities for boys and girls in rural and industrial centers. Mr. Garrison.

Ed. 381. Character Education. 0-0-3

Prerequisite: Twelve credits in Education.

Nature of the problem, needs for character training, present development, agencies responsible, theories of character development, results of investigations, materials, and methods for teachers. Mr. Cook.

Courses for Graduates Only

Ed. 403. Problems in Educational Psychology. 3-3-0

Prerequisite: Eighteen credits in Education and Psychology.

The nature, causes, and measurements of individual differences in relation to problems of education; the principles of learning, motivation and conditions of educational improvement; the application of psychological principles to mental and educational measurements. Mr. Garrison.

Ed. 410. Administration and Supervision of Vocational Education. 3-3-0

Prerequisite: Ed. 203, 320, 321, and 332.

Administration and supervisory problems of vocational work. Considers the practices and policies of Federal and State officers, organizations and administration of city and consolidated systems, and individual school departments for Vocational Education. For graduate students majoring in Education. Mr. Boshart.

Ed. 412. Occupational Counseling. 0-0-3

Prerequisite: Ed. 320, 321, or equivalent.

This course is intended for teachers of experience and those interested in the problems of guidance in school and life. Attention is given to group and individual counseling as it may be applied to the junior and senior high schools, colleges or placement offices, and to the procedures of conducting interviews and conferences. Information concerning occupational material will be organized, evaluated, and applied to type cases. The relation to personnel work will be considered as the functions of school and industry are studied. Mr. Boshart.

Ed. 416. Problems in Agricultural Teaching. 3-0-0 or 0-3-0 or 0-0-3

Prerequisite: Ed. 203, 307, and at least 12 other credits in Education and Agriculture. Experience in Agricultural Teaching will be accepted in lieu of Ed. 307.

Investigations, reports, and a critical evaluation of present practices with constructive remedies; course adapted to individual interests and needs. Mr. Cook.

Ed. 417. Principles of Agricultural Education. 3-0-0 or 0-3-0 or 0-0-3

Prerequisite: Eighteen credits in Education and Agriculture. Permission to register.

Principles and practices in Agricultural Education in the light of educational research and of changing rural conditions. Mr. Cook.

Ed. 420. Agricultural Education Seminar. 1-1-1

Prerequisite: Eighteen credits in Education.

A critical review of current articles and books of interest to students of agricultural education. Mr. Cook, Mr. Armstrong.

Ed. 421. Research in Education. 3-3-3

The student will make a study of one or more research problems under the supervision of some member of the staff of the School of Education. The course will be selected on the recommendation of the member of the faculty with whom the student plans to carry on the study.

Staff in Education.

ELECTRICAL ENGINEERING

Courses for Undergraduates

E. E. 101. Electrical Engineering Fundamentals. 3-3-0 or 0-3-3

Required of sophomores in E. E. Concurrent with Phys. 104.

Fundamental laws of electric, magnetic and dielectric circuits; problem drill. Mr. Browne.

E. E. 105. Electrical Equipment of Buildings. 0-0-3

Required of juniors in Construction Engineering and seniors in Architectural Engineering. Prerequisite: Physics 104.

Wiring of buildings for light and power; selection of motors and lighting equipment. Mr. Browne, Mr. Keever, Mr. Glenn.

E. E. 110. Electric Shop. 0-0-3

A course offered for students in Vocational Education. Practical electrical problems suitable for secondary school; electrical shop equipment.

Credit is allowed only for students in the Department of Education.

Mr. Keever.

Courses for Advanced Undergraduates

E. E. 201. Electrical Engineering. 3-3-3

Required of juniors in E. E. Prerequisite: E. E. 101.

Principles, performance and characteristics of direct current apparatus, electronics, theory of periodic currents, alternating current circuits and systems. Mr. Fouraker, Mr. Brown, Mr. Keever.

E. E. 202. Electrical Engineering Problems. 1-1-1

Required of juniors in E. E. Concurrent with E. E. 201.

Supervised problem drill. Mr. Fouraker.

E. E. 203. Electrical Engineering Laboratory. 2-2-2

Required of juniors in E. E. Concurrent with E. E. 201.

A laboratory course coördinated with E. E. 201.

Mr. Pearsall, Mr. Keever, Mr. Brown, Mr. Glenn.

E. E. 220. Elements of Electrical Engineering I. 3-3-0 or 0-3-3

Required of juniors in Chem. E., C. E., H. E., Constr. E., and San. E., and of seniors in Cer. E., Geol. E., and Min. E., and in Industrial Management. Prerequisite: Math. 202, Phys. 104.

Principles, characteristics and operation of electric equipment and systems. Mr. Pearsall, Mr. Keever, Mr. Glenn.

E. E. 230. Elements of Electrical Engineering II. 4-4-4

Required of seniors in M. E. and of juniors in Industrial Engineering. Prerequisite: Math. 203, Phys. 104.

Principles, characteristics, and operation of electric equipment.
Mr. Pearsall, Mr. Keever, Mr. Glenn.

Courses for Graduates and Advanced Undergraduates

E. E. 301. Electric Distribution. 0-0-3

Required of seniors in E. E. Prerequisite: E. E. 201.

Low voltage distribution systems. Mr. Browne.

E. E. 302. Alternating Current Machinery. 4-4-0

Required of seniors in E. E. Prerequisite: E. E. 201.

Principles and characteristics of alternating current machinery.
Mr. Fouraker, Mr. Brown.

E. E. 303. Electrical Engineering Laboratory. 2-2-2

Required of seniors in E. E. Concurrent with E. E. 301.

A laboratory course coördinated with classroom work.
Mr. Fouraker, Mr. Pearsall, Mr. Keever, Mr. Brown.

E. E. 304. Electric Transmission. 0-0-4

Prerequisite: E. E. 302.

Theory and characteristics of electric circuits for high tension transmission of power; circuits for communication; radio and carrier current systems. Mr. Fouraker, Mr. Brown.

E. E. 305. Electric Power Applications (Optional with E. E. 306). 3-3-3

Prerequisite: E. E. 201.

Selection of electrical equipment for industrial applications, control equipment; electric traction, electric power plants.
Mr. Browne, Mr. Fouraker.

E. E. 306. Electric Communication (Optional with E. E. 305). 3-3-3

Prerequisite: E. E. 201, 202.

Circuits and equipment for wire communication; radio and carrier current systems. Mr. Fouraker.

E. E. 307. Illumination. 3-0-0

Required of seniors in E. E. Prerequisite: E. E. 201, 202.

Characteristics of electric lamps; electric lighting systems.

Mr. Browne, Mr. Glenn.

Courses for Graduates Only

E. E. 401. Fundamental Principles in Electrical Engineering. 3-3-3

Prerequisite: E. E. 301, 302.

Theory of the more difficult problems in electrical engineering, emphasis being placed upon the fundamental principles.

Mr. Browne, Mr. Fouraker.

E. E. 402. Electric Transmission—Advanced. 3-3-3

Prerequisite: E. E. 301, 303.

Calculation of constants, networks, mechanical principles, transmission lines, interference and transients in lumped circuits. Mr. Fouraker.

E. E. 403. Electrical Engineering Research. 3-3-3

Prerequisite: Graduation in electrical engineering.

Original investigation in the field of electrical engineering.

Mr. Browne, Mr. Fouraker.

ENGINEERING MECHANICS

Courses for Advanced Undergraduates

E. M. 201. Engineering Mechanics (Abridged). 3-0-0 or 0-3-0

Required of students in Cer. E., Ch. E. and Geol. E. Prerequisite: Math. 202. Co-requisites: Math. 203 and Phys. 104.

Statics: Concurrent, parallel and non-concurrent force systems, the determination of their resultants and conditions of equilibrium. Friction, centroids and moments of inertia. Messrs. Smith, Mann, Geile, Bramer.

E. M. 202. Engineering Mechanics (Abridged). 0-3-0 or 0-0-3

Required of students in Cer. E., Ch. E. and Geol. E. Prerequisites: E. M. 201 and Math. 203. Co-requisite: Phys. 104.

Kinematics: The motion of bodies without considering the manner in which influencing factors affect the motion. Kinetics: The motion of bodies as affected by unbalanced forces.

Messrs. Smith, Mann, Geile, Bramer.

E. M. 211. Engineering Mechanics. 3-0-0 or 0-3-0 or 0-0-3

Required of all students in Engineering except Cer. E., Ch. E. and Geol. E. Also required of students in Agr. Eng. Prerequisite: Math. 201. Co-requisites: Math. 202 and Phys. 104.

Statics and Friction: Study of concurrent, parallel and non-concurrent systems of both coplaner and non coplaner forces. The application of statics to the solution of fundamental engineering problems, including statical friction. Messrs. Smith, Mann, Geile, Bramer.

E. M. 212. Engineering Mechanics. 3-0-0 or 0-3-0 or 0-0-3

Required of all students in Engineering except Cer. E., Ch. E., and Geol. E. Also required of students in Agr. Eng. Prerequisites: E. M. 211 and Math. 202. Co-requisites: Phys. 104 and Math. 203.

Kinematics, centroids and moments of inertia.

Messrs. Smith, Mann, Geile, Bramer.

E. M. 213. Engineering Mechanics. 3-0-0 or 0-3-0 or 0-0-3

Required of all students in Engineering except Cer. E., Ch. E. and Geol. E. Also required of students in Agr. Eng. Prerequisites: E. M. 212 and Math. 203. Co-requisite: Phys. 104.

Kinetics: The motions of particles or rigid bodies as they are affected by the action of unbalanced forces. The Newtonian laws of motion, work and energy, power, impulse and momentum are studied and their applications to special engineering problems are illustrated.

Messrs. Smith, Mann, Geile, Bramer.

Courses for Graduates and Advanced Undergraduates

E. M. 301. Advanced Strength of Materials. 3-0-0

Elective for Engineering seniors and graduate students. Prerequisite: C. E. 220 or C. E. 222.

Detailed study of the deflections of beams, special types of beams, and statically indeterminate systems. Various methods of studying the topics will be discussed and compared. Mr. Smith.

Courses for Graduates Only

***E. M. 401. Advanced Strength of Materials.** 0-3-0

Prerequisites: C. E. 220 and C. E. 222, Math. 301.

A study of more advanced problems than taken up in C. E. 220 or C. E. 222. Energy of strain. Castigliano's Theorem, impact, Maxwell's Theorem, Mohrs circle. Mr. Smith.

***E. M. 402. Applied Elasticity.** 0-0-3

**Prerequisites: C. E. 220 or C. E. 222, Math. 301.

Stress analysis of machine parts, stress concentration, stress in curved bars, torsion and bending in prismatical bars. Stress in thick-walled cylinders, fly wheels, shrink fits. Mr. Smith.

***E. M. 403. Applied Elasticity.** 0-3-0

**Prerequisites: E. M. 301 or C. E. 313, Math. 301.

Thin bars, plates and slabs in compression, tension, or combined compression and tension. Built-up columns. Mr. Smith.

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* Not more than three of these courses will be given in any one year.
** Math. 302, 303 are desirable.

***E. M. 404. Vibration Problems.** 0-0-3

**Prerequisites: E. M. 401, Math. 301.

Fundamental vibratory systems of one degree of freedom. Balancing of rotating systems, calculation of critical speeds of rotating shafts; vibrating instruments. Systems of several degrees of freedom.

Mr. Smith.

***E. M. 405. Research in Strength of Materials.** 3-3-3

Special problems and investigations. Mr. Smith.

ENGLISH

Courses for Undergraduates

Eng. 101. Composition. 3-3-3

Required of all freshmen.

Illustrative readings; exercises in types of composition; long paper each term; collateral reading. Conferences.

Messrs. Clark, Paget, Hartley, Harrison, Wynn, Ladu, Fountain, Marshall, Wynne, Shelley, and Campbell.

Eng. 102. Composition. 0-3-3

The course repeats the work of English 101 for two terms beginning with the second term. Mr. Clark and staff.

Eng. 120. Business English. 3-0-0 or 0-3-0 or 0-0-3

Required of sophomores in Engineering. Prerequisite: Eng. 101.

Practical application of the principles of composition; types of letters; form, style, and tone of effective correspondence; intensive word study. Conferences. Mr. Wilson.

Eng. 150. Principles of Journalism. 0-3-0

Required of students intending to take other courses in Journalism. Prerequisite: Eng. 101 or equivalent.

Newspaper methods and organization; simple forms of news writing; collateral readings. Mr. Wynne.

Eng. 160. Public Speaking. 3-0-0 or 0-3-0 or 0-0-3

Required of sophomores in Engineering. Elective for other students. Prerequisite: Eng. 101 or equivalent.

Speech organization and effective delivery; extempore speeches; audience motivation and use of motivating process; acquisition of ease before audience. Messrs. Paget, Fountain, and Wynne.

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* See footnote on page 210.

** See footnote on page 210.

Eng. 162. Speech Adjustment. 0-0-2

Elective. Prerequisite: Eng. 101.

Poise and pleasing communicative habits in all group contacts; habits of speech, posture, action, and language. Mr. Paget.

Courses for Advanced Undergraduates

Eng. 220. Survey of English Literature. 3-3-3

Elective. Prerequisite: Eng. 101.

Masterpieces in their literary and historical settings. Parallel readings for reports and discussions. Messrs. Clark and Hartley.

Eng. 221. Survey of American Literature. 3-3-0

Elective. Prerequisite: Eng. 101.

Masterpieces and outstanding types in their historical settings. Parallel readings for reports and discussions. Mr. Ladu.

Eng. 223. The English Novel. 3-0-0

Elective. Prerequisite: Eng. 101.

Its English origin, structural development, and historical and social settings; works of greater novelists and essential characteristics; the novel today; the short story. (Not given 1937-38.) Mr. Hartley.

Eng. 226. Modern Drama. 0-3-0

Elective. Prerequisite: Eng. 101.

Modern plays, beginning with Ibsen; contemporary English and American productions. Mr. Ladu.

Eng. 227. The Development of the Drama. 0-0-3

Elective. Prerequisite: Eng. 101.

Origin, progress, and influence; plot, characterization, and interpretation of certain readings. Mr. Clark.

Eng. 233. Southern Writers. 3-0-0

Elective. Prerequisite: Eng. 101.

Important writers, with intensive study of Poe, W. G. Simms, Sidney Lanier, Joel Chandler Harris, George W. Cable, O. Henry, Ellen Glasgow, James Branch Cabell. Mr. Ladu.

Eng. 235. Victorian Poetry. 0-3-0

Elective. Prerequisite: Eng. 101.

Principal poets of the Victorian era; emphasis on Tennyson and Browning. Mr. Hartley.

Eng. 236. Victorian Prose. 0-0-3

Elective. Prerequisite: Eng. 101.

Readings in Landor, Macaulay, Carlyle, Ruskin, Newman, Arnold, Huxley, Pater, Stevenson, and others. (Not given 1937-38.)

Mr. Clark.

Eng. 238. The Bible as Literature. 0-0-3

Elective. Prerequisite: Eng. 101.

Selected books of the Old and New Testaments as literary and historical documents. (King James Version.) Mr. Ladu.

Eng. 254. Agricultural and Industrial News Writing. 3-0-0

Elective. Prerequisite: Eng. 101.

First part of term is given to writing news "stories"; second part, to writing and criticism of magazine and newspaper articles. Collateral readings; vocabulary study. Mr. Wynne.

Eng. 269. Parliamentary Practice. 0-2-0

Elective. Not to be counted toward the fulfillment of any requirement in English. Prerequisite: Eng. 101 or equivalent.

Rules and customs of assemblies, including organization, motions; participation in and conduct of meetings; parliamentary strategy. Mr. Paget.

Courses for Graduates and Advanced Undergraduates

Eng. 319. The Essay. 0-3-0

Elective for students in all schools. Prerequisite: Eng. 101 and 3 additional credits in English.

The writing and appreciation of literary, non-technical essays; papers and one longer essay; conferences. Mr. Harrison.

Eng. 320. The Short Story. 0-0-3

Elective for students in all schools. Prerequisite: Eng. 101 and 3 additional credits in English.

Development, structure, types, and style of the present-day short story; writing narratives of fact and of fiction; conferences. Mr. Harrison.

Eng. 324. Technical Writing I 3-0-0 or 0-3-0 or 0-0-3

(For students in Engineering).

Required of juniors or seniors in Engineering. Prerequisite: Eng. 101.

Principles of writing engineering reports, articles, and papers for public delivery. Illustrative reading. Practice in short class papers and a term paper in thesis form. Mr. Harrison.

Eng. 325. Technical Writing II 3-0-0 or 0-3-0 or 0-0-3

(For students in Agriculture and Forestry).

Required of juniors or seniors. Prerequisite: Eng. 101.

Fundamentals of style in professional writing. Models of various types: reports, articles, papers. Practice in these types; a more formal term paper. Mr. Harrison.

Eng. 330. Shakespeare. 3-0-0

Elective. Prerequisite: Eng. 101 and three additional credits in English.

An analysis of principal plays. Reports on parallel readings.

Mr. Clark.

Eng. 332. The Romantic Period. 0-3-0

Elective. Prerequisite: Eng. 101 and three additional credits in English.

Representative poems of Gray, Blake, Burns, Wordsworth, Coleridge, Scott, Southey, Byron, Shelley, and Keats. Mr. Clark.

Eng. 333. Non-Dramatic Literature of English Renaissance. 0-0-3

Elective. Prerequisite: Eng. 101 and Eng. 220 or its equivalent.

Development of humanistic spirit in the poetry of the period between 1540 and 1625. Mr. Ladu.

Eng. 334. The Eighteenth Century. 3-0-0

Elective. Prerequisite: Eng. 101 and Eng. 220 or its equivalent.

English literature of the period from 1700 to 1770; content and critical importance emphasized. (Not given 1937-38.) Mr. Ladu.

Eng. 335. Milton. 0-0-3

Elective. Prerequisite: Eng. 101 and Eng. 220 or its equivalent.

Major and minor poems, with limited treatment of prose.

Mr. Hartley.

Eng. 336. The Seventeenth Century. 0-3-0

Principal types of literature of the Restoration, preceded by few of major writers of early part of century. Mr. Hartley.

Eng. 337. Contemporary American Literature. 0-0-3

Prerequisite: Eng. 101 and three additional credits in English.

Study of leading writers of present century, and an attempt to interpret works against social background of period. Mr. Ladu.

Eng. 352. Feature and Editorial Writing. 0-3-3

Prerequisite: Eng. 150 and special permission.

Writing and criticism of feature articles; collateral readings; and vocabulary study. Mr. Wynn.

Eng. 361. Argumentation and Debate. 0-3-0

Prerequisite: Eng. 160 or equivalent.

Analysis, brief-drawing and evidence, and methods of proof and refutation; fundamentals of conviction; humanness and forcefulness; extempore speeches, debates, and discussions. Mr. Paget.

Eng. 362. Persuasion. 3-0-0

Prerequisite: Eng. 160 or equivalent.

Psychological forces, methods of conciliation, securing and holding attention, and winning response; extempore speeches and discussions. Mr. Paget.

Eng. 363. Public Address. 0-0-3

Prerequisite: Eng. 160 or equivalent.

Public addresses for special occasions, including announcement, speech of introduction, committee-room speech, personal conferences, after-dinner speech, speech at professional convention, political speech, college oration, formal sales talk. Mr. Paget.

FIELD CROPS—AGRONOMY

F. C. 101. General Field Crops. 0-3-0 or 0-0-3

Required of sophomores in Agriculture.

A standard introductory course. Emphasis is given to the economic production of field crops as used in well-balanced cropping systems. Mr. Darst, Mr. Cotner.

F. C. 105. Cotton. 3-0-0

Required of sophomores in Textile.

Lectures and recitations on history, botany, and physiology of the cotton plant; comparative study of varieties; microscopic studies of the fiber and a study of the physical properties of the fiber as it affects milling quality. Mr. Cotner.

Courses for Advanced Undergraduates

F. C. 201. Cereal Crops. 0-4-0

Prerequisite: F. C. 101. Required of juniors in Agronomy.

Advanced study of the various factors that should be considered in the economic production of corn and small grains. Mr. Darst.

F. C. 205. Legumes and Grasses. 0-0-4

Prerequisite: F. C. 101. Required of juniors in Agronomy.

Advanced study of legumes and grasses as to their adaptation and uses. Emphasis is placed on their economic use in crop and livestock farming. Mr. Darst, Mr. Cotner.

F. C. 210. Cotton Production. 0-0-3

Prerequisite: F. C. 101.

This course, or Agronomy 215, required of juniors in General Agriculture.

Lectures and recitations on history, production, adaptation, type, and varieties; cultivation, harvesting, grading, and marketing. Laboratory consists of variety studies and the classing of cotton lint. Mr. Cotner.

F. C. 215. Tobacco Production. 0-3-0

Prerequisite: F. C. 101.

This course, or Agronomy 210, required of juniors in General Agriculture.

Lectures and recitations on history, production, adaptation, type, and varieties; cultivation, harvesting, grading, and marketing. Laboratory consists of variety studies and the grading of tobacco. Mr. Cotner.

F. C. 220. Cotton Classing I. 0-3-0

Elective for juniors or seniors.

A study of the universal standards of American upland cotton for grade and staple. Factors that determine grade and how to improve them. Practice will consist of classing three to five thousand samples of North Carolina cotton. Mr. Cotner.

F. C. 225. Cotton Classing II. 0-3-0

Required of sophomores in Textile Manufacturing, Chemistry and Dyeing, and Designing.

A study of the universal standards of American upland cotton for grade and staple. Factors that determine grade and their relative value. Practice will consist of classing and stapling three to five thousand samples of cotton. Mr. Cotner.

Courses for Graduates and Advanced Undergraduates

F. C. 302. Advanced Cotton Classing. 3-3-3

Prerequisite: F. C. 101 or 105, 225, or 220.

For men who expect to become specialists in cotton classing.

This course will prepare men to take the U. S. Civil Service examination for cotton classing. Mr. Cotner.

F. C. 303. Advanced Cotton Production. 3-3-3

Prerequisite: F. C. 210.

Advanced study of cotton production problems. Mr. Cotner.

F. C. 305. Crop Breeding. 3-3-3

Special problems in inheritance and methods of investigation. A student may select a problem in any phase of plant breeding. Mr. Cotner.

F. C. 325. Seed Certification Problems. 0-3-0

Prerequisite: F. C. 101.

A study of standards of quality in field crops for certification.

Mr. Darst.

F. C. 330. Seed Judging. 3-0-0

Elective for juniors and seniors. Prerequisite: F. C. 101, Botany 101 and 102.

Advanced study of quality in crop seeds and the standards for seed certification. Arranging and judging of crop exhibits. Mr. Darst.

F. C. 332. Market Grading of Field Crops. 3-0-0

Elective for juniors and seniors. Prerequisite: F. C. 101, Botany 101, 102.

A study and application of the Federal Standard for Market grades as applied to field crops. Mr. Darst.

F. C. 334. Taxonomy of Field Crops. 3-0-0

Elective for juniors and seniors. Prerequisite: F. C. 101, Botany 101, 102.

A study of the origin, botanical classification, identification and adaptation of the commercially important crops and their varieties grown in America. Mr. Darst.

F. C. 340. Experimental Methods. 0-3-0

Elective for juniors and seniors.

A study of the development in agricultural experimental work and the experimental technique as developed to date by soil fertility, crop and crop breeding tests and demonstrations. Mr. Darst.

F. C. 345. Plant Breeding. 3-0-0

Prerequisite: Zoology 304.

Lectures, field and laboratory exercises, including methods and principles of plant breeding. Mr. Cotner.

F. C. 350. Senior Seminar. 1-1-1

Prerequisite: Twelve credit hours in Field Crops. Elective for seniors.

Scientific articles, progress reports in research and special problems of interest to agronomists will be assigned, and reviewed with discussion by students and members of the Agronomy Staff.

Mr. Darst, Mr. Cotner.

F. C. 351. Crop Research. 3-3-3

Prerequisite: Twelve credit hours in Field Crops. Elective for seniors.

A study of research and demonstrations in crops. Emphasis will be placed on experimental tests in progress. Crops for special consideration will be assigned. Mr. Darst, Mr. Cotner.

Courses for Graduates Only

F. C. 401. Crop Research. 3-3-3

Prerequisite: Eighteen credit hours in Field Crops.

A study of special problems and methods of investigation. A student may select a problem in any phase of crop production.

Mr. Darst, Mr. Cotner.

F. C. 404. Advanced Tobacco Production. 3-3-3

Prerequisite: F. C. 215 and ten additional credit hours in Field Crops.

Advanced study of tobacco production problems. Mr. Cotner.

F. C. 410. Seminar. 1-1-1

Prerequisite: Eighteen credit hours in Field Crops.

Scientific articles, progress reports in research and special problems of interest to Agronomists will be assigned, reviewed, and discussed by students and members of the Agronomy Staff. Mr. Darst, Mr. Cotner.

F. C. 415. Plant Breeding Research. 3-3-3

Prerequisite: F. C. 345.

Inheritance problems of the plants. Available during any season appropriate to the study of the particular crop. Mr. Cotner.

FORESTRY

Courses for Undergraduates

For. 101. Elementary Forestry. 1-1-1

Required of freshmen in Forestry.

Study of the nature and development of forests of the world, with special study of the forests of the United States. A correlation of all sciences required in forestry. Field trips are included. Mr. Hofmann.

For. 102. Wood Technology. 0-3-0

Required of sophomores in Forestry. Prerequisite: Bot. 101, 102, 204.

Microscopic slides of the conifers and broad-leaved trees are studied in order to determine the occurrence, form, and structure of the wood elements. Identification by means of the hand lens is especially emphasized. Mr. Slocum.

For. 103. Timber Physics. 0-0-3

Required of sophomores in Forestry. Prerequisite: For. 104.

Mechanical properties of wood. Strength tests. Methods of testing. Growth conditions that produce the best timber for specific purpose.

Mr. Slocum.

For. 104. Principles of Forestry. 3-0-0

Required of sophomores in Agriculture.

Elective for junior and senior students not in Forestry.

Forest conditions in the United States and the relation of the forest problems to other fields of industry. World forests as related to local and national problems. Mr. Slocum.

Courses for Advanced Undergraduates

For. s200. Mensuration III. 3 credits

Sophomore summer camp. Prerequisite: For. 201.

Field data for stand and yield tables, stem analysis and timber surveys.

Mr. Slocum, Mr. Miller.

For. 201, 202. Mensuration I, II. 3-3-0

Required of juniors in Forestry. Prerequisite: Math. 100 A, B, C, Bot. 207.

The measurement of timber, both standing and felled; log rules, form factors, stem analysis and growth.

Methods of making volume, growth, and stand tables. Increment and yield studies.

Development of stand and yield tables from field data. Timber surveys.

Mr. Slocum.

For. s203. Silviculture. 3 credits

Sophomore summer camp. Prerequisites: For. 202, 204.

Study of growth and development of forest stands. Establishment and measurement of sample plots. Mr. Miller, Mr. Slocum.

For. 204. Silviculture I. 3-0-0

Required of juniors in Forestry. Prerequisite: Bot. 207.

Factors affecting tree growth and distribution. Forest regions, sites, stands, and types. Silvical requirements of important tree species.

Mr. Miller.

For. 205. Silviculture II. 0-3-0

Required of juniors in Forestry. Prerequisite: For. 204.

Production, collection, extraction, storage, and planting of forest tree seeds. Mr. Slocum.

For. 206. Forest Products. 3-0-0

Required of seniors in Forestry. Prerequisite: For. 204.

A study of the source and method of obtaining derived and manufactured forest products other than lumber. Mr. Wyman.

For. 207. Forest Utilization. 0-0-3

Required of seniors in Forestry. Prerequisite: For. 206.

The problems of more complete utilization of our forest resources. Utilization of present waste in commercial practice. Mr. Wyman.

For. 208. Timber Preservation. 3-0-0

Elective for juniors in Forestry. Prerequisite: For. 102.

Lumber and timber preservatives and their use. Methods of preservation. Relation of preservation to forestry and industry. Mr. Slocum.

For. s211. Dendrology. 3 credits.

Sophomore summer camp. Prerequisite: Bot. 207.

Identification and study of trees in Piedmont, Coastal and Mountain sections of North Carolina. Mr. Slocum, Mr. Miller.

Courses for Graduates and Advanced Undergraduates

For. 301. Silviculture III. 3-0-0

Required of seniors in Forestry. Prerequisite: For. 205.

Methods of cutting to secure natural regeneration. Intermediate cuttings and their effect on the stand. Forest protection. Mr. Miller.

For. 302. Silviculture IV. 0-3-0

Required of seniors in Forestry. Prerequisite: For. 301.

The application of silvicultural methods in the forests of the United States. Mr. Miller.

For. 303. Logging. 3-0-0

Required of seniors in Forestry. Prerequisite: C. E. 103, For. 205.

The logging industry and transportation methods. Logging costs. Application of methods to specific conditions. All forest regions are covered, discussing the problems of each. Mr. Wyman.

For. 304. Lumbering. 0-3-0

Required of seniors in Forestry. Prerequisite: For. 303.

The manufacture and remanufacture, transportation and handling of lumber. Grades and grading of lumber. Mr. Wyman.

For. 305. Lumber Seasoning. 0-0-2

Required of seniors in Forestry. Prerequisite: For. 304.

Air-seasoning and kiln-drying of lumber. Kiln construction and operation. Defects and their control. Mr. Wyman.

For. 306, 307. Forest Management. 3-3-0

Required of seniors in Forestry. Prerequisite: For. 203, 205.

The principles of management of timber lands for economic returns. The normal forest is taken as the ideal. The application of regulation methods to the forest. A typical working circle as developed by the United States Forest Service is studied for each forest region.

Mr. Hofmann.

For. 308. Forest Finance. 0-3-0

Required of juniors in Forestry.

Prerequisite: For. 201, 204.

Forests as investments, interest, carrying charges, financial maturity, and relation of intermediate to final and net incomes. Forest taxation, hazards in forest investments, and forest insurance. Mr. Wyman.

For. 309. Timber Appraisal. 0-0-2

Required of seniors in Forestry. Prerequisite: For. 301, 308.

Field and office methods of valuing timber lands, with special reference to stumpage appraisal; the evaluation of damages to timber and forest property. Mr. Wyman.

For. 310. Seminar. 0-2-0

Required of seniors in Forestry.

A round-table discussion of forestry problems, trends of development in forestry matters and related sciences. Forestry Faculty.

For. 311. Methods of Research in Forestry. 0-0-3

Required of juniors in Forestry.

Methods of research used by the United States Forest Service, experiment stations, the Madison Laboratory, and State and private research organizations. Sample plot technique. Mr. Miller.

For. 312. Forest Management Problems. 0-0-3

Required of seniors in Forest Management.

The student must select some specific area on which all the phases of management may be worked out. Mr. Hofmann.

For. 313. Advanced Silviculture Problems. 3-3-3

Elective for seniors, time arranged.

Assigned problems or research experiments to be carried out to completion by the student. A written report of procedure, and results will be required. Mr. Miller.

For. 314. Advanced Logging Problems. 3-3-3

Elective for seniors; time arranged.

Assigned or selected problems in logging in specified regions. A complete written report required for credit. Mr. Wyman.

For. 315. Advanced Manufacturing. 3-3-3

Elective for seniors; time arranged.

Assigned or selected problems applying to the manufacture or remanufacture of lumber. A complete written report required for credit. Mr. Wyman.

For. 316. Advanced Utilization Problems. 3-3-3

Elective for seniors; time arranged.

Assigned or selected problems dealing with some special phase of the utilization of forest resources. A complete written report required for credit. Mr. Wyman.

For. 317. Senior Field Trip. 0-0-3

Required of seniors in Forestry. Prerequisites: For. 207, 305.

An extensive survey of logging, lumbering and utilization of forest products throughout the Southeast. A complete series of reports covering all plants and operations visited is required. Mr. Wyman.

Courses for Graduates Only

For. 401. Forest Valuation. 3-3-3

Planning, organizing, and conducting, under general supervision, an important research project in one of the fields of valuation.

Mr. Wyman.

For. 402. Problems in Research. 3-3-3

Specific forestry problems that will furnish material for a thesis.

Mr. Hofmann.

GEOLOGY

Courses for Undergraduates

Geol. 101. Earth History. 3 or 3 or 3

Elective for freshmen and sophomores in General Science. Not to be taken after Geol. 120 or 125.

Introductory course in general geology: changes in the earth, and underlying physical and life processes. Mr. Stuckey.

Geol. 120. Physical Geology. 4 or 4 or 4

Required of freshmen in Basic Agriculture, of sophomores in Forestry and Landscape Architecture, of teachers of Agriculture, and of Science teachers in Education.

Physical Geology as related to forces acting in and on the earth, and materials of the earth's crust. Mr. Stuckey, Mr. Parker.

Geol. 125. Historical Geology. 0-3-0

Prerequisite: Geol. 120 or 201.

Required of sophomores in Geological Engineering and of Science teachers in Education.

Sequence of events in development of the geology of the North American Continent. Mr. Parker.

Courses for Advanced Undergraduates

Geol. 201. Engineering Geology. 3-0-0 or 0-0-3

Required of sophomores in Agricultural, Ceramic and Geological Engineering, and of juniors in Civil, Highway, and Sanitary Engineering.

The principles of general geology and their application to engineering problems. Mr. Stuckey.

Geol. 205. Physiography. 0-0-3

Required of juniors in Geological Engineering and of History and other Social Science teachers in Education.

Evolution of the physical features of the earth and the agencies which influence their development. Mr. Stuckey.

Geol. 207. Ex. Physical Geography. 3-3-0

A. The processes and forces involved in the development of land forms.

B. The physiographic provinces of the United States and their importance. Some special study of the physical geography of North Carolina. Mr. Stuckey.

Geol. 230. Mineralogy. 3-0-0 or 0-0-3

Required of sophomores in Ceramic and Geological Engineering, and of juniors in Chemistry and Chemical Engineering.

Crystallography, and Physical and Chemical Mineralogy.
Mr. Stuckey.

Geol. 235. Advanced Mineralogy. 0-3-0

Prerequisite: Geol. 230.

Required in Geological Engineering.

A continuation of Geol. 230. Special attention to chemical and blowpipe properties of a larger group of important minerals. Mr. Stuckey.

Geol. 238. Thermal Mineralogy. 0-3-0

Required of juniors in Cer. E. Prerequisite: Geol. 230.

Special attention is given to the thermal and chemical properties of minerals. Mr. Stuckey.

Geol. 240. General Economic Geology. 0-3-0

Prerequisite: Geol. 201 or 230.

Required of seniors in Chemical Engineering.

The occurrence, origin, and production of minerals and mineral resources. Mr. Stuckey.

Geol. 250. Structural Geology. 0-3-0

Prerequisite: Geol. 120 or 201.

The arrangement and deformation of the different rock masses composing the earth's crust. Mr. Parker.

Geol. 280. Geology and Mineral Resources of North Carolina. 3-0-0

Prerequisite: Geol. 101 or 120.

Physical geography, general geology, common rocks and minerals, and mine and quarry products of the State. Mr. Stuckey.

Geol. 291s. Geology of North Carolina. Summer term, 9 credits

Prerequisite: Geol. 120.

Mines, quarries, mineral and clay deposits visited and studied; geological formations in different parts of the State; making of geological maps. Mr. Stuckey.

Courses for Graduates and Advanced Undergraduates

Geol. 301. Optical Mineralogy. 3-3-3

Prerequisite: Geol. 230, and Physics 101 or 104.

Required of seniors in Ceramic and Geological Engineering.

Theory of light as applied to the polarizing microscope, practice in determining minerals in thin sections and by immersion methods. Mr. Stuckey.

Geol. 303. Petrology. 3-0-0

Prerequisite: Geol. 120 or 201 and General Chemistry.

Required of seniors in Geological Engineering.

Materials of the earth's crust; rock-forming minerals; identification, origin, classification, and distribution of rocks; important rocks for building and ornamental purposes. Mr. Parker.

Geol. 305. Economic Geology. Non-Metals. 0-3-0

Prerequisite: Geol. 120, 230 and Chemistry 101, 103, 105.

Required of seniors in Geological Engineering.

Mode of occurrence, association, origin, and uses of non-metallic minerals. Mr. Stuckey.

Geol. 306. Economic Geology. Metals. 0-0-3

Prerequisite: Geol. 120, 230 and Chemistry 101, 103, 105.

Required of seniors in Geological Engineering.

Mode of occurrence, association, origin, and uses of leading metal-bearing minerals. Mr. Stuckey.

Geol. 310. Mining Engineering. 3-3-3

Prerequisites: Geol. 201, 230, and C. E. 207. Required of seniors in Geological Engineering.

Methods of mining both open cut and underground. Mine examination and valuation, ore dressing. Mr..... ....

Geol. 320. Geological Research. 3-3-3

Prerequisite: 9 credits in Geology.

Lectures, reading assignments, and reports. Special work in geology or petrography to meet the needs of the students. Mr. Stuckey.

HIGHWAY ENGINEERING

Courses for Advanced Undergraduates

H. E. 201. Highway Engineering I. 0-3-3

Required of juniors in C. E. and H. E.

History, economics and administration of highways; construction and maintenance of highways; field and office methods; grading and drainage. Mr. Tucker.

H. E. 204. Materials Testing Laboratory. 1-1-0 or 0-1-1

Required of seniors in C. E., H. E., Constr. E., San. E., and one term only for juniors in A. E. and Cer. E.

The testing of materials used in construction. For the students in Civil and Highway Engineering, emphasis is placed on those materials used in road construction; for the students in Architectural and Construction Engineering, emphasis is placed on those materials used in the building industry. Mr. Tucker.

Courses for Graduates and Advanced Undergraduates

H. E. 301. Highway Engineering II. 3-3-0

Required of seniors in H. E.

The economic location of highways; design and construction of high-type pavements; administration of city streets. Mr. Tucker.

H. E. 302. Transportation. 0-0-3

Required of seniors in C. E. and H. E.

The transportation systems; development and uses; operation and maintenance; control and methods of taxation. Mr. Tucker.

H. E. 303. Highway Office Practice and Design. 1-1-0

Required of seniors in H. E.

The preparation of road plans, the calculation of yardage and balancing of quantities; the design of sections; plans for drainage structures and short span bridges. Mr. Tucker.

Courses for Graduates Only

H. E. 401. Highway Research. 3-3-3

Prerequisite: Eighteen term credits in H. E.

A study of the important research projects in the field of highway transport or that of highway engineering. The first term is usually given to the preparation of a bibliography of highway research projects; the second term is devoted to the preparation of papers on the results of specified research projects; while the third term is devoted to original research and investigation. Mr. Tucker.

HISTORY AND GOVERNMENT

Courses for Undergraduates

Hist. 101. Economic History. 3-3-3

An analytical examination of the important changes in the organization of European society and the forces which produced these changes during the periods of expansion and industrialization, as a background for a general treatment of the agricultural, industrial, and commercial development of the United States. Mr. Bauerlein, Mr. Seegers.

Hist. 104. World History. 2-2-2

Required of freshmen or sophomores who do not take Military Science.

A general survey of the development of institutions and culture in the Western world. Mr. Barnhardt.

Courses for Advanced Undergraduates

Gov. 200. American Government. 3-3-3

Elective.

The organization and activities of national, state, and local governments; party politics; economic, social, and legal factors of government. Mr. Lockmiller.

Hist. 201. History of the United States. 3-3-3

Prerequisite: Hist. 101.

A chronological treatment of the political, diplomatic, and constitutional history of the United States in the light of its economic and social significance. Mr. Bauerlein.

Hist. 204. History of Modern and Contemporary Europe. 3-3-3

Elective. Prerequisite: Hist. 101, or 104.

Renaissance and reformation; agricultural, industrial, and commercial revolutions; dynastic and colonial rivalries the French Revolution and reaction following 1815; spread of democracy and nationalism; modern agriculture, industry, commerce, labor, and tariff; the expansion of Europe and the background of the World War; the war and problems of post-war Europe. Mr. Barnhardt.

Gov. 206. Modern Governments. 0-3-0

Elective. Prerequisite: Gov. 200.

A comparative study of the governments of England, France, Germany, Italy, Russia, and other countries to be selected. Mr. Barnhardt.

Courses for Graduates and Advanced Undergraduates

Gov. 300. American Political Parties. 0-3-0

Elective. Prerequisite: Gov. 200.

The origin and development of political parties in the United States, their functions, organizations, finance, campaign methods, and elections. (Not offered in 1937-38.) Mr. Lockmiller.

Hist. 303. North Carolina History. 0-0-3

Prerequisite: Hist. 101.

A general survey of the political, social, and economic history of North Carolina, with special emphasis on the nineteenth and twentieth centuries. Mr. Barnhardt.

Hist. 307. Economic and Social History of the South. 3-3-3

Elective. Prerequisite: Hist. 101.

Intensive study of the economic and social history of the Southern States. Mr. Lockmiller.

Hist. 310. American Biography. 0-3-0

Elective. Prerequisite: Hist. 101 and six hours additional History.

Representative men and women in American politics, law, religion, agriculture, industry, commerce, science, literature, and art. (Not offered in 1937-38.) Mr. Lockmiller.

Hist. 318. Economic and Social History of Agriculture. 0-0-3

Required of seniors in Agricultural Administration; elective for others. Prerequisite: Hist. 101 and six additional hours in History.

Influence of agriculture on national and world issues; the economic and social status of the farmer, with special emphasis on the United States. Mr. Seegers.

Hist. Ex. 320. History of Modern England. 3 credits

Survey of English political, social, economic, and diplomatic history, with emphasis on the last century. Mr. Barnhardt.

Hist. Ex. 321. The Latin American Republics. 3 credits

Social, economic, and political development of Latin America since 1810. Mr. Lockmiller.

Hist. Ex. 322. Contemporary History of the United States. 3 credits

Significant developments in the United States since 1914, with particular emphasis on post-war problems, foreign affairs, and the "New Deal." Mr. Lockmiller.

HORTICULTURE

Courses for Undergraduates

Hort. 101. General Horticulture. 0-0-3

Required of sophomores in Agriculture.

A course designed to give a general insight into the field of horticulture, including geographic centers of production and elements of culture of fruits, vegetables, and floricultural crops. Mr. Gardner, Mr. Randall.

Hort. 102. Plant Propagation and Nursery Practice. 3-0-3

Elective for juniors.

Study of methods and practice in seedage, cuttage, separation and division, budding and grafting. Cultural principles and practices in growing nursery stock. Mr. Randall, Mr. Weaver.

Hort. 105. Small Fruits and Grapes. 3-0-0

Prerequisite: Hort. 101.

A course in the culture and production of small fruits including strawberries, dewberries, blackberries, blueberries, raspberries, currants, and grapes. Mr. Gardner.

Courses for Advanced Undergraduates

Hort. 201. Fruit and Vegetable Judging. 2-0-0

Prerequisite: Hort. 101.

Practice in variety identification, in judging plates, collections, boxes, and commercial exhibits of fruits and vegetables.

Mr. Gardner, Mr. Randall.

Hort. 205. Pomology. 4-0-0

Prerequisite: Hort. 101.

A study of factors underlying fruit production; temperature and moisture relations, culture, fertilization, pruning, fruit setting, yield and storage. Mr. Gardner.

Hort. 206. Systematic Pomology. 2-0-0

Prerequisite: Hort. 101, 205.

Fruit varieties: Their description, identification, nomenclature, and classification; their relationships and adaptations. Judging methods and standards. Mr. Gardner.

Hort. 209. Vegetable Production. 0-0-4

Prerequisite: Hort. 101.

Location, soil preparation, fertilization, irrigation, and general culture applicable to commercial vegetable production. Mr. Randall.

Hort. 210. Commercial Floriculture. 3-0-0

Prerequisite: Hort. 101, 102.

A study of the commercial production of the principal floral crops under protection and in the open, including actual planting and care of the crops.

Mr. Randall.

Hort. 211. Vegetable Forcing. 0-3-0

Prerequisite: Hort. 101, 209.

Production and management of vegetable crops under glass. Practice in growing vegetables in forcing houses. Mr. Randall.

Hort. 212. Systematic Olericulture. 2-0-0

Prerequisite: Hort. 209.

Vegetable varieties; their description, identification, nomenclature, and classification; their relationships and adaptations. Mr. Randall.

Hort. 228. Home Floriculture. 0-0-3

Principles and methods of growing garden flowers and house plants, including varieties and their adaptability. Mr. Randall.

Courses for Graduates and Advanced Undergraduates

Hort. 301. Experimental Horticulture. 0-3-0

Prerequisite: Hort. 205, 209, 210.

A systematic study of the sources of knowledge and results of experiments in pomology, olericulture, and floriculture.

Mr. Gardner, Mr. Randall.

Hort. 304. Horticulture—Problems. 2-2-2

Elective for seniors. Prerequisite: Twelve credit hours in Horticulture.

Systematic investigation of some phase of Horticulture. Each student chooses his own subjects of study and pursues it independently, under direction of the instructor. Mr. Gardner, Mr. Randall.

Hort. 308. Senior Seminar. 1-1-1

Prerequisite: Twelve credit hours in Horticulture.

Elective for seniors.

A discussion of problems of interest to Horticulturists. Discussion topics assigned to students and members of the Horticultural staff.

Mr. Gardner.

Courses for Graduates Only

Hort. 403. Methods of Horticultural Research. 3-3-3

Prerequisite: Eighteen credit hours in Horticulture.

A study of methods and procedure, outlining problems, assembling and analyzing data, and presenting results; critical review of experiment station work. Staff.

Hort. 404. Seminar. 1-1-1

Required of graduate students only. Prerequisite: Eighteen credit hours in Horticulture.

Assignment of scientific articles of interest to horticulturists for review and discussion; student papers and research problems for discussion.

Mr. Gardner.

Hort. 405. Research. 3-5, 3-5, 3-5

Prerequisite: Eighteen credit hours in Horticulture.

Graduate students will be required to select problems for original research in pomology, olericulture, or floriculture. The work and presentation of results should be of such merit as to be worthy of publication.

Staff.

INDUSTRIAL ENGINEERING

Courses for Undergraduates

I. E. 101. Industrial Organization. 2-2-2

Required of sophomores in I. E.

Engineering methods in studies of industrial enterprises. Development, status, and trend of industries and industrial enterprises. Comparisons, characteristics, production, power, machinery, processes, labor, costs, and returns. Burdens and rewards. Mr. Shaw.

Courses for Advanced Undergraduates

I. E. 213. Engineering Economics. 3-0-0 or 0-3-0 or 0-0-3

Required of seniors in E. E. and I. E. Prerequisite: Econ. 102 or 103.

Principles of investments, costs and utility with applications to engineering practice. Choice of investments and replacements. Mr. Shaw.

I. E. 220. Management Engineering. 3-3-3

Required of juniors in I. E. Prerequisite: Econ. 103, I. E. 101.

Principles of management, administration, production, and sales. Executive control, industrial relations, incentives, normal capacities, standard costs, and pricing. Budgeting and planning. Profits, progress and prosperity in relation to the general welfare. Mr. Shaw.

I. E. 222. The Electrical Industry. 0-3-0

Required of seniors in E. E. and I. E. Prerequisite: I. E. 213.

The operation, practices, management, and performance of electric light and power companies and other electrical industries. Factors, indexes, and comparisons. Services and prices. Cost analyses and predeterminations. Mr. Shaw.

Courses for Graduates and Advanced Undergraduates

I. E. 312. Engineering Economics Advanced. 0-3-3

Elective. Prerequisite: I. E. 213.

Comprehensive study of the application of economics to the practice of engineering. Mr. Shaw.

I. E. 320. Public Utilities. 3-3-3

Elective for seniors in engineering. Prerequisite: Econ. 102 or 103.

Intensive study of the regulation of public utilities. Services, rates, rate bases, and returns. Commission laws and procedure. Leading cases. Current problems. Mr. Shaw.

I. E. 330. Industrial Engineering Problems. 0-3-3

Required of seniors in I. E. Prerequisite: or concurrent: I. E. 220.

Detailed study of problems of moment in this rapidly developing field. Mr. Shaw.

I. E. 331. Investigation and Report. 0-0-3

Required of seniors in I. E. Prerequisite: Senior standing in I. E.

Original investigation of a selected and approved problem. Mr. Shaw.

Courses for Graduates Only

I. E. 410. Industrial Engineering Research. 3-3-3

Prerequisite: graduation in Engineering.

Investigation of problems of major importance in the field of Industrial Engineering. Mr. Shaw.

LANDSCAPE ARCHITECTURE

Courses for Undergraduates

L. A. 106. Arboriculture. 1-1-2

Required of freshmen in Landscape Architecture.

Culture of plant materials, their planting, transplanting, training, fertilization, and protection from pests, tree surgery, and lawn making. Messrs. Pillsbury and Weaver.

Courses for Advanced Undergraduates

L. A. 203. Plant Materials. 0-2-0

Elective for juniors.

Ornamental plants, their characteristics of use in planting design for home, school, and church grounds, and farmstead landscapes. Mr. Randall.

L. A. 204. Landscape Gardening. 0-0-3

Elective for seniors. Prerequisite: L. A. 203.

Landscape and planting design applied to the improvement of home, school, church, and community grounds, and the farmstead. Practice in making measured surveys, mapping, and designing improvements and planting. Mr. Pillsbury.

L. A. 216. Plant Materials: Woody Plants. 2-2-2

Required of sophomores in Landscape Architecture. Prerequisite: Bot. 204.

Trees, shrubs and vines, their distribution, form and habits of growth, size, texture, color, and other characteristics determining use in planting design. Mr. Randall.

L. A. 217. Plant Materials: Annual and Herbaceous Plants. 0-0-2

Required of juniors in Landscape Architecture. Prerequisite: Bot. 204.

Herbaceous and annual plants, their height, habits of growth, texture, season, color, and other characteristics determining use in planting design. Mr. Randall.

L. A. 218. Theory of Landscape Design. 0-3-3

Required of sophomores in Landscape Architecture.

Introduction to the study of landscape design; its theoretical basis; the meaning of taste; historic styles; elements, and landscape composition; planting design; and analyses of typical problems in landscape design. Mr. Pillsbury.

L. A. 219. History of Landscape Design. 3-3-0

Required of juniors in Landscape Architecture.

History of the art of landscape architecture from the ages of antiquity to modern times. Sketching from illustrations of design in important periods. Mr. Pillsbury.

L. A. 220. Landscape Design I. 4-4-4

Required of juniors in Landscape Architecture. Prerequisite: L. A. 218.

Problems in presentation, and in consecutive design of small properties, gardens, and other special areas, and suburban estates. Mr. Pillsbury.

L. A. 221. Planting Design. 3-3-3

Required of seniors in Landscape Architecture. Prerequisite: L. A. 216, 217.

Problems in composition with plant materials, presentation, the preparation of planting plans, and cost data. Mr. Pillsbury.

L. A. 222. Landscape Design II. 4-4-4

Required of seniors in Landscape Architecture. Prerequisite: L. A. 220.

Problems in presentation, and in the design of small parks, and other public grounds, and institutional groups. Mr. Pillsbury.

L. A. 223. City Problems. 0-3-0

Required of seniors in Landscape Architecture.

Origins and types of urban communities; modern city and town planning; legal, economic, social, and aesthetic phases and their interrelationships; fundamental data required; methods of planning and financing; zoning, city and regional planning legislation.

Mr. Pillsbury.

L. A. 224. Suburban Design. 0-4-0

Prerequisite: L. A. 220, 223.

The subdivision of land as related to suburban development and urban growth. Mr. Pillsbury.

L. A. 225. Landscape Construction. 2-2-2

Required of seniors in Landscape Architecture. Prerequisite: C. E. 207, 208.

Problems in design of ground surface, walks, and drives; preparation of plans for grading and drainage; estimates of materials and costs; and methods of execution of landscape designs. Mr. Pillsbury.

L. A. 226. Office Practice. 0-0-1

Prerequisite: L. A. 225.

Arrangement of equipment, supplies, data, illustrative and other material in landscape offices; methods of professional procedure; and professional ethics.

LIBRARY METHODS

L. M. 300. Use of the Library. 0-3-0 or 0-0-3

Elective for students in all schools. Prerequisite: junior standing.

Instruction by lectures, assigned readings, and problems in the use of the card catalog, reference books and library methods in general. The course is planned to make the student self-directing in locating information and to demonstrate the value of the library and books for the student in college and after graduation. Mr. Kellam.

MATHEMATICS

Courses for Undergraduates

***Math. 100 a-b-c. Mathematical Analysis.** 3-3-3

Math. 100-a. Fall term (Algebra).

Review of elementary topics, such as Factoring, Fractions, Simple Equations, Exponents, and Radicals. Topics then taken up are Quadratic Equations, Solution of Higher Degree Equations, Simultaneous Quadratic Equations, Logarithms, the Binomial Theorem, Arithmetic and Geometric Progressions, Permutations, Combinations, and the Elementary Theory of Probability.

* This course will be repeated the following terms.

Math. 100-b. Winter term (Trigonometry).

The study of the Trigonometric Functions with their applications to the solution of the right and oblique triangles, with numerous problems. Also a brief study of Trigonometric Equations and Identities and Inverse Functions. Practical Mensurations of Solids is taken up.

Math. 100-c. Spring term (Mathematics of Finance).

The principal topics are Simple and Compound Interest, Annuities, Sinking Funds and Amortization, and the Valuation of Bonds, and other applications. Staff.

***Math. 101. Algebra.** 6-0-0

Required of freshmen in the Schools of Engineering and Textile, and in the departments of Industrial Management, Industrial Arts, and Landscape Architecture.

This course includes quadratic equations, the progressions, the binomial theorem, permutations and combinations, logarithms, the general theory of equations, and the solution of higher equations. Staff.

***Math. 102. Trigonometry.** 0-6-0

Required of freshmen in the Schools of Engineering and Textile, and in the departments of Industrial Management, Industrial Arts, and Landscape Architecture.

The trigonometric functions, derivation of formulae, the solution of plane and spherical triangles, with practical applications. Staff.

***Math. 103. Analytical Geometry.** 0-0-6

Required of freshmen in the School of Engineering and in the departments of Industrial Management, Industrial Arts, and Landscape Architecture. Prerequisite: Math. 101, 102.

Loci of equations, the straight line, circle, parabola, ellipse, hyperbola, the general equation of the second degree, polar coördinates, transcendental curves, parametric equations, coördinates in space, planes and surfaces. Staff.

Courses for Advanced Undergraduates

***Math. 201. Differential Calculus.** 4-0-0

Required of sophomores in Engineering. Prerequisite: Math. 103.

An elementary course in the fundamental principles of the Calculus, including the formulae for differentiation, with applications to Geometry and to problems in rates, maxima and minima, curve tracing, and curvature. Staff.

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* This course will be repeated the following terms.

***Math. 202. Integral Calculus I.** 0-4-0

Required of all sophomores in Engineering. Prerequisite: Math. 201.

Methods of integration, and the study of the definite integral, with applications to problems in areas, volumes, surfaces, and lengths of arcs. Staff.

***Math. 203. Integral Calculus II.** 0-0-4

Required of sophomores in Engineering. Prerequisite: Math. 202.

A continuation of Integral Calculus I: the calculation of centroids, radii of gyration and moments of intertia; problems in work and liquid pressure; double and triple integrals, infinite series, hyperbolic functions, and the elements of ordinary differential equations. Staff.

Courses for Graduates and Advanced Undergraduates

Math. 301. Differential Equations. 3-0-0

Required of juniors in Electrical Engineering and elective for others. Prerequisite: Math. 203.

A short course to include the solutions of equations which occur in scientific work and engineering problems. Mr. Fisher.

Math. 302. Advanced Calculus for Engineers, I. 0-3-0

Elective. Prerequisite: Math. 301.

Text: Wood's Advanced Calculus.

Functions, power series, partial differentiation, implicit functions, maxima and minima of functions of two variables, the definite integral. Mr. Levine.

Math. 303. Advanced Calculus for Engineers, II. 0-0-3

A continuation of Math. 302.

Special integrals, line integrals, partial differential equations, functions of a complex variable, elliptic integrals. Mr. Levine.

Math. 311. Graphical and Numerical Methods. 3-0-0

Elective. Prerequisite: Math. 203.

Graphical and numerical approximate methods in differentiation, integration, and the solution of both ordinary and differential equations. Theory of least squares and empirical curve fitting. Numerous examples in the fields of physics, electricity, mechanics, and engineering will be solved. Mr. Cell.

Math. 312. Vector Analysis I. 0-3-0

Elective. Prerequisite: Math. 203.

A study of the different vector products. The calculus of vectors with applications to geometry and mechanics. Mr. Clarkson.

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* See footnote on page 234.

Math. 313. Vector Analysis II. 0-0-3

Elective. A continuation of Math. 312. Mr. Clarkson.

Math. 321. Advanced Analytical Geometry. 3-0-0

Elective. Prerequisite: Math. 203.

The elements of higher plane curves and the geometry of space.

Mr. Bullock.

Math. 322. Theory of Equations. 0-3-0

Elective. Prerequisite: Math. 203.

The usual topics in the theory of equations, the solution of higher equations, exponential equations, logarithmic equations, and determinants.

Mr. Mumford.

Math. 323. Series. 0-0-3

Elective. Prerequisite: Math. 203.

Fourier series, related series and functions, with applications to physics and engineering. Mr. Levine.

Math. 401. Applied Mathematics I. 3-0-0

Elective. For graduate students only. Prerequisite: Math. 303, or the consent of the instructor.

The course will be arranged to fit the engineering interests of the students enrolled.

Catenary cables, straight and curved beam problems, theory of curve fitting, probability and applications, problems in the theory of elasticity, ballistics, vibration theory and problems, electrical circuits, Heaviside operational calculus and applications to electrical engineering and to other engineering problems, calculus of finite differences and applications.

Mr. Cell.

Math. 402. Applied Mathematics II. 0-3-0

Elective. For graduate students only. Prerequisite: Math. 401.

A continuation of Math. 401. Mr. Cell.

Math. 403. Applied Mathematics III. 0-0-3

Elective. For graduate students only. Prerequisite: Math. 402.

A continuation of Math. 402. Mr. Cell.

MECHANICAL ENGINEERING

Courses for Undergraduates

M. E. 101. Engineering Drawing I. 2-2-2

Required of freshmen in Textiles.

Drawing-board work covering lettering, projections, sections, pictorial drawings, working drawings as related to textile machinery, tracing, and blueprinting.

Messrs. Briggs, Feltner, Johnson, Turner, and Satterfield.

M. E. 102. Engineering Drawing II. 3-3-0

Required of freshmen in Engineering, Agricultural Engineering, Teachers of Industrial Arts, and Landscape Architecture.

Drawing-board work covering lettering, projections, sections, revolution, pictorial drawings, intersection, development, working drawings, tracing, and blue-printing.

Messrs. Briggs, Feltner, Johnson, Turner, Satterfield, and Denmark.

M. E. 103. Descriptive Geometry. 0-0-3

Required of freshmen in Engineering, Agricultural Engineering, Teachers of Industrial Arts, and Landscape Architecture.

Prerequisite: M. E. 102.

Representation of geometrical magnitudes by means of points, lines, planes, and solids, and the solutions of problems.

Messrs. Briggs, Feltner, Johnson, Turner, Satterfield, and Denmark.

M. E. 104. Shopwork. 1-1-1

Required of sophomores in Chemical Engineering and freshmen in Textiles.

Use of bench tools, making cabinet joints, operation and care of woodworking machinery. Correct methods of staining, varnishing, filling, and gluing various kinds of wood. The forging of iron and steel. Instruction and practice in molding and core making. Cupola practice.

Messrs. Allen, Olivo, Rowland, and Wheeler.

M. E. 105. Shopwork. 2 or 2 or 2

Required of sophomores in Mechanical Engineering and in Industrial Engineering.

Deal with elementary joinery, finishing, theory of dry-kilning, wood turning. Lectures, demonstrations, and practice in hand work and machine methods. Typical patterns and core boxes are constructed such as solid, split, and loose piece.

Mr. Rowland.

M. E. 106. Shopwork. 2 or 2 or 2

Required of sophomores in Industrial and Mechanical Engineering.

Lectures, demonstrations, and practice in molding and core making, furnace operations, melting and casting of ferrous and non-ferrous metals and their alloys. Instruction and practice in the production and maileable castings, and heat treatment of castings. Mr. Olivo.

M. E. 107. Shopwork. 2 or 2 or 2

Required of sophomores in Industrial and Mechanical Engineering.

A study of the principles and practice as applied to the forging of wrought iron and steel. Lectures, demonstrations, and practice in forge welding. Tool making and heat treatment. Mr. Allen.

M. E. 108. Woodworking. 3-0-0

Required of sophomores in Architectural Engineering.

Includes elementary joinery, cabinet joints, reading blue prints, and wood turning. Theory of dry-kilning and wood finishing. Lectures, demonstrations, and practice in hand and machine methods.

Mr. Rowland.

M. E. 108a. Metal Work 3 or 3 or 3

Required of sophomores in Civil, Highway, Sanitary, and Electrical Engineering.

A study of the principles and practices as applied to the forging of wrought iron and steel. Lectures, demonstrations, and practice in forge welding. Tool making and heat treatment.

Mr. Allen.

M. E. 109. Metallurgy. 2-2-2

Required of sophomores in Mechanical Engineering.

Prerequisite: Chem. 101.

The study of metals and alloys; smelting, refining, shaping, and heat treating. Crystallography of metals, their properties and commercial applications. Mr. Selkinghaus.

M. E. 110. Mechanical Drawing. 2-2-2

Six (6) credits required of sophomores in Mechanical Engineering, and four (4) credits required of juniors in Ceramic Engineering and Geological Engineering.

Prerequisite: M. E. 102, M. E. 103.

Drawing-board work covering machine fastenings, pipe fittings, cam design, technical sketching, applied descriptive geometry, and working drawings; tracing and blue-printing.

Messrs. Briggs, Fornes, Parkinson, and Satterfield.

M. E. 112. Heat Engineering I. 2-2-2

Elective in Textile Manufacturing.

Prerequisite: Phys. 103 and Math. 103.

Nature and measurement of heat, work, and power. Study of fuels and combustion, steam and steam boilers, and boiler-room auxiliaries. Elementary thermodynamics of the steam cycle.

Mr. Bridges.

M. E. 114. Mechanical Engineering Laboratory I. 1-1-0

Required of juniors in Industrial Management and seniors in Chemical Engineering.

Calibration of thermometers and gauges, use of planimeters and indicators; coal and gas analyses; tests of lubricating oils. Testing of steam engines, turbines, and internal combustion engines.

Messrs. Bridges, Rice, Selkinghaus, and Turner.

M. E. 115. Heat Engineering II. 0-0-3

Required of juniors in Civil and Highway Engineering.

Nature and measurement of heat, work, and power. Study of fuels and combustion, steam and steam boilers, and boiler-room auxiliaries.

Messrs. Bridges, Selkinghaus, and Turner.

Courses for Advanced Undergraduates

M. E. 201. Heat Engineering III. 3-3-0

Required of juniors in Ceramic and seniors in Chemical Engineering.

Prerequisite: Phys. 104, Math. 203, M. E. 102.

Nature and measurement of heat, work, and power. Study of fuels and combustion, steam and steam boilers, and boiler-room auxiliaries. Elementary thermodynamics of the steam and gas engine cycles.

Mr. Selkinghaus, Mr. Turner.

M. E. 202. Mechanical Engineering Laboratory II. 1-1-1

Required of juniors in Ceramic, Electrical, and Mechanical Engineering. Concurrent with M. E. 204, M. E. 207.

The work consists of: calibration of pressure, temperature, speed and power measuring instruments; the study of steam generating and power generating equipment; the testing of fuels, lubricants, and power machinery. Messrs. Bridges, Selkinghaus, Rice, and Turner.

M. E. 203. Kinematics. 3-3-3

Required of juniors in Mechanical Engineering.

Prerequisite: M. E. 102, 103, and M. E. 110.

A study of the science of the motion of machine parts, or the geometry of machinery, with emphasis on belts, pulleys, cams, gears, chain drives, shafts, and links. Mr. Fornes.

M. E. 204. Heat Engineering IV. 3-3-3

Required of juniors in Electrical Engineering.

Prerequisite: Phys. 104, Math. 203, and M. E. 110.

Nature and measurements of heat work, and power. Study of fuels, and combustion, steam and steam boilers, and boiler-room auxiliaries. Elementary thermodynamics of the steam and gas engine cycles.

Messrs. Bridges and Satterfield.

M. E. 205. Furniture Designs and Rod-Making. 3-3-3

Required of juniors in M. E. (Furniture Option).

Prerequisite: M. E. 105, 106, and 107.

Principles of elementary freehand design. Methods of dry-kilning, finishing, filling and staining, and rod-making. Mr. Wheeler.

M. E. 206. Machine Design. 3-3-3

Required of seniors in Mechanical Engineering.

Prerequisite: M. E. 109, 203, E. M. 211, 212, 213, C. E. 201, 222.

Application of mechanics, kinematics, strength of materials, and metallurgy to the design of machinery. Determination of proper materials, shape, size, strength, motion, and relationship of various machine parts.
Mr. Fornes.

M. E. 207. Engineering Thermodynamics. 3-3-3

Required of juniors in M. E. and I. E.

Prerequisite: Phys. 104, Math. 203, and M. E. 110.

The study of heat as an engineering media, using the energy equation to solve problems dealing with gases, vapors and mixtures. The steam table is studied in detail, with special application to the design of nozzles, steam power plants, engines and turbines. Combustion, refrigeration, compressed air, and internal combustion engine cycles are also studied.
Mr. Vaughan, Mr. Rice.

M. E. 211. Introduction to Aeronautics. 0-0-3

Required of juniors in M. E., Aeronautical Option.
A study of the airplane and simple aerodynamics. Mr. Parkinson.

M. E. 215. Furniture Design and Construction. 2-4-5

Required of seniors in Mechanical Engineering (Furniture Option).

Prerequisite: M. E. 205.

Theory and practice in construction and finishing. Factory processes and layout for quantity production. Mr. Wheeler.

M. E. 218. Machine Shop I. 1-1-0

Required of juniors in Chemical Engineering.

Prerequisite: M. E. 104.

Instruction is given in chipping, filing, scraping, and babbitting. General machine work, including straight and taper turning, drilling, shaper work, and gear cutting. Mr. Wheeler.

M. E. 219. Machine Shop II. 1-1-1

Required of juniors in Mechanical Engineering and Textile Manufacturing.

Prerequisite: M. E. 104 or M. E. 105, 106 and 107.

Given by lectures and demonstrations. Includes laying out work, grinding tools, chipping, drilling, tapping, babbitting bearings and scraping. Machine work, including centering, straight and taper turning, chucking, screw cutting, shaper work, planer work and index milling, and gear cutting. Mr. Wheeler.

M. E. 220. Machine Shop III. 2-2-2

Required of juniors in Industrial Engineering.

Prerequisite: M. E. 105, 106, 107.

Instruction is given through lectures, demonstrations and required exercises. The exercises will include chipping, tapping, drilling and tool grinding. Machine tool work will include straight and taper turning, screw-cutting, shaper and planer work, index milling and gear cutting. Emphasis placed upon economic production. Mr. Wheeler.

M. E. 251. Metal Shop. 3-3-0

Required in Industrial Arts. Prerequisite: Ed. 106.

Use of hand and machine tools in problems for Secondary Schools.

Mr. Wheeler.

Courses for Graduates and Advanced Undergraduates

M. E. 301. Mechanical Engineering Laboratory III. 1-1-1

Required of seniors in Mechanical Engineering.

Prerequisite: M. E. 202, 204.

Testing of materials, efficiency, and economy runs on gasoline, oil, and steam engines, steam turbine and fans. Boiler and steam pump tests. Hydraulic testing.

Messrs. Bridges, Rice, Selkinghaus, and Turner.

M. E. 303. Heating and Air-Conditioning. 0-3-0

Required of seniors in Mechanical Engineering and Industrial Management.

Prerequisite: M. E. 202, 204.

Principles of heating and ventilation. Hot air, steam, and hot water heating systems; air conditioning. Mr. Vaughan.

M. E. 304. Refrigeration. 0-0-3

Required of seniors in Mechanical Engineering.

Prerequisite: M. E. 202, 204.

Theory of refrigeration; types of ice-making and refrigerating machinery. Special emphasis upon cooling for air conditioning. Installation, management, and cost of operation. Mr. Vaughan.

M. E. 305. Power Plants. 3-3-3

Required of seniors in Mechanical Engineering.

Prerequisite: M. E. 202, 207.

A critical study of fuels and combustion, heat balance, steam boilers, prime movers and auxiliaries as applied to power generation.

Mr. Vaughan.

M. E. 306. Hydraulic Machinery. 0-0-3

Required of seniors in Electrical Engineering.

Prerequisite: C. E. 205.

Design and tests of hydraulic motors and pumps, including study of their theoretical and actual efficiencies. Naval Hydro-Mechanics, Laboratory Experiment. Mr. Riddick.

M. E. 310. Aircraft Engines. 3-3-3

Required of seniors taking Aeronautical Option in Mechanical Engineering.

Prerequisite: M. E. 204.

Thermal and mechanical characteristics of high-speed internal combustion engines; operation, performance, and design. Mr. Rice.

M. E. 311. Aeronautical Laboratory. 1-1-1

Required of seniors taking Aeronautical Option in Mechanical Engineering.

Prerequisite: M. E. 202.

Experiments with aircraft engines and auxiliaries. Wind-tunnel tests on airfoils and models. Rigging of airplanes.

Mr. Rice, Mr. Parkinson.

M. E. 312. Airplane Design. 3-3-3

Required of seniors taking Aeronautical Option in Mechanical Engineering.

Prerequisite: C. E. 200 and M. E. 203.

A study of the design and construction of aircraft. Mr. Parkinson.

M. E. 313. Aerodynamics. 3-3-3

Required of seniors taking Aeronautical Option in Mechanical Engineering.

Prerequisite: Phys. 104, Math. 203, and C. E. 201.

A study of forces affecting the airplane under the various conditions of flight. Mr. Parkinson.

M. E. 320. Metallography. 3-3-3

Prerequisite: Metallurgy and Engineering Physics.

Advanced crystallography of metals, experimental determination of properties. Microscopical analysis, photoelasticity. Mr. Selkinghaus.

M. E. 321. Experimental Engineering. 3 or 3 or 3

Prerequisite: M. E. 202, 207.

An engineering seminar associated with advanced heat-power and general experimental work, terminating with a written report on a specific project. Messrs. Vaughan, Wheeler, and Rice.

Courses for Graduates Only

***M. E. 401. Power Plant Design.** 3-3-3

Prerequisite: M. E. 301, 305.

The design of a plant to fulfill conditions obtained by investigation and research; specifications for design and installation. Mr. Vaughan.

***M. E. 402. Design of Heating and Ventilating System.** 3-3-3

Prerequisite: M. E. 301, 305.

The study and the design of a heating system for specific conditions; specifications for installation and performance tests of heating equipment. Mr. Vaughan.

M. E. 403. Advanced Aerodynamics. 3-3-3

Prerequisite: M. E. 313.

Wind tunnel research. First term: a study of tests performed. Second term: a series of experiments. Third term: the compilation and interpretation of the results. Mr. Parkinson.

M. E. 404. Aerodynamic Research. 3-3-3

Prerequisite: M. E. 312.

Research and thesis in connection with M. E. 403. Mr. Parkinson.

M. E. 405. Mechanical Engineering Research. 3-3-3

Prerequisite: M. E. 301, 305.

Research and thesis in connection with M. E. 401 and M. E. 402. Mr. Vaughan.

MILITARY SCIENCE AND TACTICS

Mil. 101. Military Science I. 2-2-2

This, the first-year basic course, is required of all physically fit freshmen.

The National Defense Act and the R. O. T. C., Military Courtesy and Discipline, Military Hygiene and First Aid, Leadership, Rifle Marksmanship, Map Reading, Military Organization, Current International Situation, Military History and Policy, and Obligations of Citizenship.

Mil. 102. Military Science II. 2-2-2

This, the second-year basic course, is required of all physically fit sophomores who have completed Military Science 101.

Leadership, Musketry, Automatic Rifle, Scouting and Patrolling, Combat Principles of the Rifle Squad and Section; Interior Guard Duty and Military History.

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* Only one of these courses to be offered during any college year.

Mil. 103. Military Science III. 3-3-3

This, the first-year advanced course, is elective for selected juniors. Prerequisite: Mil. 102.

Aerial Photograph Reading, Leadership, Machine Gun, 37 MM. Gun, Three-inch Trench Mortar, Combat Principles of the Rifle Section and Rifle Platoon, Pistol, Supply and Mess Management, Care of Animals and Stable Management, Property and Funds, and Field Fortifications.

Mil. 104. Military Science IV. 3-3-3

This, the second-year advanced course, is required of all seniors who have completed the first-year advanced course. Prerequisite: Mil. 103.

Military Law and Officers Reserve Corps Regulations, Military History and Policy, Administration of the Rifle Company, Field Engineering, Leadership, Combat Principles of the Rifle Company, Machine Gun Company, and Howitzer Platoon, Tanks and Mechanization, Defense Against Chemical Warfare, Combat Intelligence, and Signal Communications.

Full credit will be given for work at other institutions maintaining a *Senior* unit of the Reserve Officers Training Corps as shown by the students' record, Form 131 A. G. O., kept by the Professor of Military Science and Tactics.

MODERN LANGUAGES

FRENCH

Courses for Undergraduates

M. L. 101. Elementary French. 3-3-3

Elective. Reading and translations with elements of grammar; pronunciation, diction, and oral practice. Mr. Ballenger.

Courses for Advanced Undergraduates

M. L. 201. French Prose. 3-3-0

Elective. Prerequisite: M. L. 101, or equivalent.*

General survey of French literature and culture, with emphasis on Hugo, Dumas, Daudet, and others. Translations, parallel readings and reports. Mr. Ballenger.

M. L. 202. Introductory Scientific French. 0-0-3

Elective. Prerequisite: M. L. 201.

Reading and translation with the study of scientific construction; initial work in the acquisition of a scientific vocabulary stressed.

Mr. Ballenger.

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* Two years of High School work will be considered the equivalent of M. L. 101, 102 or 108.

Courses for Graduates and Advanced Undergraduates

**M. L. 301. Scientific French. 3-3-3

Elective. Prerequisite: M. L. 201.

Extensive reading in scientific literature; scientific terminology, and acquisition of a scientific vocabulary. Parallel readings, reports, and conferences. Mr. Hinkle.

M. L. 313. French Prose Masterpieces. 3-3-3

Elective. Prerequisite: M. L. 201.

Translation of French for purposes of investigation. Parallel readings, reports, and conferences. Alternates with M. L. 301. Mr. Hinkle.

GERMAN

Courses for Undergraduates

M. L. 102. Elementary German. 3-3-3

Elective.

Reading and translations with elements of grammar; pronunciation, diction, and oral practice. Mr. Hinkle.

Courses for Advanced Undergraduates

M. L. 205. German Prose. 3-3-0

Elective. Prerequisite: M. L. 102, or equivalent.*

General survey of German literature and culture, with emphasis on translations, parallel readings, and reports. Mr. Hinkle.

M. L. 207. Introductory Scientific German. 0-0-3

Elective. Prerequisite: M. L. 205.

Translations with study of scientific construction, and the acquisition of a scientific vocabulary. Mr. Hinkle.

Courses for Graduates and Advanced Undergraduates

M. L. 304. Advanced Scientific German. 3-3-3

Elective. Prerequisite: M. L. 207.

This is an extensive reading course in advanced scientific literature. It is designed and conducted primarily to meet the needs of students who are majoring in Science. Mr. Hinkle.

M. L. 314. German Prose Masterpieces. 3-3-3

Elective. Prerequisite: M. L. 205.

Translation of German for purposes of investigation. Parallel readings, reports, and conferences. Alternates with M. L. 304. Mr. Hinkle.

** Students taking this course are given the opportunity of working a project in connection with the Translation Service of the department. When this project is satisfactorily completed, it is bound and placed in the College Library. This procedure is recommended as a method of preparation for the acquisition of a reading knowledge of the respective language.

SPANISH

Courses for Undergraduates

M. L. 103. Elementary Spanish. 3-3-3

Elective. Reading and translations with elements of grammar; pronunciation, diction, and oral practice. Mr. Ballenger.

Courses for Advanced Undergraduates

M. L. 209. Spanish Prose. 3-3-3

Elective. Prerequisite: M. L. 103, or equivalent.*

General survey of Spanish literature and culture, with emphasis on modern Spanish classics. Translations, parallel readings, and reports. Mr. Ballenger.

****M. L. 206. Industrial and Scientific Spanish.** 3-3-3

Elective. Prerequisite: M. L. 209.

This is an extensive reading course in industrial and scientific literature. A study of technical expressions is made with a view to the acquisition of a practical vocabulary. Conferences, consultations, and reports. Mr. Ballenger.

Courses for Graduates and Advanced Undergraduates

M. L. 315. Spanish Prose Masterpieces. 3-3-3

Elective. Prerequisite: M. L. 209.

Translation for developing facility in Spanish. Parallel readings, reports, and conferences. Alternates with M. L. 310. Mr. Hinkle.

General Courses

M. L. 310. French, German, and Spanish Civilization. 3-3-3

Elective. Prerequisite: two years French, German, or Spanish.

Development of French, German, and Spanish civilization, culture, manners and customs. Parallel readings, reports, and conferences. Mr. Hinkle.

M. L. 316. The Development of Language. 3-3-3

Prerequisite: M. L. 201, 205, 209, or equivalent.

The various phases of linguistic growth, with the object of providing a basis for intelligent language study. Problems as to the origin of language, linguistic change, grammatical categories, dialects, standard language, word order, inflection, isolation, agglutination, etymology, and other linguistic processes. Mr. Hinkle.

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* Two years of High School work will be considered the equivalent of M. L. 101, 102 or 103.

** Students taking this course are given the opportunity of working a project in connection with the Translation Service of the Department. When this project is satisfactorily completed, it is bound and placed in the College Library. This procedure is recommended as a method of preparation for the acquisition of a reading knowledge of the respective language.

M. L. 317. Masterpieces of Foreign Literature. 3-3-3

Prerequisite: M. L. 316, or equivalent.

A study of outstanding literary productions in each of the various types of literature with lectures on the cultural background out of which they have developed. Especial attention given to the literary contributions of France, Germany, Italy, and Spain. Mr. Hinkle.

PHYSICAL EDUCATION

Courses for Undergraduates

P. E. 101. Fundamental Activities and Hygiene. 1-1-1

Required of all freshmen except those excused upon the recommendation of the college physician.

Individual health and physical efficiency of each student, based on standard athletic, gymnastic, and efficiency tests. Lectures on personal hygiene required in one term only. Mr. Miller and staff.

P. E. 102. Sport Activities. 1-1-1

Required of all sophomores except those excused upon the recommendation of the college physician. Prerequisite: P. E. 101.

Election permitted in popular sports for healthful exercise and a fair degree of skill in them. Mr. Miller and staff.

P. E. 103. Corrective Activities. 1-1-1

Required of all freshmen excused from P. E. 101.

Special exercises for those students who cannot take work in regular course because of a physical handicap. Mr. Miller and staff.

P. E. 104. Corrective Activities. 1-1-1

Required of all sophomores excused from P. E. 102.

Special exercises given those students who cannot take the regular course because of physical handicap. Mr. Miller and staff.

P. E. 110. Hygiene. 0-0-3

Elective in Education only. Prerequisite: Zool. 103.

Fundamentals of personal health and the habits based thereon. Attention to food and feeding, exercise and rest, brain and nervous system, special senses, reproductive system, bathing and elimination.

Mr. Warren.

P. E. 111. Games and Organized Play. 2-0-0

Elective in Education only. Prerequisite: P. E. 101.

Games suitable for the playground, elementary and secondary schools, ranging from the simplest primary school games to organized games, such as volleyball, playground baseball. Mr. Miller.

P. E. 112. Gymnastics—Theory and Practice. 0-2-0

Elective in Education only. Prerequisite: P. E. 101.

Methods and practice of Swedish and German systems of calisthenics, marching, heavy and light apparatus. Organization and presentation of material. Mr. Miller.

P. E. 113. Track and Field—Theory and Practice. 0-0-3

Elective in Education only. Prerequisite: P. E. 101.

Organization, theory, and practice of coaching track and field athletics. Two classroom periods and three field-periods required per week.
Mr. Sermon.

P. E. 114. Football—Theory and Practice. 3-0-0

Elective in Education only. Prerequisite: P. E. 102.

Organization, theory, and practice football coaching. Two class-room periods and three field-periods required per week. Mr. Newton.

P. E. 115. Basketball—Theory and Practice. 0-3-0

Elective in Education only. Prerequisite: P. E. 102.

Organization, theory, and practice of basketball coaching. Two class-room periods and three field-periods required per week. Mr. Sermon.

P. E. 116. Baseball—Theory and Practice. 0-0-3

Elective in Education only. Prerequisite: P. E. 102.

Organization, theory, and practice of baseball coaching. Two class-room periods and three field-periods required per week. Mr. Doak.

P. E. 117. Junior Practice Teaching. 1-1-1

Elective in Education only. Prerequisite: P. E. 111, 112, 113.

Students will do supervised teaching in courses P. E. 101 and P. E. 102.
Mr. Miller.

P. E. 118. History and Principles of Physical Education. 0-2-0

Elective in Education only. Prerequisite: senior standing.

An historical survey of physical education; the conditions that influence physical activities among people. The relationship of Physical Education to growth and development and to general education. Mr. Miller.

P. E. 119. Medical and Health Supervision. 3-0-0

Elective in Education only. Prerequisite: senior standing.

Methods of examinations for physical defects. Remedial exercises. Prevention and treatment of common athletic injuries. Training and conditioning men for various sports. Mr. Sermon.

P. E. 120. Organization and Administration of Physical Education. 0-0-3

Elective in Education only. Prerequisite: senior standing.

Policies to be followed in schools and colleges, finances, construction, equipment and care of plant; selection of staff; methods of handling enrollment, records, and reports. Administrative problems involved in handling competitive sports. Mr. Miller.

P. E. 121. Senior Practice Coaching. 1-1-1

Elective in Education only. Prerequisite: P. E. 114, 115, 116.

Opportunity will be made in Raleigh for students to coach sports in season, under supervision. This will afford a field to apply the skill and methods secured in the other courses. Mr. Doak.

PHYSICS

Courses for Undergraduates

Phys. 100. Physics Survey. 0-3-0

An introductory survey of physical phenomena, with the scientific method developed and conclusion drawn therefrom; designed for the enrichment of the student's thinking. Mr. Heck.

Phys. 101. General Physics. 4-4-4

A general survey of the phenomena, laws, and devices of modern physical science. Mr. Heck, Mr. Bartlett.

Phys. 103. F, W, S. Physics for Textile Students. 4-4-4

Required of freshmen in the Textile School. Prerequisite: Math. 100.

Industrial Physics, with emphasis on practical applications to textile industry. Mr. Lancaster, Mr. Bartlet.

Phys. 104. F, W, S. Physics for Engineers. 4-4-4

Required of sophomores in Engineering. Prerequisite: Math. 102.

General Physics, with emphasis on problems and engineering applications. Messrs. Derieux, Dixon, and Meares.

Phys. 105. Physics for Agricultural Students. 5 or 5 or 5

Required of sophomores in Agriculture.

Elements of machines, physics of heat and weather, and applications of light and electricity on the farm. Mr. Heck, Mr. Bartlett.

Phys. 107. Descriptive Astronomy. 0-3-0 or 0-0-3

Elective.

The sun and planets, the stars and modern research in astronomy; observations with telescope. Mr. Heck.

Courses for Advanced Undergraduates

Phys. 201. Advanced Physics. 4-4-4

Elective. Required of sophomores specializing in Physics. Prerequisite: Phys. 101, Math. 103.

Designed for teaching Physics in secondary schools or for those desiring specialization in Physics. Mr. Heck.

Phys. 202. Industrial Optics. 3-0-0

Elective, especially for Engineering and Industrial Management students. Prerequisite: Phys. 101, or equivalent.

Photometric units, photometry and illumination, light sources, radiometry and spectroradiometry, color, light-sensitive cells, optical glass types and manufacture, design, manufacture, and testing of optical parts, lens errors and corrections, design and manufacture of optical instruments. Mr. Derieux.

Phys. 203. Photography. 0-3-0

Elective. Prerequisite: Phys. 101, or equivalent.

A study of the optical requisites of the camera; proper exposure, development and printing; lantern slides, micro photography, projection prints and color photography. Mr. Meares.

Phys. 204. Electron Tubes and Their Application to Industry. 0-0-3

Elective. Prerequisite: Phys. 101 or 104.

Thermionic emission, various thermionic emitters, secondary emission, space charge, discharge in gases, photoelectricity, photoconductivity, and the photovoltaic effect. Laboratory substituted for lectures as needed. Mr. Dixon.

Phys. 205. Light in Industry. 0-0-3

Elective especially for Textile and Industrial Management students. Prerequisite: Phys. 101, or equivalent.

Fundamentals of light, illumination, and color, with principles applied to selection, mixing, harmony, matching, lighting, photography, and pigments. Mr. Lancaster.

Phys. 206. Elementary Modern Physics. 3-0-0 or 0-0-3

Required of juniors in Electrical Engineering and of seniors in Ch. E.

Prerequisite: General Physics.

Evolution of the electron theory, constitution of matter, conduction in gases, conduction in non-metallic liquids, conduction in solids, radiation, photoelectric emission, thermionic emission, electronic rectifiers, applications of electronic devices. Mr. Derieux, Mr. Dixon.

Phys. 209. Meterology. 0-3-0

Required of juniors in Forestry.

Causes of weather change, methods of forecasting, and peculiarities of the weather of North Carolina. Mr. Heck.

Courses for Graduates and Advanced Undergraduates

Phys. 301. Mechanics. 0-3-3 or 0-4-4

Elective. Prerequisite: Phys. 201, Math. 203.

The physics principles of mechanics. Mr. Derieux.

Phys. 302. Electricity and Magnetism. 3-3-0 or 4-4-0

Elective. Prerequisite: Phys. 201 or 104.

Fundamental principles of subject in a more specialized, but intermediate manner. Laboratory, if taken, increases the course to 4 credits. Mr. Dixon.

Phys. 303. Heat. 3-0-0

Elective. Prerequisites: Physics 104 and Integral Calculus.

Methods of temperature measurement, specific heats, thermal expansion in solids, in liquids and in gases, conduction, radiation, kinetic theory of gases, change of state, continuity of state, thermodynamics, low temperatures, high temperatures. Mr. Derieux, Mr. Dixon.

Phys. 304. Sound. 0-0-3 or 0-0-4

Elective. Prerequisite: 12 term credits in Physics.

Production, propagation, and reception of sound, with analysis of physical basis of music. Mr. Heck.

Phys. 305. Light. 0-3-3 or 0-4-4

Elective. Prerequisite: Phys. 101 or 104.

Introduction to principles of geometrical and physical optics. Mr. Derieux.

Phys. 307. History of Physics. 0-0-3

Elective. Prerequisite: Phys. 101.

Development of Physics from its beginnings to the present time. Mr. Heck.

Phys. 308. Modern Physics. 3-3-3

Elective. Prerequisite: Phys. 104, and Integral Calculus.

Alternating currents, electromagnetic radiation, moving charge, the electron, kinetic theory of gases, thermionics, photoelectric effect, X-rays, spectra, atomic structure, ionizing potential, radio and television, radioactivity, isotopes, geophysics, astrophysics, relativity, specific heats, high frequency sound, recent ideas. Mr. Derieux.

Phys. 309. Research. 3-3-3

Elective. Prerequisite: Phys. 101 or 103 or 104.

Undergraduate research given according to student's ability. Mr. Heck.

Phys. 310. Physics Colloquium.

Current research by department and advanced students; meets weekly at night throughout the year. Mr. Heck.

Courses for Graduates Only

***Phys. 401. Theoretical Mechanics.** 3-3-3

Prerequisite: Phys. 201, Math. 203.

Gyroscopic motion, spiral orbits, compound pendulum, bifilar suspensions, coupled systems, damped and forced oscillations, elasticity, surface tension, osmosis, motion of fluids, viscosity, and wave motion.

Mr. Derieux.

***Phys. 402. Geometrical Optics.** 3-0-0

Prerequisite: Phys. 201, Math. 203.

Photometry, intrinsic energy, luminosity, curved mirrors, refraction through a prism, refraction at curved surface, thin lens, lenses in system of thick lenses, the eye and spectacles, dispersion, aberrations, resolving power, achromatic lenses, and optical instruments. Mr. Derieux.

***Phys. 403. Physical Optics.** 0-3-3

Prerequisite: Phys. 201, Math. 203.

Velocity of light, composition of wave, velocity of wave transmission, wave theory of light, spectra, Doppler effect, absorption, anomalous dispersion, interference, interferometers, color photography, diffraction, and gratings, polarization, and saccharimetry. Mr. Derieux.

***Phys. 404. Kinetic Theory of Gases.** 3-0-0

Prerequisite: Phys. 201, Math. 203.

Laws of Maxwell, Dalton, Avagadro, first and second laws of thermodynamics, mean free path, viscosity, diffusion, Van de Waals' equation, critical point, triple point, solution, vapor and osmotic pressure, boiling point, freezing point, heat of solution, dissociation. Mr. Derieux.

***Phys. 407. Advanced Theory of Electricity and Magnetism.** 3-3-3

Prerequisite: Phys. 201, Math. 203.

Theorem of Gauss, energy in media, boundary conditions, condensers, electrometers, dielectric constants, migration of ions, thermodynamics of reversible cells, thermo-electricity, galvanometers, magnetic circuits, growth and decay of currents, oscillatory discharge, and alternating currents. Mr. Dixon.

Phys. 409. Discharge of Electricity in Gases. 0-3-0

Prerequisite: Phys. 201, Math. 203.

Production of ions in gases, motion of ions, velocity in an electric field, diffusion, recombination, determination of atomic charge, ionization by collision, discharge tubes, cathode rays, positive rays, and X-rays.

Mr. Dixon.

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* Only two of the following alternate gamuts may be given each year; either 401 or 402 and 403, or 404, 405, 406; and either 407 or 408 and 409.

Phys. 410. Experimental Optics. 0-2-2

Laboratory work with the photometer, spectrometer, gratings, Fresnel byprism and mirrors, polarimeter, saccharimeter, and interferometer.

Mr. Derieux.

Phys. 411. Research. 3-3-3

Open to all graduates. Every graduate student sufficiently prepared is expected to undertake a research in some particular field of Physics. At least six hours a week must be devoted to such a research.

Messrs. Heck, Derieux, and Dixon.

Phys. 412. Atomic Theory. 3-0-0

Elective. Prerequisite: Phys. 302.

Bohr's model, spectral formula, elliptical orbits, fine structure of spectral lines, Stark effect, Zeeman effect, Roentgen rays, Moseley's law, periodic system, isotopes, radioactivity, atomic nuclei, ionization, spectra and atomic structure, fluorescence, atomic magnetism. Mr. Dixon.

POULTRY SCIENCE

Courses for Undergraduates

Poul. 101. General Poultry. 3-0-0

Required of sophomores in Agriculture.

Fundamental principles of poultry production.

Mr. Williams, Mr. Dearstyne.

Poul. 103. Incubation and Brooding. 0-0-3

Required of juniors in Poultry Production, elective for others.
Prerequisite: Phys. 105, Poul. 101.

Principles of incubator and brooding operation, feeding, housing, and rearing of baby chicks. Mr. Williams.

Courses for Advanced Undergraduates

Poul. 201. Selection and Mating of Poultry. 0-0-3

Required of seniors in Poultry Production. Elective for juniors in Agriculture. Prerequisite: Poul. 101, Genetics, Zool. 304.

Methods of recognition and selection for purposes of mating from both standard and utility standpoints. Study of progeny performance.

Mr. Dearstyne.

Poul. 202. Poultry Production. 0-3-0

Elective. Prerequisite: Poul. 101.

Developed especially for vocational teachers of agriculture. Poultry disease problems; nutritional problems; judging methods.

Mr. Dearstyne, Mr. Williams.

Poul. 208. Preparation and Grading of Poultry Products. 0-3-0

Required of juniors in Poultry, elective for others. Prerequisite: Poul. 101.

Commercial fattening, grading and marketing eggs. Refrigerating and storage, markets. Mr. Williams.

Courses for Graduates and Advanced Undergraduates

Poul. 302. Poultry Judging. 3-0-0

Required of juniors in Poultry Production, elective for others. Prerequisite: Poul. 101.

Class and practice work in standard and utility judging of fowl. Selection and preparation of birds for showing. Mr. Williams.

Poul. 303. Poultry Nutrition. 0-0-4

Required of juniors in Poultry Production, elective for juniors in Agriculture. Prerequisite: Chem. 101, Zool. 101 and 102, Poul. 101.

Feeds and feeding; physiology of digestion, absorption and elimination; mineral and vitamin requirements. Mr. Dearstyne.

Poul. 304. Poultry Anatomy. 3-3-0

Required of juniors in Poultry Production, and elective especially for juniors in Agriculture. Prerequisite: Poul. 101, Zool. 102.

Study of normal structure of the fowl including osteology, arthrology, myology, splanchnology, angeology, neurology, and aesthesiology. Mr. Gauger.

Poul. 305. Poultry Diseases. 3-3-0

Required of juniors in Poultry Science, elective for others. Prerequisite: Poul. 101, Zool. 102.

Sanitation, parasite infestations and control, contagious and noncontagious diseases of the fowl. Mr. Gauger.

Poul. 306. Commercial Poultry Plant Management. 0-0-3

Required of seniors in Poultry Science, elective for others. Prerequisite: Poul. 101, 208.

Study of development and maintenance of a commercial poultry plant, custom hatching, and commercial incubation, cost of production. Mr. Williams.

Poul. 307. Poultry Problems. 3 or 3 or 3

Prerequisite: Poul. 101, 201, 208.

Study of new developments in poultry research, discussion of practical problems. Mr. Dearstyne.

Poul. 308. Sero-Diagnosis in Poultry Diseases. 0-0-3

Required of seniors in Poultry Science. Prerequisite: Poul. 101, 304.

Antigen and vaccine preparation. Application of the agglutination test for pullorum disease carriers. Mr. Greaves.

Poul. 309. Poultry Survey Studies. 3-3-3

Elective. Prerequisite: Poul. 101, 201, 208.

Field problems as to housing, feeding, production, marketing, and disease. Mr. Dearstyne.

Poul. 310. Senior Seminar. 0-0-3

Required of seniors in Poultry. Mr. Dearstyne.
(Courses for graduates only.)

Poul. 406. Production Studies and Experiments. 3 or 3 or 3

Prerequisite: Poul. 101, 102, 303, 305.

Problems in Poultry nutrition, breeding, and commercial poultry production and marketing. Mr. Dearstyne.

Poul. 407. Poultry Research. 3 or 3 or 3

Prerequisite: Eighteen term credits in Poultry.

Problems in poultry nutrition, diseases, marketing, and breeding may be undertaken. Such problems shall be conducted on a definitely outlined basis acceptable to the department. Poultry Staff.

Poul. 408. Seminar. 3 or 3 or 3

Prerequisite: Eighteen credit hours in Poultry. Mr. Dearstyne.

PSYCHOLOGY

Psychol. 101. Introduction to Psychology. 3 or 3 or 3

A study of the structure, function, and laws of human behavior with applications of Psychology to everyday life. Staff.

Psychol. 101-A. Introduction to Psychology Laboratory. 1 or 1 or 1

Mr. McGehee.

Psychol. 203. Educational Psychology. 3-3-0

(For description of the course see Ed. 203.) Mr. Garrison.

Psychol. 238. Industrial Psychology. 0-0-3

Required of seniors in Industrial Management and Industrial Engineering; elective for others.

Applications of psychological principles and techniques to industry and business. Mr. Garrison.

Psychol. 269. Applied Psychology. 0-3-0

Application of psychological principles in special field of business and industry, with special reference to advertising and selling.

Mr. McGehee.

Psychol. 305. Social Psychology. 0-3-0

Elective. Prerequisite: Ed. 101 and 3 additional term credits in Sociology or Psychology.

Social applications of Psychology; social stimulation, response, and attitudes. Mr. Garrison.

Psychol. 368. Measurements in Psychology 0-0-3

Prerequisite: 6 credits in Psychology supplemented by credits in related fields.

An introduction to the theory and practice of mental and aptitude testing. A study will be made of the various types of mental and performance tests now in use. A critical analysis is made of the methods of devising such tests and the application of the results to the various vocational activities. Mr. McGehee.

Psychol. s371. Psychology of Exceptional Children. 3 credits

Psychol. Ex. 375. Psychology of Language. 3 credits

Psychol. 376. Psychology of Adolescence. 3-0-0

(For description of course see Ed. 376.)

Psychol. Ex. 377. Psychology of Secondary Education. 3 credits

Psychol. 390. Problems in Social Psychology. 0-0-3

Prerequisite: Psychol. 305.

Designed for students interested in a study of specific social psychology problems in rural and industrial situations. Collateral reading and individual reports will characterize the course. Mr. Garrison.

Psychol. 403. Problems in Educational Psychology. 3-3-0

(For description of the course see Ed. 403.) Mr. Garrison.

RELIGION

Courses for Undergraduates

Rel. 101. Introduction to Religion. 3-0-0

Elective. Typical forms and aspects of religion, religious phenomena, and basic sociological, psychological, and philosophical groundings of religion. Mr. Hicks.

Rel. 102. The Life of Jesus. 3-0-0

Elective. The life of Jesus; Synoptic Gospel records with review of the social, economic, and political background of age that produced Jesus. Mr. Hicks.

Rel. 103. Social Ethics. 0-0-3

Elective. Historical and psychological study of moral nature and moral progress; origin and development of the social conscience; and changing ethic in certain aspects of social life. Mr. Hicks.

Rel. 104. Social Teachings of Jesus. 0-3-0

Elective. Social principles and ideals of Jesus in the Gospels: The Sermon on the Mount with teachings about God, prayer, wealth, peace, and war. Mr. Hicks.

Courses for Advanced Undergraduates

Rel. 201. Comparative Religion. 0-3-0

Elective. History, general characteristics, and social significance of the great ethnic religions of the world, characteristics of the living religions. Mr. Hicks.

Courses for Graduates and Advanced Undergraduates

Rel. 301. Problems in Religion. 0-0-3

Elective. Prerequisite: Rel. 101 and 3 additional term credits in Religion.

Pertinent problems of religion related to scientific and social developments: nature of religion, prayer, evil, immortality, etc. Individual investigation. Mr. Hicks.

SOCIOLOGY

Courses for Undergraduates

Soc. 101. Human Relations. 2-2-2

Required of all students in the Schools of Agriculture and Textiles who do not take Military Science.

Fundamental human institutions, home, school, church, government, and industry; social structure and social problems of our time.

Mr. Winston and staff.

Soc. 102. Introductory Sociology. 3-0-0 or 0-3-0 or 0-0-3

Required of students in Forestry; elective for others.

Basic principles of social life and social organization, major social institutions, and problems arising from industrial organization.

Mr. Hicks and staff.

Soc. 103. General Sociology. 3-3-0

Basic principles of sociology, general social organization, and human behavior. Mr. Winston.

Courses for Graduates and Advanced Undergraduates

Soc. Ex. 300. Criminology. 0-0-3

Prerequisite: Soc. 102 or 103.

Causes and conditions leading to crime, methods of handling criminals, and various factors in producing criminal behavior. Mr. Winston.

Soc. 301. Social Pathology. 0-0-3

Prerequisite: Soc. 102 or 103.

Outstanding pathological problems reacting from social life, social and individual adjustments. Mr. Winston.

Soc. Ex. 302. Sociology of City Life. 0-3-0

Elective. Prerequisite: Soc. 102 or 103.

Problems arising from growth of modern town and city life; city planning in regard to social and industrial progress. Mr. Winston.

Soc. 306. The Family Organization. 3-0-0

Prerequisite: Soc. 102 or 103.

Family relationships, and development of personality, effects of present-day social changes, various efforts to stabilize the family. Mr. Winston.

Soc. 307. Race Relations. 3-0-0

Elective. Prerequisite: Soc. 102 or 103.

Race problems in America and other countries; social, economic, educational status of racial groups; international relationships.

Mr. Winston.

Soc. Ex. 308. Social Anthropology. 0-0-3

Prerequisite: Soc. 102 or 103.

Analysis of present-day culture and its effect on behavior.

Mr. Winston.

Soc. 310. Industrial Sociology. 0-0-3

Prerequisite: Soc. 102 or 103.

Influence of industrial life, occupations as social and industrial factors, problems arising from our industrial era. Mr. Winston.

Soc. 311. Population Problems. 0-3-0

Prerequisite: Soc. 102 or 103.

Analyses of outstanding problems connected with the growth and decline of populations in the United States; factors connected with birth and death rates, marriage rates; discussion of the changing quality of population groups. Mr. Winston.

Soc. Ex. 312. General Anthropology. 0-3-0

Prerequisite: Soc. 102 or 103.

Physical differences in racial groups; evolution of society.

Mr. Winston.

Soc. 315. Research in Applied Sociology. 2-2-2

Prerequisite: 9 hours of Sociology, and permission of the instructor.

Research problems in applied fields of sociology, such as problems of the family, population problems, social work problems, rural-urban relationships, student success, American leadership. Mr. Winston.

SOILS—AGRONOMY

Courses for Undergraduates

Soils. 115. Soils. 4 or 4 or 4

Prerequisite: Geol. 120 and Chem. 101. Required of sophomores in Agriculture and juniors in Forestry.

A study of the properties of soils and their relation to soil management. Mr. Clevenger, Mr. Lutz.

Courses for Advanced Undergraduates

Soils Ex. 215. Soils of North Carolina. 3

The origin, characteristics, distribution, native vegetation, agricultural adaptation, and utilization of North Carolina soil types. Mr. Lutz.

Soils 265. Soil Fertility. 3-0-0

Prerequisite: Soils 115. For juniors and seniors in Agriculture.

A course dealing with the chemical and biological properties of soils as related to soil fertility. Mr. Lutz.

Soils 270. Soil Survey. 0-0-3

For juniors and seniors in Agriculture. Prerequisite: Soils 115 or equivalent.

The making of detailed soil maps and the writing of soil survey reports. Mr. Clevenger.

Courses for Graduates and Advanced Undergraduates

Soils 310. Fertilizers. 0-3-0

For juniors and seniors in Agriculture. Prerequisite: Soils 115 for Agricultural students. For non-Agricultural students, prerequisite: Chem. 101-3-5.

A study of the sources, manufacture, characteristics, and utilization of fertilizers; calculation of formulas. Mr. Clevenger.

Soils 315. The Soils of North Carolina. 0-3-0

For juniors and seniors in Agriculture and Forestry. Prerequisite: Soils 115.

The origin, characteristics, plant adaptation, and fertilizer needs of North Carolina soil types. Field trips. Mr. Lutz.

Soils 317. Soil Conservation and Land Use. 0-0-3

For juniors and seniors in Agriculture and Forestry. Prerequisite: Soils 115.

A course dealing with the factors affecting erosion, the methods of erosion control, and land use. Mr. Lutz.

Soils 319. Fertilizer Experimentation. 0-0-3

Prerequisite: Soils 310.

A study of methods of determining the fertilizer needs of different crops on different soil types. Practice in mixing fertilizers and in putting out soil type fertilizer experiments. Mr. Clevenger.

Soils 320. Pedology. 3-0-0

For juniors and seniors in Agriculture and Forestry. Prerequisite: Soils 115 and 265.

The genesis, morphology, and classification of the great soil groups of the world. Mr. Clevenger.

Soils 321. Soil Technology. 3-3-3

Prerequisite: Soils 265.

A laboratory, field, and greenhouse course in the physical, chemical, and biochemical properties of soils. Mr. Lutz.

Soils 322. Advanced Soils. 3-3-3

Prerequisite: Soils 265.

A course in advanced soil problems for seniors and graduate students. Mr. Clevenger, Mr. Lutz.

Soils 350. Senior Seminar. 1-1-1

Elective for seniors in Agriculture. Prerequisite: Senior standing and fifteen credits in Soils.

Reports on special problems and scientific articles of interest to soil scientists. Mr. Clevenger, Mr. Williams, Mr. Lutz.

Courses for Graduates Only

Soils 410. Seminar. 1-1-1

Prerequisite: Eighteen credits in Soils.

Reports and discussions of research problems in soil science. Mr. Williams, Mr. Clevenger, Mr. Lutz.

Soils 430. Soil Research. 3-3-3

Prerequisite: Eighteen hours in Soils.

Research in specialized fields of soil science. Mr. Clevenger, Mr. Lutz.

TEXTILES

Courses for Undergraduates

Tex. 101. Textile Principles Laboratory. 1-1-1

Required of freshmen in all Textile curricula.

Operation of plain and automatic looms and carding and spinning machines. M. Hart, Mr. Hilton, Mr. Culberson.

Tex. 102. Yarn Manufacture I. 3-0-0 or 0-0-3
and
Tex. 103. Yarn Manufacture Laboratory I. 1-0-1

Required of sophomores in all Textile curricula.

Mixing of cotton, description and setting of openers, pickers, and cards. Production, speed and draft calculations. Operation and fixing of machines. Grinding and setting cards. Mr. Hilton, Mr. Culberson.

Tex. 104. Knitting I. 2-0-0 or 0-0-2
and
Tex. 105. Knitting Laboratory I. 1-1-1

Required of sophomores in all Textile curricula.

Selection and preparation of knitting yarns, knitting mechanisms, plain and rib knitting machines, circular ribbers, and circular automatic machines. Operation of machines, practical experiments, hosiery analysis, topping, transferring, and looping. Mr. Lewis.

Tex. 106. Fabric Structure and Analysis. 0-2-2 or 4-0-0

Required of sophomores in all Textile curricula.

Systems of numbering woolen, worsted, silk, linen, rayon, and cotton yarn. Plain, twill, and sateen weaves. Ornamentation of plain weaves; wave designs; pointed twills; diamond effects; plain and fancy basket weaves; warp and filling rib weaves.

Analyzing plain, twill, sateen, and other fabrics made from simple weaves, ascertaining the number of ends and picks per inch in sample. Fabric analysis calculations. Mr. Lewis.

Tex. 107. Power Weaving. 0-2-0
and
Tex. 108. Power Weaving Laboratory. 0-1-1

Required of sophomores in all Textile curricula.

Construction of auxiliary motions on plain looms. Cams and their construction. Drop-box loom construction. Methods of pattern chain building. Construction and value of pattern multipliers. Timing of drop-box motion, and other motions.

Operation and fixing of plain, automatic and drop-box looms. Pattern chain building for drop-box looms. Mr. Nelson, Mr. Hart.

Tex. 109. Fabric Testing. 0-0-1

Required of seniors in Textile Manufacturing, Textile Chemistry and Dyeing, and Weaving and Designing.

Testing fabrics for strength. Effect of heat upon fabrics. Effect of regain upon tensile strength. Elasticity of fabrics. Micrometer and calculated tests for fabric thickness. Mr. Shinn.

Tex. 110. Principles of Textile Manufacturing I. 3-0-0

A study of the processes and machines used in textile manufacture, planned as an overview course for those preparing to be teachers of industrial arts in junior and senior high schools or in vocational schools.

Mr. Nelson, Mr. Hilton.

Tex. 111. Principles of Textile Manufacturing II. 0-0-3

Prerequisite: Principles of Textile Manufacturing I, Tex. 110.

A study of the operation and care of textile machines, planned for those who are preparing to be teachers in vocational schools.

Mr. Nelson, Mr. Hilton.

Tex. 112. Dyeing I. 3-0-0 or 0-0-3

and

Tex. 113. Dyeing Laboratory I. 1-1-1

Required of juniors in Textile Manufacturing.

Physical and chemical properties of textile fibres. Chemicals used in preparing fibres for dyeing. Methods of applying substantive, sulphur, basic, developed, acid, acid chrome, mordant and vat dyes. Effect of changes in temperature and volume of the dye bath. Theory of dyeing mixed fabrics. Theory of mercerizing. Tests for the chemical constituents of the fibres. Dyeing experiments using all the different classes of dyes on the various fibres. Tests showing effect of varying such factors as bath, temperature and time. Tests for fastness to light, washing, cross-dyeing, and so forth. Mercerizing experiment.

Mr. Grimshaw, Mr. Hayes.

Tex. 114. Textile Microscopy. 1-1-0

Required of seniors in Textile Chemistry and Dyeing. Elective for others.

Instruction in the use of the microscope. Examination of fibres. Preparation of permanent slides. Mr. Grimshaw, Mr. Hayes.

Tex. 115. Textile Principles. 3-0-0 or 0-0-3

Required of freshmen in all Textile curricula.

Principles of manufacture involved in the textile industry. Elementary calculations for yarns and fabrics; harness and reed calculations; loom production calculations. Textile Staff.

Courses for Advanced Undergraduates

Tex. 201. Yarn Manufacture II. 0-3-0

and

Tex. 202. Yarn Manufacture Laboratory II. 1-1-1

Required of juniors in Textile Manufacturing. Elective for others. Prerequisite: Yarn Manufacture I, Tex. 102, 103.

Tex. 203. Yarn Manufacture III. 0-3-3
and
Tex. 204. Yarn Manufacture Laboratory III. 2-2-2

Required of juniors in Yarn Manufacturing. Prerequisite: Yarn Manufacture I, Tex. 102, 103.

Construction of draw frames; sliver lapper; ribbon lapper, comber; mechanical and electrical stop motions; description and setting of the different parts; weighting of rolls; types of roll covering; care of machines; fly frame builder and differential motions.

Operation and fixing of draw frames; sliver lappers; ribbon lapper; comber and fly frames. Changing of hank roving and the setting of rolls and speeder motions. Mr. Hilton, Mr. Richie.

Tex. 205. Fabric Design and Analysis I. 3-3-0 or 0-3-3

Required of juniors in Textile Manufacturing and Weaving and Designing. Elective for others.

Prerequisite: Fabric Structure and Analysis, Tex. 106.

Construction of fancy weaves, such as broken twills, curved twills, entwining twills; granite weaves. Imitation leno; honeycomb weaves; fabrics backed with warp or filling; fabrics ornamented with extra warp or filling; combining weaves together to produce new patterns.

Analyzing samples of fancy fabrics for design, drawing in draft, reed, and chain plan. Calculating particulars to reproduce fabric from data obtained from sample. Mr. Shinn.

Tex. 206. Fabric Design and Analysis II. 0-0-3

Required of seniors in Weaving and Designing. Prerequisite: Fabric Design and Analysis I.

Design and analysis of fancy fabrics. Making fabrics from sketches and specifications. Mr. Shinn.

Tex. 207. Dobby Weaving. 3-0-0 or 0-0-3
and
Tex. 208. Dobby Weaving Laboratory I. 1-1-1

Required of juniors in Textile Manufacturing and Yarn Manufacturing. Elective for others.

Tex. 209. Dobby Weaving Laboratory II. 2-2-2

Required of juniors in Weaving and Designing. Prerequisite: Power Weaving, Tex. 107, 108.

Methods of drawing in and starting up cotton and rayon warps. Setting of harness shafts. Selection of springs or spring jacks. Construction and methods of fixing single and double index dobbies. Methods of pattern-chain building.

Preparation of warps for weaving cotton and rayon fabrics on dobby looms; starting up warps in looms; fixing single and double index dobbies; pattern-chain building; operation of dobby looms. Mr. Nelson, Mr. Hart.

Tex. 210. Cotton and Rayon Dyeing. 0-3-0
and
Tex. 211. Cotton and Rayon Dyeing Laboratory I. 1-1-1

Required of seniors in Textile Manufacturing. Elective for others. Prerequisite: Dyeing I, Tex. 112, 113.

Lectures on color mixing, money value of dyes. Testing of dyes, water, starch, and materials used in sizing. Lubricating oils and oil compounds. Processes and machinery used in dyeing and finishing. Textile printing. Apparatus used in research laboratory.

Color matching. Testing dyes for strength and money value. Physical and chemical examination and application of starches, sizing materials and finishing compounds. Examination of textile oils, soap, and all the different rayons. Analysis of mixed fabrics. Mr. Grimshaw, Mr. Hayes.

Tex. 212. Dyeing II. 3-3-0
and
Tex. 213. Dyeing Laboratory II. 2-2-2

Required of juniors in Textile Chemistry and Dyeing.

Physical and chemical properties of textile fibres. Lectures on wool, silk, rayon, and cotton; hydrometers and chemicals used in dyeing and finishing. Application of dyestuffs to different fibres. Effect of changing bath, temperature, or time factor. Money value and strength test of dyes. Theory of dyeing mixed fabrics. Mercerizing.

Microscopic examination of textile fibres. Dyeing experiments using different classes of dyes on textile fibres. Tests showing the effects of varying such factors as bath, temperature, and time. Fastness to light, washing, and cross dyeing. Money value and strength of various dyes. Mercerizing. Mr. Grimshaw, Mr. Hayes.

Tex. 214. Textile Printing. 3-0-0
and
Tex. 215. Textile Printing Laboratory. 1-1-1

Prerequisite: Dyeing II, Tex. 212, 213.

The history of printing and the development of machinery used. Calico printing with the mordant, basic, and vat colors, analine black, indigo, and insoluble azo colors. Resist and discharge styles.

Paste mixing. Practical experiments. Mr. Grimshaw.

Tex. 216. Principles of Fabric Finishing. 0-0-3
and
Tex. 217. Principles of Fabric Finishing Laboratory. 1-1-1

Elective for Textile students.

A study of machinery used in finishing of textile fabrics and in textile printing, with lectures and pictures. Lectures on materials used in the textile finishing and printing industry and experiments. Mr. Grimshaw.

Courses for Graduates and Advanced Undergraduates

Tex. 301. Yarn Manufacture IV. 3-0-0 or 0-0-3
and
Tex. 302. Yarn Manufacture Laboratory IV. 1-1-1

Required of seniors in Textile Manufacturing. Elective for others. Prerequisite: Yarn Manufacture, Tex. 201, 202.

Tex. 303. Yarn Manufacture V. 3-3-0
and
Tex. 304. Yarn Manufacture Laboratory V. 2-2-2

Required of seniors in Yarn Manufacturing. Prerequisite: Yarn Manufacture, Tex. 203, 204.

Spinning; spooling; twisting. Description and setting of different parts. Builder motions for warp and filling. Bobbin holders, thread guides, traverse motions. Ply yarns. Calculations for twist, speed, and production.

Practical methods of spinning, spooling, winding and twisting. Setting of spinning rolls, spinning frame builder motions for warp, filling, and combination build. The practical application of all machines in Yarn Manufacture. Mr. Hilton, Mr. Culberson.

Tex. 305. Knitting II. 0-3-0
and
Tex. 306. Knitting Laboratory II. 1-1-1

Elective for Textile students. Prerequisite: Knitting I, Tex. 104, 105.

Advanced circular mechanisms. Hosiery design. Auxiliary knitting machinery. Warp and spring needle knitting. Knitting machinery layout and organization. Production control and costs. Laboratory experiments. Mr. Lewis.

Tex. 307. Textile Calculations I. 3-0-0

Required of seniors in Yarn Manufacturing. Elective for others. Prerequisite: Yarn Manufacture, Tex. 102.

Principles underlying the calculation of draft, twist, speed, and production. Systems of numbering yarns. Doubling and twisting yarns. Lay, tension, differential, and cone drum calculations. Practice in solving practical mill problems. Mr. Hilton.

Tex. 308. Manufacturing Problems. 0-0-3

Required of seniors in Yarn Manufacturing. Elective for others. Prerequisite: Yarn Manufacture, Tex. 203.

Mill organization and administration. Machine layout for long and regular draft spinning; production control and costs; making of novelty yarns; making of daily and weekly reports; breaking of single and ply yarns. Regular and reverse twisted yarns. Mr. Hilton.

Tex. 310. Jacquard Design Laboratory. 1-1-1

Required of seniors in Weaving and Designing.

Designing fancy and jacquard fabrics. Methods of making original designs by combinations of color, weave, and sketches. Designs for table napkins, table covers, dress goods, draperies. Mr. Nelson, Mr. Shinn.

Tex. 311. Fabric Analysis. 2-2-0

Required of seniors in Textile Manufacturing and Weaving and Designing. Elective for others. Prerequisite: Fabric Design and Analysis, Tex. 205.

Analyzing samples of cotton, wool, worsted, linen, rayon, and silk fabrics for size of yarns, ends and picks per inch, weight of warp and filling, so as to accurately reproduce samples analyzed. Obtaining design, drawing in draft, chain, and reed plan for fancy fabrics, such as stripes, checks, extra warp and extra filling figures, leno fabrics, jacquard fabrics, draperies. Mr. Nelson, Mr. Shinn.

Tex. 312. Cotton and Rayon Weaving. 0-0-3

and

Tex. 313. Cotton and Rayon Weaving Laboratory I. 1-1-1

Required of seniors in Textile Manufacturing and Weaving and Designing. Elective for others. Prerequisite: Dobby Weaving, Tex. 207, 208.

Tex. 314. Cotton and Rayon Weaving Laboratory II. 2-2-2

Required of seniors in Weaving and Designing. Prerequisite: Dobby Weaving, Tex. 209.

Principles of loom construction to weave rayon and fine cotton fabrics. Pick and pick looms. Box and multiplier chain-building. Arrangement of colors in boxes to give easy running loom. Extra appliances for weaving leno, towel, and other pile fabrics. Construction and operation of single, double lift, and rise and fall jacquards. Tie-up of harness for dress goods, table napkins, damask, and other jacquard fabrics, such as leno. Relative speed of looms. Production calculations and fabric costs.

Operation and fixing of dobby, pick and pick, and jacquard looms. Preparation of warps to weave rayon and fine cotton fabrics. Building of box, dobby, and multiplier chains. Mr. Nelson, Mr. Hart.

Tex. 315. Color in Woven Design. 3-3-0

Required of seniors in Weaving and Designing. Elective for others. Prerequisite: Fabric Structure and Analysis, Tex. 106.

Pigment and light theories of color. Contrast and harmony of color. Factors which influence quality, style, and color. Methods of applying weaves and color to fabrics for wearing apparel and home decorations.

Mr. Hart.

Tex. 316. Textile Calculations II. 0-0-3

Required of juniors in Textile Manufacturing and Weaving and Designing. Elective for others. Prerequisite: Fabric Structure and Analysis. Tex. 106.

An intensive course in calculations for designing, weaving, and analyzing cotton, rayon, silk, wool, worsted and linen yarns and fabrics. Weight of fabrics, ends, and picks per inch. Costing of fabrics. Reed and harness calculations. Loom speed and production. Mr. Hart.

Tex. 317. Cotton and Rayon Dyeing II. 0-3-3
and
Tex. 318. Cotton and Rayon Dyeing Laboratory II. 2-2-2

Required of seniors in Textile Chemistry and Dyeing. Prerequisite: Dyeing II. Tex. 212, 213.

Theories of color matching. Lectures on color mixing, water and mold, starch, materials used in sizing. Lubricating oils, textile oils and oil compounds. Processes and machinery used in dyeing and finishing. Method of analyzing textile fabrics. Laboratory equipment used in textile research and testing laboratories.

Color matching. Physical and chemical examination and application of textile oils, soaps, and finishing compounds. Microscopical and chemical tests on rayons. Dyeing various types of rayon. Operation of dyeing and finishing equipment in the dye house and research laboratories. Mr. Grimshaw.

Tex. 319. Textile Testing. 1-1-1

Elective for Textile students. Prerequisite: Fabric Testing, Tex. 109 or equivalent.

Tests for moisture content, regain, twist, and tensile strength. Description and operation of testing equipment. Solution and written reports of assigned textile problems. Mr. Hart, Mr. Hilton.

Tex. 320. Leno Design. 3 or 3-0

Required of seniors in Textile Manufacturing and in Weaving and Designing. Elective for others. Prerequisite: Fabric Design and Analysis, Tex. 205.

Leno weaves with one, two or more sets of doups. Combinations of plain and fancy weaves with leno. Methods of obtaining leno patterns. Methods of making original designs for dress goods, draperies. Mr. Nelson, Mr. Shinn.

Tex. 321. Dobby Design. 3 or 3-0

Required of seniors in Textile Manufacturing and in Weaving and Designing. Elective for others. Prerequisite: Fabric Design and Analysis, Tex. 205.

Designing fabrics, such as fancy crepes, figured double plain, matelasse, velvets, corduroys, pique, lines of samples. Mr. Nelson.

Tex. 322. Jacquard Design. 0-0-3

Required of seniors in Textile Manufacturing and juniors in Weaving and Designing. Elective for others. Prerequisite: Fabric Design and Analysis I, Tex. 205.

Designing fancy and jacquard fabrics. Methods of making original designs for table napkins, table covers, dress goods, draperies.

Mr. Nelson, Mr. Shinn.

Tex. 330. Calculating Fabric Costs. 0-3-0

Elective for Textile students. Prerequisite: Fabric Structure and Analysis, Tex. 106.

Special attention is given to distribution of costs to various productive processes, summarizing costs, the determination and use of unit costs, and the making of cost reports. Mr. Shinn.

Courses for Graduates Only

Tex. 401. Yarn Manufacture. 3-3-3

A study of breaking strength and related properties of cotton yarns made under various atmospheric conditions; comparison of yarns produced from long and short-staple cotton with regular and special carding processes; efficiency of various roller covering materials at the drawing processes; elimination of roving processes by special methods of preparation; comparison of regular and long-draft spinning. Mr. Hilton.

Tex. 402. Textile Research. 3-3-3

A study of the moisture content of cotton yarns and fabrics. The convolutions in cotton fibres and their relation to spinning, weaving, and dyeing. The effect of mercerization on cotton yarns and fabrics. Testing yarns and fabrics under variable conditions for breaking strength and elasticity. Textile staff.

Tex. 403. Textile Design and Weaving. 3-3-3

Study and practice in more advanced designing and analyses of fabrics, such as lenos made with twine and wire doups, lappits, and other fancy fabrics. Designing for jacquard dress goods, table covers, reversibles, and other fabrics. Making original designs for dobby and jacquard fabrics. Fabric costs. Weaving fancy and jacquard fabrics.

Messrs. Nelson, Hart, and Shinn.

Tex. 405. Domestic and Imported Fabrics. 0-3-0

A technical study of imported and domestic fabrics, such as broadcloths, venetian, organdy, lawn, voile, crepe, shirting, dotted swiss, drapery, and other fabrics used for decorative purposes.

Types and characteristics of fabrics imported and exported by foreign countries. Qualities and styles of textile fabrics. Mr. Nelson.

Tex. 406. Textile Dyeing. 3-3-3

The course consists of matching shades from standard and season color cards upon classes of materials which require skill in their dyeing, such as three-fibre, cotton-wool, and half-silk hosiery, woolens and worsteds with effect stripes, and cotton fabrics with woven figures or stripes of the different varieties of artificial silk. Advanced work on chemical and microscopical examination of materials used in dyeing and finishing.

Mr. Grimshaw.

Tex. 407. Advanced Textile Microscopy. 0-0-3

Microscopic study of textile starches, fibres, fabrics, oils, etc.

Study of mounting media for above. Methods of mounting textile materials. Methods of cross-sectioning textile materials. Photomicrography. Mr. Grimshaw.

Tex. 408. Seminar. 1-1-1

Discussion of scientific articles of interest to textile industry. Review and discussion of student papers and research problems. Textile staff.

ZOOLOGY

Courses for Undergraduates

Zool. 101. General Zoology. 4-0-0

An elementary study of animals, with special reference in the morphology and physiology of the vertebrates.

Messrs. Metcalf, Mitchell, Meacham, Bostian, McCutcheon, Harkema.

Zool. 102. Economic Zoology. 0-4-0

An elementary study of animals with special reference to the more important economic groups; designed to give the student a general knowledge of the animal kingdom.

Messrs. Metcalf, Mitchell, Meacham, Bostian, McCutcheon, Harkema.

Zool. 103. Human Physiology. 0-3-0

Prerequisite: Zool. 101. Not available for men having had Zool. 201.

A study of human anatomy and physiology with special reference to nutrition. Mr. McCutcheon.

Zool. Ex. 107. Physiology and Hygiene. 3 credits

An elementary study of human physiology sufficient to serve as a basis for the principles of correct hygiene. Mr. Bostian.

Zool. Ex. 108. Heredity and Eugenics. 3 credits

Basic principles of heredity and their application to human problems.

Mr. Bostian.

Courses for Advanced Undergraduates

Zool. 201. Animal Physiology. 0-0-5

Prerequisite: Zool. 101.

Comparative physiology of vertebrates, with particular reference to mammals and man. Detailed studies of various functions, with metabolism emphasized. Mr. McCutcheon.

Zool. 204. Economic Entomology. 0-0-4

Prerequisite: Zool. 102.

A general study of the insects, including their economic importance, with emphasis upon control of the more important local species.
Messrs. Mitchell, Meacham, and Bostian.

Zool. 205. Comparative Anatomy. 0-4-4

Prerequisite: Zool. 101.

Comparative morphology of vertebrates. Interrelations of organ systems studied for the various groups. Mr. Harkema.

Zool. 207. Vertebrate Embryology. 5-0-0

Prerequisite: Zool. 101.

The comparative embryology of the principal groups of vertebrates with special emphasis on the chick and the pig. Mr. Harkema.

Zool. 208, 209. Beekeeping. 3-0-3

Elective for juniors and seniors. Prerequisite: Zool. 102.

Designed to give the principles of scientific beekeeping and honey marketing. Mr. Meacham.

Zool. 210. Forest Entomology. 0-0-3

Prerequisite: Zool. 204.

A special study of forest insects, including the factors governing abundance, and the application of this knowledge in control.
Mr. Mitchell.

Zool. Ex. 220. Animal Nature Study. 3 credits

Prerequisite: Zool. 101, 204, or 205.

For grade school teachers and high school science instructors.
Messrs. Metcalf, Mitchell, and Bostian

Courses for Graduates and Advanced Undergraduates

Zool. 301. Applied Entomology. 3-3-3

Prerequisite: Zool. 204.

A detailed study of the relation of insects to human welfare and the principles of insect control; the special study of the more important insects directly or indirectly affecting man; and a special study of methods of investigation. Mr. Mitchell.

Zool. 304. Genetics. 4-0-0

Prerequisite: Bot. 101 and 102 or Zool. 101.

Basic principles of heredity and variation. Students carry on and analyze breeding experiments, analyze inheritance in various animals and plants. Mr. Bostian.

Zool. 305. Advanced Genetics. 0-4-4

An advanced study of heredity and variation, including biometry. The student will select a problem in breeding to be carried out as a part of the course. Mr. Bostian.

Zool. 307. Systematic Zoology. 3-3-3

Prerequisite: Zool. 101, 102.

The classification of various groups of animals.

Mr. Metcalf, Mr. Mitchell.

Zool. 309. Field Zoology. 0-0-4

Prerequisite: Zool. 101, and 204 or 205, 206.

The study of the relation between animals and their environment. Frequent excursions to the field will be taken.

Mr. Metcalf, Mr. Bostian.

Zool. 315. Histology. 3-3-0

A study of animal tissues and their preparation. Mr. Harkema.

Courses for Graduates Only

Zool. 401, 402. Systematic Entomology. 3-3-3

Prerequisite: Zool. 307.

Codes of nomenclature, methods of writing descriptions, constructing keys, determining priority, selecting and preserving types, and making bibliographies and indexes. Mr. Metcalf, Mr. Mitchell.

Zool. 403, 404. Research in Zoology. 3-3-3

Prerequisite: Eighteen term credits in Zoology.

Problems in development, life history, morphology, ecology, genetics, taxonomy, or parasitology.

Messrs. Metcalf, Meacham, Mitchell, Bostian, McCutcheon, Harkema.

Zool. 405. Seminar. 1-1-1

Prerequisite: Eighteen term credits in Zoology. Mr. Metcalf.

SUMMARY OF ENROLLMENT, 1936-37

1. Resident Students.			
A. Candidates for Degrees.			
1. Freshmen		851	
2. Sophomores		472	
3. Juniors		403	
4. Seniors		238	
5. Graduates		53	
6. Graduates for Professional Degrees		7	
Total		2,024	
B. Irregular Students.			
*1. Extension Classes in Raleigh and Cary		199	
2. Special Students (No College Credit)		5	
3. Irregular College Students		0	
Total		204	2,228
2. Non-resident Students.*			
A. Correspondence Students for College Credit.		870	
B. Extension Students (Classes Outside Raleigh)		1,809	
C. Correspondence Students in Practical Courses (No College Credit)		103	
Total		2,782	5,010
3. Summer School Students, 1936.			
A. Regular Students (Six Weeks)		631	
B. Cotton Classing Students (Six Weeks); No College Credit		20	
C. Specials No College Credit		15	
Total		666	5,676
1. Agriculture Teachers (One Week)		243	
2. Farm Boys and Girls		725	
3. Farm Men and Women		1,500	
4. Farm and Home Agents (One Week)		344	
5. Young Tar Heel Farmers		406	
6. Janitor's School		98	
7. Waterworks Operators		60	
Total		3,376	
Grand Total			9,052

* Data from January, 1936, to January, 1937.

*ENROLLMENT BY CURRICULA

Agriculture and Forestry

General Agriculture	229
Agricultural Economics	53
Agricultural Engineering	11
Agricultural Specialists	39
Forestry	229
Landscape Architecture	6
Special—No Credit	1
Total	568

Education

High School Teaching	53
Industrial Arts	19
Agricultural Education	115
Total	187

Engineering

Architectural	25
Ceramic	56
Chemical	193
Civil	77
1. Construction Option	34
2. Highway Option	5
3. Sanitary Option	3
Electrical	161
Geological	4
Industrial	28
Mechanical	149
1. Aeronautical Option	104
Special No Credit	3
Total	842

Science and Business

Business Administration	2
Industrial Management	44
Biology	10
Chemistry	12
Physics	1
Industrial Chemistry	1
Special—No Credit	1
Total	71

Textiles

Chemistry and Dyeing	48
Manufacturing	252
Yarn Manufacturing	1
Weaving and Designing	14
Textile Management	39
Total	354

Graduate

(Counted in Departmental Classification)

Graduate Students in:

Agriculture	33
Education	6
Engineering	5
Science and Business	4
Textiles	5
Candidates for Professional Degrees	7
Total	60

* Graduate students are classified by departments except for Professional Degree Candidates.

FORTY-SEVENTH ANNUAL COMMENCEMENT

Monday Evening, June 8, 1936

DEGREES CONFERRED

SCHOOL OF AGRICULTURE AND FORESTRY

Bachelor of Science

IN AGRICULTURE

Milford Edmund Aycock ..... Pikeville
Wayne Arthur Corpening ..... Horse Shoe
Paul Moncier Cox ..... Newport News, Va.
Max Augustus Culp ..... Mooresville
Robert Hugh Evans ..... Greenville
Olney Ray Freeman ..... Colerain
Andrew Jackson Harrell ..... Potecasi
Arleigh Taft Jackson ..... Dunn
George Raleigh McColl ..... Linden
David Franklin Morgan ..... Monroe
Thomas Fleet Osborne ..... Arden
William Taft Proctor ..... Rocky Mount
Charles David Raper ..... Lexington
Thomas Cecil Sawyer, Jr. ..... Belcross
Herbert Frederick Schoof ..... Wortendyke, N. J.
Samuel Vernon Stevens, Jr. ..... Broadway
Robert Hartford Tilley ..... Bahama

IN AGRICULTURE ECONOMICS

Alton Parks Cobb ..... La Grange
William Tudor Emmart ..... Winston-Salem
Joe Lee Hinson ..... Stanfield
James Conway Keith ..... Apex
Thomas Cross Mimms ..... Raleigh
James Eugene Penland ..... Hayesville
Walter Henry Pierce ..... Whiteville
Alfred Benjamin Raby ..... Hickory
Thomas Lenoir Stuart ..... Mebane

IN FORESTRY

Andrew George Adman ..... Aliquippa, Pa.
William Craig Aiken ..... Asheville
Leslie Kearns Andrews ..... Mt. Gilead
Olive Thurlow Ballentine ..... Varina
Robert Ortiz Bennett ..... Turkey
Arthur H. Black ..... Scottdale, Pa.
Houston M. Crandall ..... Dixiana, Ala.

Donald Corbett Dixon.....Pittsburgh, Pa.
Wilson Marshall Hill.....Thomasville
Seaman Knapp Hudson.....Raleigh
Oscar Homer James.....Wallace
Charles Star Layton.....Greensboro
Leethan Norwood Massey.....Raleigh
Paul Matthew Obst.....Union City, Conn.
Dalton Murray Parker.....Sunbury
Charles Clarence Pettit, Jr.....Asheville
Charles Gheen Riley.....Pleasant Garden
John Louis Searight.....Hatboro, Pa.
Milburn Everett Sewell.....Moscow, Pa.
James Edwin Thornton.....Hampton, Va.
William Hinton Utley.....Raleigh
John Sharp Vass.....Chattanooga, Tenn.
Landis Henry Welsh.....Wilmington

DEPARTMENT OF EDUCATION

Bachelor of Science

IN AGRICULTURAL EDUCATION

Bonner Bernard Broome.....Monroe
John William Grant.....Garysburg
George Felix Moore.....Cary
Jesse Edwin Shearin.....Littleton
Heath Miller Washam.....Cornelius

IN HIGH SCHOOL TEACHING

William Brantley Aycock.....Selma
Elbert Forte Coates.....Raleigh
Percy Hilbre Cooper.....Greensboro
William C. Creel.....Raleigh
Edith Furr.....Gastonia
Lillian Maie Honeycutt.....Raleigh
Blanche Lucille Monroe.....West End
Nathan Jack Pepper.....New York, N. Y.
Birdena Seligson.....Raleigh
Henry Clarence Stone.....Shallotte
Julian Baird Stovall.....Virgilina, Va.
Elizabeth Ann Valentine.....Raleigh
K. Walton Vann.....Mt. Olive
Milan Zori.....Steubenville, Ohio

IN INDUSTRIAL ARTS

James Thomas Patrick.....Bahama
Preston Bruce Raiford.....Seven Springs
Frederick George Walsh.....New Bedford, Mass.

SCHOOL OF ENGINEERING

Bachelor of Science

IN ARCHITECTURAL ENGINEERING

Kenneth C. Diehl.....Philadelphia, Pa.
Benton Thomas Hickok.....Wytheville, Va.
Herman Russell McLawhorn, Jr.....Wilson

IN CERAMIC ENGINEERING

William Garvin Cole, Jr.....Canton
Thomas Leonard Hurst.....Leonia, N. J.

IN CHEMICAL ENGINEERING

William Allen Bain, Jr.....Norfolk, Va.
Paul Linwood Barnes.....Winston-Salem
Samuel Julian Boyles.....Winston-Salem
Claiborne McMillan Campbell, Jr.....Mocksville
Joseph L. Cannady, Jr.....Wilmington
Jack Greene Copeland, Jr.....Fremont
Rupert Leslie Cox.....Raleigh
Harvey O. Dixon, Jr.....Winston-Salem
Norman Vincent Edmondson.....New Bedford, Mass.
Bruce P. Ellen.....Mars Hill
James Dominic Fallon, Jr.....E. Rutherford, N. J.
George Nathaniel Fortney.....Altoona, Pa.
Worth Hurley Franklin.....Raleigh
W. A. Grigsby.....Asheville
Robert Perry Harris.....Raleigh
Elbert Theo Hollifield.....Little Switzerland
Alden Leonard Johnson.....New Bedford, Mass.
John Daniel Johnson.....Raleigh
Warren Stewart LeRoy.....Goldsboro
Charles Edward Loughlin.....Wilmington
Charles Edwin Lynch.....Wilmington
H. Therrell Michael.....Pleasant Garden
Frederick Douglas Newcomb.....Wilmington
Jay Thelbert Nicholson.....Winston-Salem
Charles D. Norlander, Jr.....New Bedford, Mass.
Dexter Eugene Parham.....Asheville
Richard Moore Pittman.....Rocky Mount
James Edward Porter.....Raleigh
Fred Henry Ramseur, Jr.....Lincolnton
Robert Wilton Seitz.....Camp Hill, Pa.
Ewald G. Spader.....Linden, N. J.
Jesse Coltrane Stansel, Jr.....Allenton
Harry Stokely.....Edenton
Stuart McGuire Thompson.....Lake Waccamaw

Willis Arthur Tripp ..... Greenville
George Howard Trostel ..... Canton
Francis Perry Wilson ..... Middleburg

IN CIVIL ENGINEERING

William Relmond McCraney ..... Vass
Carl Stein ..... Everett, Mass.

IN CIVIL ENGINEERING, CONSTRUCTION OPTION

Jack M. Brown ..... Burlington
Felix Comolli ..... Elberton, Ga.
Hugh Dodd Dorsey ..... Cartersville, Ga.
Charles Bain Fowler ..... Thomasville
James Ray Marks, Jr. ..... Whitakers
Raymond Arthur Murray ..... Linden, N. J.
Fulton Samuel Snyder ..... Winston-Salem
Challey Walter Surratt, Jr. ..... Warsaw
John L. Tyer ..... Fountain
Julian Roscoe West ..... Statesville

IN CIVIL ENGINEERING, SANITARY OPTION

Harry Julian Brown ..... Snow Hill

IN ELECTRICAL ENGINEERING

John Randolph Boykin ..... Charlotte
John Taylor Brown, Jr. ..... Burgaw
Braxton Stanfield Burt ..... Raleigh
John Ward Byrum ..... Tyner
George B. Daniel ..... Rocky Mount
Floyd Wyatt Dickerson ..... Salisbury
James Carldon Hall ..... Autryville
Ernest Lee Hyde ..... Andrews
Kenneth Jacob Krach ..... Baltimore, Md.
James Clark Owens ..... Spruce Pine
Edwin Dean Powell ..... Burnsville
George Henry Schmutz ..... Union City, N. J.
Frederick Thorne Scott ..... Rose Hill
Thomas O'Kelly Smith ..... Apex
Thomas S. Teague ..... Fairmont
Samuel Robert Watson, Jr. ..... Henderson
Homer Baron Whitaker ..... Durham

IN INDUSTRIAL ENGINEERING

Robert Edward Settan ..... Greensboro

IN MECHANICAL ENGINEERING

Martin Ballard Bazemore ..... Wilson
William Dillon Goad ..... Raleigh
Ray Henry Mills ..... Chapel Hill
William Archibald Sherratt ..... Glenolden, Pa.

John Taylor Still, Jr. ..... Durham
Raymond Sylvester Talton ..... Smithfield
William Edwin Teer ..... Durham
Linwood Grafton Tucker, Jr. ..... Monroe
John Winfred Weisner ..... Greensboro

IN MECHANICAL ENGINEERING

AERONAUTICAL OPTION

Edwin Philip Bounous ..... Valdese
Norman Bradford Chaplin ..... S. Weymouth, Mass.
Clifton Arthur Croom ..... Bolton
Gerald William Ford ..... Englewood, N. J.
Rudolph Hovan Hocutt ..... Rocky Mount
Jasper Uriah Teague ..... Henderson
Francis Edward Ticknor ..... Monroe

SCHOOL OF SCIENCE AND BUSINESS

Bachelor of Science

IN BUSINESS ADMINISTRATION

Leemond Edgar Atkinson ..... Kenly
Gibson Vester Barbee ..... Spring Hope
William Ashby Barefoot ..... Asheville
James Madison Britt ..... Newton Grove
Micou Farrar Browne ..... Raleigh
Needham Bryant Dozier, Jr. ..... Rocky Mount
Hubert James Dudley ..... Vanceboro
William Edward Hart ..... Grifton
Clarence Cleveland Hawkins ..... Selma
Stuart Boyce Holoman ..... Raleigh
William Luther Isenhour, Jr. ..... Charlotte
William Yance Joyce, Jr. ..... Leaksville
Donald Cassler Kautz ..... Somerset, Pa.
Harrie Stanley Keck ..... W. Englewood, N. J.
Francis Raymond Kuhn, Jr. ..... Raleigh
Wilton Earl Lang, Jr. ..... Walstonburg
Claud Henry Lloyd, Jr. ..... Spencer
Lorenza Dow Pender, Jr. ..... Raleigh
Irwin Mansfield Porter, Jr. ..... Raleigh
James Davis Renn ..... Raleigh
Meredith William Schnaufer ..... Columbiana, Ohio
Russell Graham Sherrill ..... Raleigh
Charles Wesley Turlington ..... Fayetteville
William John Vann ..... Rich Square
James Arthur Watkins ..... Andrews
Henry Elwin Watson ..... Kenly
Edmund Aloysious Watters ..... Ft. Bliss, Texas
William Hinton Wesson, Jr. ..... Warrenton

Frank McNeill Williams ..... Raleigh
James Francis Wilson ..... Raleigh
Howard Walton Winstead ..... Macclesfield
Rufus Josephus Womble ..... Raleigh

IN BIOLOGY

Walter Nevins Flournoy ..... Raleigh
Mary Elizabeth Matthews ..... Raleigh

IN CHEMISTRY

Arthur William Brown ..... Raleigh
O. Berval Hawkins ..... Mt. Olive
Mary Sue Pearce ..... Raleigh
William David Poole ..... Troy
Martha Williams Smith ..... Raleigh

IN GENERAL BUSINESS

Francis Lane Coachman ..... Moravian Falls
James William Lamberson ..... Raleigh
Albert Pair Park ..... Raleigh

IN INDUSTRIAL MANAGEMENT

Isaac Prevette Duncan ..... N. Wilkesboro
Ambrose Harrell Griffin ..... Edenton
Joel Larry Newsome ..... Fremont
William Marion Shaw ..... Winton
Walter Bernard Wagor ..... Nunda, N. Y.

IN PHYSICS

Henry Braxton Litchfield ..... Raleigh
Richard Greenwood Thomas ..... Gibsonville

SCHOOL OF TEXTILES

Bachelor of Science

IN TEXTILE CHEMISTRY AND DYEING

Glenn Raymond Bellamy ..... Wilmington
William F. Gaston ..... Belmont
James Jackson Griffith, Jr. ..... Kernersville
James Robert Hill ..... Greensboro
Henry Harding Latham ..... Washington
Henry Clinton Liles ..... Goldsboro
Arthur Jackson McGinty ..... Shelby
Alvin Elwood Shumate ..... Leaksville

IN TEXTILE MANUFACTURING

William Powell Banner ..... Greensboro
Bertram H. Bloch ..... New York, N. Y.
Jesse Raymond Chapman ..... Dover

Isaac Boyce Covington, Jr. ..... Wadesboro
William Lawrence Craven ..... Sanford
Elbert Hubbard Denning ..... Albemarle
Ali Giray Emin. ..... Nazilli, Turkey
Alex N. Gee ..... Shelby
Ralph Clarence Going ..... Fieldale, Va.
Charles Emerson Hayworth ..... High Point
Thomas Monroe Jenkins, Jr. ..... Roanoke Rapids
Charles Lee Jennette, Jr. ..... Raleigh
C. Brooks Knight ..... Durham
Richard Hunter Kunkel ..... Pulaski, Va.
Benjamin S. Lambeth, Jr. ..... Thomasville
Edgar D. Landreth, Jr. ..... Greensboro
James Roscoe Lathan. ..... Monroe
Otha Sears McCullers ..... Durham
Henry Hodge Mayo ..... Raleigh
Willard Lee Mills ..... Apex
Joseph D. Moore ..... Forest City
Thomas Jefferson Morris ..... Colerain
William Edwin Moser ..... Monroe
Robert Bruce Murdoch ..... Salisbury
Ralph Robertson Powell ..... Raleigh
Robert L. Rogers ..... Oakboro
James Irving Roy ..... Westmount, Quebec, Canada
Morris Sherrod Spruill ..... Mt. Olive
Thomas Simeon Tolar ..... Fayetteville
Edward C. Treverton ..... Marion
Bernice Lee Ward ..... Pittsboro
Stephen Augustus Ward. ..... Lumberton

IN WEAVING AND DESIGNING

John D'Jlmer Baker ..... Raleigh
Eleanor Mae Greene. ..... Raleigh
Robert Garnett Hodgkin, Jr. ..... Wilmington
Leland McIntosh Howland ..... Henderson
Daniel Alexander McCanless ..... Asheville
Virginia Lee Reinheimer ..... Raleigh
Carl Wynn ..... Spindale

ADVANCED DEGREES

Master of Science

IN CERAMIC ENGINEERING

Charles Washington Owens, Jr. ..... Black Creek
Robert LeGrande Stone ..... Rolla, Mo.

IN PLANT BREEDING

William Eugenius Adams ..... Iredell
James Faucette Bullock ..... Creedmoor

IN TEXTILES

Tarik M. Ismet..... Stanbul, Turkey

IN ZOOLOGY

Peter Gerard Strazza .....New London, Conn.

PROFESSIONAL DEGREE

MECHANICAL ENGINEER

Joseph Turney Banks .....Montgomery, Ala.

HONOR STUDENTS—COMMENCEMENT, 1936

HIGH HONORS

William Craig Aiken
William Allen Bain, Jr.
Bertram H. Bloch
Micou Farrar Browne
Isaac Boyce Covington, Jr.
Max Augustus Culp
Norman Vincent Edmondson
James J. Griffith
Thomas Leonard Hurst
Herman Russell McLawhorn
William David Poole
James Davis Renn
James Irving Roy
Robert Wilton Seitz
Martha Williams Smith
Jasper Uriah Teague
John Winfred Weisner
William Hinton Wesson
Julian Roscoe West

HONORS

Andrew George Adman
Arthur Howard Black
John Randolph Boykin
Arthur William Brown
Jack Greene Copeland, Jr.
Elbert Hubbard Denning
Needham Bryant Dozier, Jr.
Edith Furr
William Forrest Gaston
John William Grant
James Carldon Hall
Seaman Knapp Hudson
Alden Leonard Johnson
Harrie Stanley Keck
Kenneth Jacob Krach
James Roscoe Lathan
Warren Stewart LeRoy
Mary Elizabeth Matthews
Blanche Monroe
Joseph Daniel Moore
Jay Thelbert Nicholson
Charles David Norlander, Jr.
Thomas Fleet Osborne
James Thomas Patrick
Walter Henry Pierce
Irwin Mansfield Porter
Alfred Benjamin Raby
Robert Lincoln Rogers
Herbert Frederick Schoof
Frederick Thorne Scott
Robert Edward Settan
Jesse Edwin Shearin
John Taylor Still, Jr.
Challey Walter Surratt
James Edwin Thornton
Frederick George Walsh
Stephen Augustus Ward
Homer Baron Whitaker

MEDALS AND PRIZES—COMMENCEMENT, 1936

INTERSOCIETY DECLAIMER'S MEDAL (AWARDED BY STATE COLLEGE)
Horace McSwain, Freshman in Textiles, Shelby, N. C.

INTERSOCIETY ORATOR'S MEDAL (AWARDED BY STATE COLLEGE)
Herbert Fisher, Junior in Industrial Management, Raleigh, N. C.

NATIONAL ASSOCIATION OF TEXTILE MANUFACTURERS' MEDAL
Robert L. Rogers, Senior in Textiles, Oakboro, N. C.

ASSOCIATED GENERAL CONTRACTORS' AWARD
Julian Roscoe West, Senior in Construction Engineering, Statesville, N. C.

ELDER P. D. GOLD CITIZENSHIP MEDAL
Robert W. Seitz, Senior in Chemical Engineering, Camp Hill, Pa.

ALUMNI ATHLETIC TROPHY
Stephen V. Sabol, Senior in High School Teaching, Campbell, Ohio

SENIOR ORATOR'S MEDAL (AWARDED BY STATE COLLEGE)
R. J. Womble, Senior in Business Administration, Raleigh, N. C.

DELTA SIGMA PI KEYS
James D. Renn, Senior in Business Administration, Raleigh, N. C.
Micou Brown, Senior in Business Administration, Raleigh, N. C.

STATE COLLEGE WOMAN'S CLUB AWARD
Miss Martha W. Smith, Senior in Chemistry, Route 1, Raleigh, N. C.

SOUTHERN CHAMPIONSHIP CUP IN AFTER-DINNER SPEAKING
J. G. Gaw, Junior in Mechanical Engineering, Greensboro, N. C.

SOUTHEASTERN CHAMPIONSHIP MEDAL IN EXTEMPORANEOUS SPEAKING
J. G. Gaw, Junior in Mechanical Engineering, Greensboro, N. C.

SOUTHEASTERN CHAMPIONSHIP MEDAL IN IMPROMPTU SPEAKING
J. G. Gaw, Junior in Mechanical Engineering, Greensboro, N. C.

STATE OF NORTH CAROLINA PEACE ORATION CUP
J. G. Gaw, Junior in Mechanical Engineering, Greensboro, N. C.

N. C. I. F. A. AND STATE CHAMPIONSHIP MEDAL IN AFTER DINNER SPEAKING
J. G. Gaw, Junior in Mechanical Engineering, Greensboro, N. C.

MEDALS AND PRIZES—SCHOLARSHIP DAY, 1936

PHI KAPPA PHI SCHOLARSHIP MEDALS

Senior: J. D. Renn, Business Administration, Raleigh, N. C.
Junior: I. C. Gregory, Agriculture, Greensboro, N. C.
Sophomore: L. A. Ward, Mechanical Engineering, Bemus Point, N. Y.

J. C. STEELE SCHOLARSHIP CUP

Arthur Dammann, Sophomore in Ceramic Engineering, Amityville, N. Y.

MOLAND-DRYSDALE SCHOLARSHIP CUP

William Arthur Scholes, Freshman in Ceramic Engineering, Detroit, Mich.

SCHOOL OF SCIENCE AND BUSINESS AWARD

W. L. Chambers, Sophomore in Industrial Management, Winston-Salem, N. C.

ALPHA ZETA SCHOLARSHIP CUP

W. L. Colwell, Jr., Sophomore in Forestry, Washington, D. C.

SIGMA TAU SIGMA (TEXTILE) AWARD

R. L. Rogers, Senior in Textile Manufacturing, Oakboro, N. C.

TAU BETA PI AWARDS

J. T. Massey, Sophomore in Electrical Engineering, Raleigh, N. C.
L. C. Brooks, Freshman in Electrical Engineering, Bryson City, N. C.

FRATERNITY SCHOLARSHIP CUP

Alpha Gamma Rho

SIGMA PI ALPHA LANGUAGES AWARD

W. A. Bain, Jr., Senior in Chemical Engineering, Norfolk, Va.

AMERICAN INSTITUTE OF CHEMICAL ENGINEERS AWARD

J. G. Bronson, Sophomore in Chemical Engineering, Durham, N. C.

ORDER OF 30 AND 3

L. C. Brooks, Freshman in Electrical Engineering, Bryson City, N. C.

MU BETA PSI

Paul M. Cox, Senior in Agriculture, Newport News, Virginia

DEGREES CONFERRED—JULY, 1936

Bachelor of Science

AGRICULTURAL EDUCATION

Robert Augustus Currie ..... Raeford
James Fountain Jones ..... Pamplico, S. C.
Jesse Stuart Liles ..... Littleton
James Washington Whiteside, Jr. ..... Uree

HIGH SCHOOL TEACHING

Atlas Russell Buffaloe ..... Apex
Arthur C. Kimrey, Jr. ..... Raleigh
William Carey Lee ..... Fort Benning, Ga.
Stephen Vincent Sabol ..... Campbell, Ohio

INDUSTRIAL ARTS

Harry Lee Bowling ..... Leaksville

ARCHITECTURAL ENGINEERING

Marcus William Hanna ..... Shelby
William C. Litniansky ..... Brooklyn, N. Y.

CERAMIC ENGINEERING

Shipp Cannaday Davis ..... Winston-Salem

CHEMICAL ENGINEERING

James Lewis Hamrick ..... Ellenboro
Clifton Loys Jones, Jr. ..... Farmville
Edwin Oster Thomas ..... Aydlett

MECHANICAL ENGINEERING

James Cranford Butler ..... Clinton
Walter Clark Erwin ..... Morganton
Gordon Smith, Jr. ..... Raleigh

MECHANICAL ENGINEERING, AERONAUTICAL OPTION

Marcellus Garnett Saunders, Jr. ..... Wilmington

BUSINESS ADMINISTRATION

James Turner Buchanan ..... Sanford
William Cecil Callaway ..... Sherrills Ford
George Hendon Currie ..... Clarkton
Lloyd Allyn Julien ..... Charlotte
Daniel Philip Vitello ..... Belleville, N. J.
James Madison Wells ..... Reidsville

CHEMISTRY

Allen Benson Love, Jr. ..... Wilmington
Adlai Stevenson Oliver, Jr. ..... Raleigh

TEXTILE MANUFACTURING

Ashby Lee Baker.....Raleigh
Julian Tucker Baker.....Raleigh
James Kenneth Bruton.....Mt. Gilead
Richard Henry Lewis, Jr.....Oxford
Evan Gordon McIver, Jr.....Durham
Howard Alonzo Rollins.....Mooresboro
Edward Mosely Wiseman.....Danville, Va.

WEAVING AND DESIGNING

William Claudius Bowen.....Smithfield
George Albert Holt.....Burlington

Master of Science

PHYSICS

Kelly George Miles.....Miles

INDEX

DIRECTORY

FACULTY and STUDENTS

OF

NORTH CAROLINA STATE COLLEGE OF AGRICULTURE AND ENGINEERING

OF THE

UNIVERSITY OF NORTH CAROLINA

1936-1937

STATE COLLEGE STATION
RALEIGH

Officers of Administration

For the School Year 1936–1937

Dean of Administration	Colonel J. W. Harrelson
Dean of Students	E. L. Cloyd
Director of Registration	W. L. Mayer
Treasurer	A. F. Bowen

FACULTY COUNCIL

Colonel J. W. Harrelson, Chairman	Dean of Administration
B. F. Brown	Dean of the School of Science and Business
T. E. Browne	Director of the Department of Education
E. L. Cloyd, Secretary	Dean of Students
H. A. Fisher	Head of the Department of Mathematics
W. L. Mayer	Director of Registration and Purchasing Agent
Dr. Z. P. Metcalf	Director of Instruction, School of Agriculture and Forestry.
Thomas Nelson	Dean of the Textile School
Dr. R. F. Poole	Chairman of the Committee on Graduate Instruction
Dr. W. C. Reddick	Dean of the School of Engineering and Director of Instruction.
I. O. Schaub	Dean of the School of Agriculture and Director of Agricultural Extension.
Dr. R. Y. Winters	Director of the Agricultural Experiment Station

OTHER OFFICERS

Alumni Secretary	Fred Dixon
Athletics: Director	Dr. R. R. Sermon
Athletics: Business Manager	J. L. Von Glahn
Dining Hall, Steward	L. H. Harris
Dormitories, Superintendent	T. T. Wellons
Extension, Director	Edward W. Ruggles
Gymnasium, Custodian	Captain Arthur Daman
Laundry, Superintendent	W. L. Godwin
Librarian	W. P. Kellam
Military, P. M. S. & T.	Colonel C. S. Caffery
Music, Director	Major C. D. Kutschinski
Nurse, Head	Miss Ida E. Trollinger
Physician	Dr. A. C. Campbell
Power Plant, Superintendent	A. A. Riddle
Publicity, Director	F. H. Jeter
Self-Help, Director	R. L. Stallings
Service Department, Manager	W. F. Morris
Station Farms, Director	F. E. Miller
Y. M. C. A., Secretary	Edward S. King

Standing Committees

For the School Year 1936–1937

ATHLETICS

J. W. Harrelson, Chairman
H. A. Fisher, Vice-Chairman
A. J. Wilson, Secretary
R. F. Poole
I. O. Schaub

BUILDING AND GROUNDS

M. E. Gardner, Chairman
J. P. Pillsbury, Secretary
J. V. Hofmann
C. L. Mann
W. F. Morris
J. P. Pillsbury
R. F. Ruffner
I. V. Shunk
L. L. Vaughan
J. G. Weaver

CATALOG

H. B. Shaw, Chairman
J. D. Clark
J. B. Cotner
T. R. Hart
W. L. Mayer

COLLEGE EXTENSION

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Organization		*Address*	*Telephone*
Alpha Chi Beta	(Local)		
Alpha Gamma Rho	(Nat'l)		
Alpha Kappa Pi	(Nat'l)	6 Ferndell Lane	3941
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Delta Sigma Phi	(Nat'l)	2004 Hillsboro Street	3582
Kappa Alpha	(Nat'l)	5 Maiden Lane	4567
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Lambda Chi Alpha	(Nat'l)	2407 Clark Avenue	4140
Phi Kappa Tau	(Nat'l)	2405 Clark Avenue	1651
Pi Kappa Alpha	(Nat'l)	1922 Hillsboro Street	4743
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Sigma Nu	(Nat'l)	1301 Hillsboro Street	3407
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Sigma Pi	(Nat'l)	2513 Clark Avenue	1152
Theta Kappa Nu	(Nat'l)	2230 Hillsboro Street	4329
Theta Phi	(Local)	116 Groveland Avenue	4776

Faculty Directory

1936–1937

Adams, A. H.—Clerk, Central Stores, Warehouse. Extension 50.
Clayton, N. C. Telephone 345-6.

Adams, Hazel C. Clerk and Stenographer, Horticulture Department. 304 Polk Hall. Extension 62.
2303 Clark Avenue. Telephone 1099-M.

Alford, A. O.—Assistant Agricultural Editor, Agricultural Extension Service and Experiment Station. 3 Ricks Hall. Extension 67.
1904½ Hillsboro Street. Telephone 4018-J.

Althaus, Kenneth G., Major, Infantry Instructor, Military Department. 2 Holladay Hall (Basement). Extension 56.
1515 Scales Street. Telephone 2792-W.

Altman, L. B.—District Agent, Agricultural Extension. 103 Ricks Hall. Extension 48.
2714 Vanderbilt Avenue. Telephone 963-M.

Anderson, D. B.—Professor of Botany, Botany Department. 104 Polk Hall. Extension 72.
906 Brooks Avenue. Telephone 3957-J.

Anderson, E. H. Instructor, Economics Department. 213 Peele Hall. Extension 6.
401 South McDowell Street.

Anderson W. Heartly Football Coach, Athletic Department, Gymnasium. Extension 12.
1610 St. Mary's Street. Telephone 2879.

Arant, Miss Anamerle District Agent, Home Demonstration Division, Extension Department. 312 Ricks Hall. Extension 68.
407 North Blount Street. Telephone 3246.

Arey, J. A.—In Charge Office of Dairy Extension, Dairy Extension. 118 Polk Hall. Extension 65.
5 Maiden Lane. Telephone 1788-R.

Armstrong, L. O. Associate Professor, Education Department. 205 Holladay Hall. Extension 37.
400 Dixie Trail.

Ashton, D. F.—Teaching Fellow, Zoology and Entomology Department. 105 Zoology Building. Extension 19.
2716 Everett Avenue. Telephone 3251-J.

Bailey, Janue R.—Stenographer, Mechanical Engineering Department. 109 Page Hall. Extension 27.
123 Ashe Avenue. Telephone 2377-W.

Baker, Mrs. Allen L. P. B. X. Operator. 117 Winston Hall.
118 South McDowell Street. Telephone 1812-J.

Ballenger, Stanley T.—Assistant Professor, Modern Language Department. 205 Peele Hall. Extension 11.
3134 Stanhope Avenue. Telephone 2760-W.

Barnes, Mrs. Mamie L.—Warp Drawer, Textile School. Tompkins Hall. Extension 55.
2220 Hillsboro Street. Telephone 2473-J.

Barnhardt, Luther Wesley—Assistant Professor, History and Government. 106 Peele Hall. Extension 1.
211 Groveland Avenue. Telephone 1826.

Bartlett, Grady W.—Instructor, Physics Department. 10 Physics Building. Extension 8.
101 Sixth Dormitory.

Bauerlein, George, Jr.—Instructor, History Department. 105 Peele Building. Extension 1.
2511 Vanderbilt Avenue.

Biggs, Mrs. V. L.—Memo. Operator, Agricultural Extension Service Department. 5 Ricks Hall. Extension 67.
311 Kinsey Street. Telephone 900-J.

Bishop, Mrs. L. W. Office Secretary, Y. M. C. A. Department. First Floor, Y. M. C. A. Building. Telephone (outside) 558.
529 Fayetteville Street (temporary). Telephone 908.

Blair, E. C.—Extension Agronomist, Department of Agronomy. Patterson Hall. Extension 44.
125 Glenwood Avenue. Telephone 4453.

Bledsoe, Miss E. B.—Stenographer, Electrical Engineering Department. 201 Electrical Engineering. Extension 16.
Brooks Avenue. Telephone 4155-J.

Bledsoe, Miss M. C. M. Office Assistant and Stenographer, Animal Husbandry and Dairying Department. 115 Polk Hall. Extension 46.
Brooks Avenue (last home). Telephone 4155-J.

Bledsoe, Miss Mordecai—Stenographer, Extension Service (Tobacco Work). 210 Ricks Hall. Extension 53.
2404 Everette Avenue. Telephone 936-J.

Blount, Fred—Bookkeeper, Boarding Department, Dining Hall. Extension 2568.
203-1911 Dormitory.

Boling, Howard H.—Assistant in Animal Husbandry, Animal Husbandry Department. 217 Polk Hall. Extension 63.
224 South Dormitory.

Boshart, Edward W.—Professor, Education Department. 11 Holladay Hall. Extension 54.
108 Horne Street. Telephone 1569-W.

Bostian, C. H. Assistant Professor, Zoology and Entomology Department. 109 Zoology Building. Extension 19.
210 Chamberlain Street. Telephone 1745-M.

Bowen, A. F. Treasurer of the College. 105-A Holladay Hall. Extension 66. Night and Sunday 2657.
20 Ferndell Lane. Telephone 1654-W.

Bramer, C. R.—Assistant Professor, Civil Engineering. 207 Civil Engineering. Extension 78.
20 Logan Court. Telephone 609-W.

Brannon, C. H.—Extension Entomologist, Zoology Department. 204 Zoology Building. Extension 17.
25 Logan Court. Telephone 2261.

Bridges, W. S.—Assistant Professor, Mechanical Engineering. 107 Page Hall. Extension 27.
125 Chamberlain Street. Telephone 3933-J.

Briggs, H. B. Professor, Mechanical Engineering. 206 Page Hall. Extension 64.
1625 St. Mary's Street. Telephone 4785.

Brigman, H. P.—Clerk, Poultry. 214 Ricks Hall. Extension 70.
213 North Bloodworth. Telephone 2519-W.

Britt, Ruth Parham Clerk, Treasurer's Office. 105 Holladay Hall. Extension 66.
Rosemont Apartment 7, 116 St. Mary's Street. Telephone 3136.

Broaddus, R. G. Agricultural Engineer, Extension Agricultural Engineering Department. 316 Ricks Hall. Extension 57.
700 West Morgan. Telephone 3872.

Brooks, Sallie Assistant Extension Nutritionist, Agricultural Extension, Division of Home Demonstration Work. 202 Ricks Hall. Extension 69.
Section A, 303 Boylan Apartments, Hillsboro Street. Telephone 3060 W.

Brown, B. F. Dean, School of Science and Business. 104 Peele Hall. Extension 1.
801 North Bloodworth Street. Telephone 816-W.

Brown, Harlan C. Circulation Librarian. Library Building. Extension 38.
2715 Vanderbilt Avenue. Telephone 2977.

Brown, Robert R. Assistant Professor, Electrical Engineering Department. 104 E. E. Building. Extension 15.
1520 Carr Street. Telephone 2463-R.

Brown, T. T.—Extension Poultryman, Poultry Department. 115 Ricks Hall. Extension 70.
1709 Bickett Boulevard. Telephone 2854-W.

Browne, T. E.—Dean, Department of Education. 201 Holladay Hall. Extension 37.
1715 Park Drive. Telephone 953 W.

Browne, William Hand, Jr. Professor and Head of Electrical Engineering Department. 203 Building. Extension 16.
408 Dixie Trail. Telephone 3848 J.

Buell, Murray F. Instructor, Botany Department. 3 Patterson Hall. Extension 45.
902 Brooks Avenue.

Bullock, R. C. Assistant Professor, Mathematics Department. 6 Pullen Hall. Extension 8.
402 Horne Street. Telephone 1745-R.

Caffery, Charles S., Colonel, Infantry P. M. S. & T, Military Department. 1 Holladay Hall (Basement). Extension 56.
318 Morrison Avenue. Telephone 2350.

Campbell, A. C.—College Physician. 2 College Infirmary. Telephone (outside) 687.
302 Hawthorne. Telephone 2110.

Carson, W. M.—Loom Fixer, Textile School. Tompkins Hall. Extension 55.
Morrisville, N. C.

Carter, Mary Evelyn—Stenographer, Horticulture and Department of Cotton Fiber Investigations. 304 Polk Hall. Extension 62.
305 South Person Street. Telephone 868-J.

Case, L. I.—Animal Husbandry Extension Department. 216 Polk Hall. Extension 63.
1425½ Park Drive. Telephone 3420-W.

Caveness, H. L.—Assistant Professor, Chemistry Department. 212 Winston Hall. Extension 58.
2607 Vanderbilt Avenue. Telephone 3749-J.

Cell, John W. Assistant Professor, Mathematics Department. 101 Civil Engineering Building. Extension 76.
712 Brooks Avenue. Telephone 1540-R.

Chambers, C. L.—Manager, Book Department, Students' Supply Store. Y. M. C. A. Extension 7.
2302 Hillsboro Street. Telephone 1435-J.

Chapman, W. H.—Graduate Assistant, Department of Agronomy. 24 Patterson Hall. Extension 44.
6 Enterprise Street. Telephone 494.

Chase, Thornton, Major, Infantry—Instructor, Military Department. 14 Holladay Hall (Basement). Extension 56.
1922 St. Mary's Street. Telephone 2326-W.

Clark, Joseph D. Professor, English Department. 106 Pullen Hall. Extension 35.
15 Furches Street, Wilmont. Telephone 1000-M.

Clarke, R. T. Teaching Fellow, Textile School. Tompkins Hall. Extension 55.
124 South Dormitory.

Clarkson, J. M. Assistant Professor, Mathematics Department. 6 Pullen Hall. Extension 8.
2701 Barmettler Street. Telephone 3957-W.

Clegg, R. E.—Graduate Student, Chemistry Department. 202 Winston Hall. Extension 58.
106 Horne Street. Telephone 707-M.

Clement, S. L. Associate Professor, Agricultural Economics Department. 116 Ricks. Extension 60.
122 Park Avenue. Telephone 1037-W.

Clevenger, C. B. Professor of Soils, Department of Agronomy. 18 Patterson Hall. Extension 44.
202 Groveland Avenue. Telephone 3948-W.

Clevenger, Reba Davis—Reference Librarian. Library Building. Extension 38.
202 Groveland Avenue. Telephone 3948 W.

Clevenger, W. L. Professor, Animal Husbandry and Dairying. 211 Polk Hall. Extension 63.
209 South Dormitory.

Cloyd, E. L.—Dean of Students, Administration. 111 Holladay Hall. Extension 18.
2224 Hillsboro Street. Telephone 1815-W.

Coffey, Thelma W. Secretary, Department of Agricultural Extension Service. 208 Ricks Hall. Extension 33.
2607 Clark Avenue. Telephone 2248-W.

Coggin, J. K. Associate Professor, Education Department. 205 Holladay Hall. Extension 37.
Cary. Telephone 32 W.

Cole, Homer Trainer, Athletic Department. Gymnasium. Extension 12.
132 7th.

Collins, E. R.—Agronomist, Department of Agronomy. Patterson Hall. Extension 44.
3410 Hillsboro Street. Telephone 2892-R.

Cook, L. E.—Professor, Department of Education. 203 Holladay Hall. Extension 37.
111 Brooks Avenue. Telephone 3853-J.

Cooper, Albert H. Assistant Professor, Chemical Engineering Department. 6 Winston Hall. Extension 80.
221 West Park Drive. Telephone 2512-W.

Cotner, J. B. Professor, Department of Agronomy. 26½ Patterson Hall. Extension 42.
2718 Clark Avenue.

Cox, Blanche Cashier, Boarding Department, Dining Hall.
1710 Hillsboro Street. Telephone 1872.

Cox, Gladys Stenographer, Office of Dean of Students. 111 Holladay Hall. Extension 18.
220 North East Street. Telephone 1437-J.

Criswell, J. F.—Head Field Officer, Department of North Carolina Soil Conservation Program. West Dining Hall. Outside Telephones 4380, 4381.
115 Chamberlain Street. Telephone 4947.

Current, Miss Ruth District Agent, Home Demonstration Division, Extension Department. 312 Ricks. Extension 68.
1425½ Park Drive. Telephone 3420-W.

Dale, L. P., Sergeant, D. E. M. L.—Administration Assistant, Military Department. 1 Holladay Hall (Basement). Extension 56.
212 Park Avenue.

Daman, A. E., Captain—Custodian, Athletic Department, Gymnasium. Extension 12. Gymnasium Extension 12.

Darst, W. H.—Professor, Agronomy Department. 24 Patterson Hall. Extension 42.
1609 Park Drive. Telephone 2758-J.

Davis, Mrs. Gertrude S.—Stenographer, Textile School. 2 Tompkins Hall. Extension 55.
17 Glenwood Avenue. Telephone 1577-R.

Dearstyne, R. S.—Professor, Poultry Department. 216 Ricks Hall. Extension 70.
921 West South Street. Telephone 1337-W.

Denmark, L. P.—Instructor, Mechanical Engineering Department. 204 Page Hall. Extension 64.
2247 Circle Drive. Telephone 3444-W.

Derieux, J. B. Professor, Physics Department. 110 Physics Building. Extension 9 2 rings.
2802 Hillsboro Street. Telephone 3288-W.

Derrick, Anna Lee—Stenographer, Agricultural Extension Service, Ediphone Department. 203 Ricks Hall. Extension 33.
103 Harrison Avenue. Telephone 1120-J.

Dixon, A. A. Associate Professor, Physics Department. 208 Physics Building. Extension 9.
14 Dixie Trail. Telephone 1348-J.

Dixon, Fred—Director Sports, Publicity, and Acting Alumni Secretary. 13 Ricks Hall. Extension 34, and Holladay Hall, Extension 32.
17 Enterprise Street. Telephone 3860.

Doak, C. G.—Assistant Professor, Physical Education. 1 Gymnasium. Extension 12.
130 Woodburn Road. Telephone 1188-M.

Eaddy, H. E.—Research Fellow, Botany Department. 49 Patterson Hall. Extension 45.
2316 Hillsboro Street. Telephone 3809-W.

Edgerton, Agnes Stenographer. Treasurer's Office. 105 Holladay Hall. Extension 66, Outside 2657.
623½ West Jones Street. Telephone 1385-W.

Edwards, J. M., Jr. Instructor, Architectural Engineering Department. 315 Physics Building. Extension 29.
Montgomery Street. Telephone 775-J.

Elliott, Mrs. Christine Coffey Cataloger. Library Building. Extension 38.
2100 Hillsboro Street. Telephone 1862-W.

Ellis, Howard M.—Agricultural Engineer, Extension Agricultural Engineering Department. 318 Ricks Hall. Extension 57.
2714 Vanderbilt Avenue.

Etchells, J. L. Assistant Bacteriologist, U. S. D. A., Food Research Division. 312 Polk Hall. Extension 62.
126 Forest Road. Telephone 2744-R.

Eyster, H. C. Instructor, Botany Department. 4 Patterson Hall. Extension 45.
1816 Park Drive. Telephone 1212-J.

Farnham, F. R.—Extension Dairyman, Dairy Extension Department. 113 Polk Hall.
Charlotte, N. C.

Feltner, C. E.—Instructor, Mechanical Engineering Department. 206 Page Hall. Extension 64.
214½ Cox Avenue. Telephone 4519-M.

Ferguson, B. T.—District Agent, Agricultural Extension. 103 Ricks Hall. Extension 48.
2807 White Oak Road. Telephone 3526-J.

Ferguson, J. C.—Instructor, Mechanical Engineering Department. Shop Building. Extension 25.
2510 Vanderbilt Avenue. Telephone 3749-M or 3138.

Fisher, H. A.—Professor and Head of Mathematics Department. 207 Page Hall. Extension 23.
125 Brooks Avenue. Telephone 3663-J.

Flanders, C. A.—Instructor, Chemistry Department. 203 Winston Hall. Extension 58.
126 Forest Road. Telephone 2744-R.

Fleming, Margaret K. Statistician, Agricultural Economics. 120 Ricks Hall. Extension 60.
130 Forest Road. Telephone 2744-W.

Floyd, E. Y.—Tobacco Specialist, Extension Service. 210 Ricks Hall. Extension 53.
125 Glenwood Avenue. Telephone 4453.

Fontaine, James—Assistant Professor, Civil Engineering Department. 122 C. E. Building. Extension 78.
2712 Everett Avenue. Telephone 3251-W.

Forncs, G. G. Instructor, Mechanical Engineering Department. 204 Page Hall. Extension 27.
Knightdale, N. C.

Forster, G. W. Head, Agricultural Economics and Rural Sociology Department. 112 Ricks Hall. Extension 60.
1924 Sunset Drive. Telephone 3509-R.

Fort, Mary Gregory—Stenographer, Agricultural Education. Third Floor, Holladay Hall. Extension 71.
315 North Boundary Street. Telephone 946-R.

Fort, Nellie Secretary and Clerk, Animal Industry Department. 215 Polk Hall. Extension 63.
315 North Boundary Street. Telephone 946-R.

Foster, J. E. Associate Professor, Animal Industry Department. 217 Polk Hall. Extension 63.
3209 Hillsboro Street. Telephone 2760-M.

Fountain, A. M.—Assistant Professor, English Department. 101 Pullen Hall. Extension 35.
312 Forest Road. Telephone 2893-J.

Fouraker, R. S. Professor, Electrical Engineering Department. 102 E. E. Building. Extension 15.
601 Brooks Avenue. Telephone 4468-J.

Frazelle, Sarah Lane Clerk, Agricultural Extension Service. 5 Ricks Hall. Extension 67.
3 East Jones Street. Telephone 2422.

Fulton, B. B.—Research Entomologist, Zoology Department. 208 Zoology Building. Extension 19.
600 Brooks Avenue. Telephone 3957-M.

Gaither, E. W. District Agent, Agricultural Extension Department. 101 Ricks Hall. Extension 48.
Carova, Western Boulevard. Telephone 53-F-03.

Gantt, Elizabeth T.—Stenographer, Agricultural Extension Service, Ediphone Department. 203 Ricks Hall. Extension 33.
2303½ Clark Avenue. Telephone 2426-J.

Gardner, M. E.—Professor and Head, Department of Horticulture. 304 Polk Hall. Extension 62.
2308 Bedford Avenue. Telephone 4468-R.

Garodnick, I. O.—Teaching Fellow, Modern Language Department. Peele Hall. Extension 11.
301 Park Avenue. Telephone 1640-M.

Garrison, K. C.—Professor, Psychology Department. H-3 Holladay Hall. Extension 54—2 rings.
123 Chamberlain Street. Telephone 3894-R.

Gauger, H. C.—Assistant Professor, Poultry Department. 218 Ricks Hall. Extension 70.
1½ Chamberlain Street.

Geile, W. G. Professor, Civil Engineering Department. 208 C. E. Building.
107 Berkshire Road. Telephone 2547-M.

Gilbert, Clara L.—Stenographer, Agricultural Economics and Rural Sociology. 114 Ricks Hall. Extension 60.
130 Forest Road. Telephone 2744-W.

Giles, G.—Assistant Professor, Agricultural Engineering, Agronomy Department. 29½ Patterson Hall. Extension 42.
3151 Stanhope Avenue. Telephone 3308-R.

Glenn, Karl B.—Assistant Professor, Electrical Engineering Department. 104 E. E. Building. Extension 15.
309 North Bloodworth Street. Telephone 995-W.

Godfrey, Robert K. Teaching Fellow, Botany Department. 2 Patterson Hall. Extension 45.
123 Brooks Avenue. Telephone 3663-W.

Goldston, Addie May Stenographer, Ceramic Engineering (afternoon), Industrial Engineering (morning). C. E. Building. Extension 78.
20 Maiden Lane. Telephone 2436-W.

Goodman, John W. Assistant Director of Agricultural Extension, Agricultural Extension Service. 104 Ricks Hall. Extension 51.
2113 Woodland Avenue. Telephone 3381-J.

Gordon, Miss Pauline E. Extension Specialist, Home Demonstration Division, Extension Department. 313 Ricks Hall. Extension 68.
221 Hawthorne Road. Telephone 846-R.

Graeber, R. W. Extension Forester, Extension Forestry Department. 305 Ricks Hall. Extension 47.
303 Hillcrest Road. Telephone 2119-R.

Grant, M. C.—College Plumber, Service Department and Central Stores. Warehouse. Extension 50.
Campus. Telephone 3756.

Grantham, Mrs. Mary S. X-Ray and Laboratory Technician, Infirmary. Telephone 687.
Infirmary. Telephone 687.

Greaves, R. E. Associate Professor, Poultry Department. 317 Ricks Hall. Extension 70.
2512 Clark Avenue. Telephone 3763-J.

Greaves-Walker, A. F.—Professor, Ceramic Engineering, Ceramics Department. Extension 28.
305 Forest Road. Telephone 1823-J.

Greene, Minda—Stenographer, School of Science and Business. 104 Peele Hall. Extension 1.
2303 Clark Avenue. Telephone 1099-M.

Greene, R. E. L.—Assistant, Farm Management Research, Agricultural Economics Department. 119 Ricks Hall. Extension 60.
R. F. D. No. 3, Raleigh, N. C. Telephone 58-F-21.

Green, R. W. Associate Professor, Economics Department. 107 Peele Hall. Extension 1.
2818 White Oak Road. Telephone 3638-W.

Gregory, David Research Fellow, Poultry Department. 213 Ricks Hall. Extension 70.
4 Maiden Lane. Telephone 65.

Griffin, Robert J. Instructor, Chemistry Department. 210 Winston Hall. Extension 58.
115½ Park Avenue.

Grimshaw, A. H. Associate Professor, Chemicals and Dye, Textile School. Basement, Textile Building. Extension 55.
Mansion Park Hotel. Telephone 1100.

Grinnells, C. D.—In Charge Office of Dairy Investigations, Animal Industry Department. 214 Polk Hall. Extension 63.
409 Dixie Trail. Telephone 3848-W.

Hackney, J. Carlyle—Teaching Fellow, Chemistry Department. 202 Winston Hall.
311 Hillcrest Road. Telephone 1411-W.

Haig, F. M.—Associate Professor, Animal Husbandry and Dairying Department. 114 Polk Hall. Extension 46.
1803 Fairview Road. Telephone 3054-J.

Halverson, J. O.—In Charge of Animal Nutrition Research, Agricultural Experiment Station, Animal Husbandry Department. 315 Polk Hall. Extension 21.
2813 Mayview Road and Brooks Avenue. Telephone 3661-M.

Hand, Miss Douglas Stenographer, Home Demonstration Division, Extension Department. 315 Ricks Hall. Extension 68.
A-303 Boylan Apartment, Hillsboro Street. Telephone 3060-W.

Harden, Katherine Stenographer, Registration Office. 208 Holladay Hall. Extension 3.
1615 Hillsboro Street. Telephone 617-W.

Harkema, Reinard Instructor, Zoology Department. 202 Zoology Building. Extension 19.
Cary, N. C.

Harrelson, J. W. Dean of Administration. Holladay Hall. Extension 26.
1903 Hillsboro Street. Telephone 2126.

Harrill, L. R. State 4-H Club Leader, Agricultural Extension Division. 105 Ricks Hall. Extension 52.
1626 Park Drive. Telephone 3349-J.

Harris, L. H.—Steward, Boarding Department, Dining Hall. Outside Telephone 2568.
Dining Hall. Telephone 2568.

Harris, Mrs. R. J. Teller, Treasurer's Office. 105 Holladay Hall. Extension 66.
Western Boulevard. Telephone 3250-R.

Harrison, Thomas P. Professor, English Department. 102 Pullen Hall. Extension 35.
1800 Park Drive. Telephone 3441-W.

Hart, T. R.—Associate Professor of Weaving and Designing, Textile School. Tompkins Hall. Extension 55.
501 West Whitaker Mill Road. Telephone 4112-J.

Hartley, Lodwick C. Assistant Professor, English Department. 103 Pullen Hall. Extension 35.
205 Woodburn Road. Telephone 2609-W.

Hayes, Arthur C.—Instructor, Textile Chemistry and Dyeing. Tompkins Hall. Extension 55.
2404 Hillsboro Street.

Heartt, Mrs. C. I.—Secretary, College Extension Division. 201 Library Building. Extension 40.
318 East Edenton Street. Telephone 1854-W.

Heck, Charles M. Professor, Physics Department. 112 Physics Building. Extension 9.
200 Hawthorne Road. Telephone 3252-J.

Henson, Mrs. Ruth S. Bookkeeper, Treasurer's Office. 105 Holladay Hall. Extension 66.
511 Oakwood Avenue. Telephone 3052-J.

Hicks, W. N.—Assistant Professor, Religion and Sociology. 204 Peele Hall. Extension 11.
2505 Vanderbilt Avenue. Telephone 707-R.

Hill, Miss Randolph—Stenographer, Department of Agronomy. 19 Patterson Hall. Extension 44.
2012 Hillsboro Street. Telephone 1062-W.

Hilton, J. T.—Professor of Yarn Manufacturing, Textile School. Tompkins Hall. Extension 55.
1610 Ambleside Drive. Telephone 1065-W.

Hiner, Foye Pate Cashier, Boarding Department. Dining Hall.
206 Ashe Avenue. Telephone 943-W.

Hinkle, L. E. Professor, Modern Languages. 205 Peele Hall. Extension 11.
1714 Park Drive. Telephone 1123-W.

Hinson, Edward G.—Assistant Steward, Boarding Department. Dining Hall. Telephone 2568.
Dining Hall. Telephone 2568.

Hocutt, Mrs. J. I.—Record Clerk, Office of Registration. 208 Holladay Hall. Extension 3.
220 North East Street. Telephone 1437-J.

Hofmann, Julius V.—Director of Forestry School and Professor of Forestry. 301 Ricks Hall. Extension 47.
904 New Bern Avenue. Telephone 3506-W.

Hostetler, Earl H.—Professor, Animal Husbandry. 215 Polk Hall. Extension 63.
3010 White Oak Road. Telephone 1040-J.

Hudgins, Madge Stenographer, Agronomy Department. 24 Patterson Hall. Extension 42.
402 Horne Street. Telephone 2708-J.

Hudson, C. R.—State Agent, Negro Work, Agricultural Extension Service. 117 Ricks Hall. Extension 70.
2316 Hillsboro Street. Telephone 2055.

Hunt, Elizabeth Stenographer, Department of Education. 203 Holladay Hall. Extension 37.
612 West Lane Street. Telephone 4240.

Hunter, Miss Willie N.—Extension Specialist, Home Demonstration Division, Extension Department. 311 Ricks Hall. Extension 68.
1804 Hillsboro Street. Telephone 352.

Hutchinson, H. H.—Audit Clerk, Treasurer-Comptroller's Office. 105 Holladay Hall. Extension 66.
7 Enterprise Street. Telephone 3224-J.

Hutchison, J. J.—Associate Professor, Research, Poultry Department. 216 Ricks Hall. Extension 70.
123 Brooks Avenue. Telephone 3663-W.

Ivey, L. L. Manager, Students' Supply Store. Y. M. C. A. Extension 7.
202 East Park Drive. Telephone 1948-M. Outside Telephone 1930.

Jenkins, Mrs. Berry G. Stenographer, Civil Engineering Department and North Carolina Board of Registration for Engineers and Land Surveyors. 210 and 112 C. E. Building. Extension 78.
2512 Stafford Avenue. Telephone 1386.

Jeter, Frank H. Editor, School of Agriculture, Director, State College News Bureau. 1 Ricks Hall. Extension 67.
304 Forest Road. Telephone 2012-W.

Johansen, J. W. Extension Economist, Farm Organization and Credit, Agricultural Economics and Rural Sociology Department. 116 Ricks Hall. Extension 60.
402 Horne Street. Telephone 1745 W.

Johnson, J. P. Instructor, Mechanical Engineering Department. 206 Page Hall. Extension 64.
Garner, N. C. Telephone 65-F-20.

Johnson, Miss Robbie Secretary to Dr. M. Taylor Matthews, Rural Sociology. 207 Polk Hall. Extension 41.
321 East Morgan Street. Telephone 463-W.

Johnson, Theodore S.—Professor, Civil Engineering Department. 306 Physics, E. E. Building. Telephone 4422.
1026 Cowper Drive. Telephone 3593.

Jones, A. D.—Assistant Professor, Chemistry Department. 106 Winston Hall. Extension 58.
2308 Vandyke Avenue.

Jones, D. E.—Extension Specialist. Agricultural Engineering Department. 318 Ricks Hall. Extension 57.
314 East Park Drive. Telephone 2788 R.

Jones, Ivan D.—Research in Horticulture, Horticulture Department. 305 Polk Hall. Extension 62.
616 Brooks Avenue. Telephone 1942-M.

Jones, Margaret Stenographer, Poultry Department. 216 Ricks Hall. Extension 70.
2512 Clark Avenue. Telephone 3763-W.

Jones, Robert E, Major, Infantry Instructor. Military Department. 12 (Basement) Holladay Hall. Extension 56.
1907 Park Drive. Telephone 4916.

Jordan, W. E. Associate Professor. Chemistry Department. 207 Winston Hall. Extension 58.
902 Brooks Avenue. Telephone 1540-W.

Joyner, Lucille Stenographer, Chemical Engineering Department. 112 Winston Hall. Extension 80.
1806 Hillsboro Street. Telephone 827-J.

Judd, Mrs. Lilly B.—Stenographer, Agricultural Experiment Station. 107 Ricks Hall. Extension 31.
309 East Morgan Street. Telephone 4512-W.

Keever, L. M. Assistant Professor, Electrical Engineering Department. 106 Electrical Engineering Building. Extension 15.
2200 Carroll Drive. Telephone 2912-M.

Kellam, W. P.—Librarian. Library Building. Extension 68.
2410 Everett Avenue. Telephone 1512-R.

Kerr, E. G.—Superintendent College Dairy Farm, Department of Animal Husbandry and Dairying. Extension 46.
Dairy Farm Cottage.

Kerr, Thomas Associate Cytologist in the U. S. D. A., Cotton Fiber Investigations. 104 Polk Hall. Extension 72.
576 North Person Street.

Kime, P. H. Agronomist, Department of Agronomy. 25 Patterson Hall. Extension 44.
728 West Cabarrus. Telephone 4449-W.

Kimrey, A. C. Extension Dairyman, Dairy Extension Department. 116 Polk Hall. Extension 65.
220 East Park Drive. Telephone 3294-M.

King, Edward S. General Secretary, Y. M. C. A. Second Floor, Y. M. C. A. Building. Telephone 558.
121 Chamberlain Street. Telephone 322.

King, Nora Lillington Secretary to Dean of Administration, Administration Department. Holladay Hall. Extension 26.
205 Woodburn Road. Telephone 2609-W.

Kluttz, R. L.—Assistant Extension Editor, Agricultural Extension Service. 9 Ricks Hall. Extension 67.
406 Capital Apartments. Telephone 1611.

Knight, Gene Extension Radio Editor, Agricultural Extension Service. 11 Ricks Hall. Extension 67.
213 Woodburn Road. Telephone 827-M.

Knox, R. B., Jr.—Reporter, College News Bureau. 13 Ricks Hall. Extension 34.
10 Enterprise Street. Telephone 534.

Koken, M. R. Assistant Football Coach, Athletic Department. Gymnasium. Extension 12.
1512 Carr Street.

Kosky, Edward Assistant Football Coach, Athletic Department. Gymnasium. Extension 12.
2226 Circle Drive. Telephone 3488 M.

Kutschinski, Christian D. Director, Music Department. 10 Holladay Hall. Extension 30.
1805 Wills Avenue. Telephone 4703.

Ladu, A. I.—Associate Professor, English Department. 105 Pullen Hall.
A-3 Wilmot Apartments. Telephone 3233-W.

Lambe, C. M.—Instructor, Civil Engineering Department. 205 Civil Engineering Building. Extension 78.
413 Calvin Road. Telephone 1983.

Lancaster, F. W.—Assistant Professor, Physics Department. 206 Physics and Electrical Engineering Building. Extension 9 (3 rings).
2403 Everett Avenue. Telephone 982 W.

Lang, A. G.—Agent of the U. S. D. A., Cotton Fiber Investigations. 104 Polk Hall. Extension 72.
2716 Everett Avenue. Telephone 3251-J.

Lauer, B. E.—Assistant Professor, Chemical Engineering Department. 112 A Winston Hall. Extension 80.
1618 Hillsboro Street. Telephone 326.

Lawrence, J. B.—Assistant Freshman Football Coach, Athletic Department. Gymnasium. Extension 12.
Flat Iron Apartments. Telephone 4058-J.

Lay, George B.—Rodent Control Leader, Agricultural Extension Department, U. S. Biological Survey. 107 Ricks Hall and Zoology Building. Extension 31.
Asbury Park. Telephone 72 F-14 (County).

Leager, Marc—Associate Professor, Business Administration. 116 Peele Hall. Extension 1.
16 Maiden Lane. Telephone 1862-R.

Lee, F. A., Jr.—Assistant Professor, Mathematics Department. 207 Page Hall. Extension 23.

Lee, William D.—Extension Soil Conservationist, Agricultural Extension Service. 206 Ricks Hall. Extension 33.

Lefort, Mrs. C. R.—Clerk, Treasurer's Office. 105 Holladay Hall. Extension 66.
821 Hillsboro Street. Telephone 2359.

Lefort, C. R.—Assistant to Dean of Students, Administration Department. 111 Holladay Hall. Extension 18.
821 Hillsboro Street. Telephone 2359.

Lehman, S. G.—Professor of Plant Pathology, Department of Botany. 32 Patterson Hall. Extension 45.
123 Brooks Avenue. Telephone 3663-W.

Leighton, Henry P., Sergeant, D. E. M. L.—Administration Assistant, Military Department. 1 Holladay Hall (Basement). Extension 56.
218 Cox Avenue.

Levine, Jack—Assistant Professor, Mathematics Department. 205 Page Hall. Extension 23.
117 Hillcrest Road. Telephone 2108-M.

Lewis, J. G.—Instructor, Textile School, Second Floor, No. 2 Tompkins Hall. Extension 55.
413 East Lane Street. Telephone 931-M.

Lockmiller, David A.—Instructor, History and Political Science. 106 Peele Hall. Extension 1.
304 Hillcrest Road. Telephone 896-R.

Lovvorn, R. L.—Agronomist, Department of Agronomy. Patterson Hall. Extension 44.
303 Hillcrest Road. Telephone 2119-R.

Lutz, J. F.—Associate Professor of Soils, Department of Agronomy. 18 Patterson Hall. Extension 44.
324 South Dormitory.

Lynn, Mrs. Virginia F.—Stenographer, Department of Agricultural Economics and Rural Sociology. 120 Ricks Hall. Extension 60.
R. F. D. No. 1, Neuse, N. C. (Wake Forest Road).

McCrary, O. F.—District Agent, Agricultural Extension. 101 Ricks Hall. Extension 48.
1029 West South Street. Telephone 1995.

McCullough, T. P., Jr.—Teaching Fellow, Physics Department. 10 Physics Building. Extension 8.
215 Park Avenue.

McCutcheon, F. H.—Assistant Professor, Zoology and Entomology Department. 209 Zoology Building. Extension 19.
Cary, N. C. Telephone 6-W.

McGehee, William—Instructor, Psychology Department. 3 Holladay Hall. Extension 54—2 rings.
North Wilmington Street. Telephone 2792.

McIntyre, Mrs. F. McP.—Secretary, Chemistry Department. 219 Winston Hall. Extension 58.
4 Maiden Lane. Telephone 65.

McIver, Miss Julia—Assistant Extension Specialist in Clothing, Home Demonstration Division, Extension Department. 311 Ricks Hall. Extension 68.
A-303 Boylan Apartment, Hillsboro Street. Telephone 3060-W.

McKimmon, Mrs. Jane S.—State Home Demonstration Agent and Assistant Director Extension, Agricultural Extension, Division of Home Demonstration Work. 201 Ricks Hall. Extension 69.
Section B-Apartment 102, Boylan Apartment, Hillsboro Street. Telephone 3313.

McKimmon, Mrs. K. C. Clerk, Department of Agronomy. 19 Patterson Hall. Extension 44.
122 Park Avenue. Telephone 1037-W.

McLean, Grayce Clerk, Treasurer's Office. 105-A Holladay Hall. Extension 66.
1508 Hillsboro Street. Telephone 1792.

McLean, Susie Stenographer, Agricultural Extension Service. 104 Ricks Hall. Extension 51.
1827 Glenwood Avenue. Telephone 3365.

McNatt, E. B.—Assistant Professor, Economics Department. 203 Peele Hall. Extension 11.
113 Chamberlain Street. Telephone 3667-M.

McSwain, C. W. Research in Cotton Utilization, Textile School. 3 Tompkins Hall, Second Floor. Extension 55.
602 South Salisbury Street. Telephone 934-R.

Mann, Carroll L. Professor, Head of Civil Engineering Department. 211 Civil Engineering Building. Extension 78.
1702 Hillsboro Street. Telephone 929-M.

Mann, Julian E.—In Charge, Extension Studies, Agricultural Extension Service. 108-110 Ricks Hall. Extension 52.
101 Horne Street. Telephone 3857-J.

Marshall, R. P. Assistant Professor, English Department. 2 Pullen Hall. Extension 35.
2617 Leesville Road. Telephone 3385-M. Mail: 215 Hillcrest Road.

Mason, Eleanor H. Secretary, Agricultural Extension, Division of Home Demonstration. 201 Ricks Hall. Extension 69.
128 North Wilmington Street. Telephone 606.

Mason, Mrs. Richard H.—Stenographer, Extension Service. 111 Ricks Hall. Extension 49.
128 North Wilmington Street. Telephone 606.

Matheson, H. D.—Teaching Fellow, Chemistry Department. 203 Winston Hall. Extension 58.
2316 Hillsboro Street. Telephone 2055.

Matthews, M. Taylor Assistant Professor, Rural Sociology Department. 207 Polk Hall. Extension 41.
1904 Hillsboro Street. Telephone 4584-J.

Maupin, C. J.—Extension Poultryman, Poultry Department. 115 Ricks Hall. Extension 70.
2806 Hillsboro Street. Telephone 1086-M.

Mayer, W. L.—Director of Registration and Purchasing Agent. 208 Holladay Hall. Extension 3.
20 Bagwell Avenue. Telephone 3758-J.

Mayes, Allene—Associate Nurse. Infirmary Building. Telephone 687.
Infirmary. Telephone 687.

Meacham, E. H.—Assistant Farm Management Supervisor, Agricultural Extension Service. 208 Ricks Hall. Extension 33.
783 Hillsboro Street. Telephone 3284.

Meacham, F. B. Assistant Professor, Zoology and Entomology Department. 106 Zoology Building. Extension 19.
2716 Everett Avenue. Telephone 3251-J.

Meacham, Mrs. Nelle Stenographer, Home Demonstration Division, Extension Department. 315 Ricks Hall. Extension 68.
1508 Hillsboro Street. Telephone 1792.

Meares, J. S Assistant Professor, Physics Department. 206 Physics and Electrical Engineering Building. Extension 9 3 rings.
2408 Everett Avenue. Telephone 936-W.

Mercer, Susannah S.—Stenographer, Highway Engineering and Education Department. 209 Civil Engineering Building. Extension 78. 11 Holladay Hall. Extension 54.
1700 Park Drive. Telephone 3477-M.

Metcalf, Z. P.—Professor of Zoology; Director of Instruction, School of Agriculture and Forestry. 101 Zoology Building. Extension 19.
315 Forest Road. Telephone 833-W.

Middleton, G. K.—Agronomist, Department of Agronomy. 24 Patterson Hall. Extension 44.
2830 Barmettler Street. Telephone 4063-R.

Miller, J. F.—Professor, Physical Education Department, and Director of Intramural Athletics. Gymnasium. Extension 12.
191 Chamberlain Street. Telephone 799-J.

Miller, William D.—Assistant Professor, Forestry Department. 303 Ricks Hall. Extension 47.
215 Hillcrest Road. Telephone 2717-W.

Mitchell, T.—Associate Professor, Zoology Department. 103 Zoology Building.
123 New Bern Avenue. Telephone 2222.

Moen, R. O.—Professor, Department of Business Administration. 107 Peele Hall. Extension 1.
3202 Clark Avenue. Telephone 1689-J.

Moore, J. H.—Cotton Technologist, Department of Agronomy. 29 Patterson Hall. Extension 44.
2807 Bedford Avenue. Telephone 4468-M.

Moore, James L.—Assistant Dairy Research, Animal Industry Department, 214 Polk Hall. Extension 63.
222 Chamberlain Street. Telephone 3809-R.

Moore, Mrs. James L.—Secretary, Dairy Extension. 117 Polk Hall. Extension 65.
222 Chamberlain Street. Telephone 3809-R.

Morris, Mrs. Cornelia C.—Extension Economist in Food Conservation and Marketing, Agricultural Extension, Division of Home Demonstration Work. 200 Ricks Hall. Extension 69.
Section A-Apartment 101, Boylan Apartments, Hillsboro Street. Telephone 3988-W.

Morris, W. F.—Director, Service Department. Warehouse. Extension 50.
2509 Vanderbilt Avenue. Telephone 1607-M.

Morrow, E. B.—Associate Horticulturist, Horticulture Department. 307 Polk Hall. Extension 62.
14 Enterprise Street. Telephone 4197-W.

Morton, Mrs. Laura B. Stenographer, Agricultural Extension Service, Ediphone Department. 203 Ricks Hall. Extension 33.
121 Halifax Street. Telephone 1572.

Mumford, C. G.—Associate Professor, Mathematics Department. 6 Pullen Hall. Extension 8.
712 Brooks Avenue. Telephone 1540-R.

Nahikian, H. M.—Instructor, Mathematics Department. 101 Civil Engineering Building. Extension 76.
3306 Hillsboro Street. Telephone 3253-J.

Nance, R. E.—Assistant Professor, Animal Husbandry Department. 218 Polk Hall. Extension 63.
Raleigh, N. C., Route No. 4.

Nash, T. L.—Instructor, Electrical Engineering Department. Room A, Electrical Engineering Building. Extension 15.
307 West Park Drive. Telephone 896-W.

Nelson, Thomas—Dean, Textile School. 1 Tompkins Hall. Extension 55.
16 Enterprise Street. Telephone 4197-J.

Newman, Mrs. L. S. Stenographer and Clerk, Forestry Department. 301 Ricks Hall. Extension 47.
213 South McDowell Street. Telephone 2056 W.

Newton, Miss Foy Stenographer, Agricultural Extension. 101 Ricks Hall. Extension 48.
319 New Bern Avenue. Telephone 1171-M.

Newton, G. L. Herdsman, Department of Animal Husbandry. 215 Polk Hall. Extension 63.
Night Telephone 3756.

Niswonger, H. R. Extension Horticulturist, Horticulture Department. 302 Polk Hall. Extension 62.
308 Forest Road. Telephone 2684-W.

Owens, O. P.—Research Fellow, Botany Department. Patterson Hall. Extension 45.
13 South Dormitory.

Page, L. O.—Herdsman, Animal Husbandry Department. 215 Polk Hall. Extension 63.

Page, R. H.—Assistant Extension Forester, Extension Forestry Department. 305 Ricks Hall. Extension 47.
2222 Circle Drive. Telephone 2019 J.

Paget, E. H. Associate Professor, English Department. 109 Pullen Hall. Extension 35.
114 Park Avenue. Telephone 3546-J.

Park, H. V. Instructor, Mathematics Department. 6 Pullen Hall. Extension 8.
404 Chamberlain Street. Telephone 799-W.

Parker, J. M., III Instructor, Geology Department. Primrose Hall. Extension 79.
206 East Park Drive. Telephone 1225 J.

Parkinson, L. R. Instructor, Mechanical Engineering, Aeronautics Department. 104 Page Hall. Extension 27.
1710 Park Drive. Telephone 3477 W.

Parrish, C. F. Extension Poultryman, Poultry Department. 115 Ricks Hall. Extension 70.
2820 Fairground Avenue. Telephone 4063-J.

Pastore, Patrick N. Teaching Fellow, Industrial Arts Department. H-11 Holladay Hall. Extension 54.
109 South Dormitory.

Paulson, J. D. Assistant Professor, Architectural Engineering Department. 311 Physics-Electrical Engineering Building. Extension 29.
2705 Everett Avenue. Telephone 845-M.

Pearsall, R. J. Assistant Professor, Electrical Engineering Department. 106 Electrical Engineering Building. Extension 16.
116 Halifax Street.

Pendergraft, Josephine—Stenographer, Zoology and Entomology Department. 101 Zoology Building. Extension 19.
119 Chamberlain Street. Telephone 799-R.

Peterson, Arnold—Superintendent of Grounds, Service Department. Warehouse. Extension 50.
1307 Jackson Street. Telephone 2048.

Phelps, W. R. Clerk, Dormitories and Central Stores. Warehouse. Extension 50.
217½ North Bloodworth Street. Telephone 4334-R.

Phillips, L. B.—Clerk, Agricultural Extension Service. 20 Ricks Hall. Extension 34.
17 Enterprise Street. Telephone 3860.

Pierce, W. H.—Assistant in Farm Management, Agricultural Extension Service. 208 Ricks Hall. Extension 33.
115 Forest Road. Telephone 3378-W.

Piland, J. R. Assistant Soil Chemist, Department of Agronomy. 15 Patterson Hall. Extension 44.
5 Pogue Street. Telephone 2650-W.

Pillsbury, J. P.—Professor, Horticulture Department. 301 Polk Hall. Extension 60.
2715 Hillsboro Street. Telephone 1210-J.

Poole, R. F.—Professor of Plant Pathology and Chairman of Committee on Graduate Instruction, Department of Botany. 44 Patterson Hall. Extension 45.
1 Hope Street. Telephone 1920-J.

Randall, G. O.—Associate Professor, Department of Horticulture. 305 Polk Hall. Extension 62.
5 Dixie Trail. Telephone 4033-W.

Randolph, E. E. Professor of Chemical Engineering and Head of the Department of Chemical Engineering. 112 Winston Hall. Extension 80.
212 Groveland Avenue. Telephone 2882-W.

Rankin, W. H. Agronomist, Department of Agronomy. Patterson Hall. Extension 44.
402 Horne Street. Telephone 4517-M.

Raper, R. H.—Field Agent, Agricultural Economics and Rural Sociology. 118 Ricks Hall. Extension 60.
Boylan Apartment C, 202 Hillsboro Street. Telephone 3773-R.

Rice, R. B.—Associate Professor, Department of Mechanical Engineering. 107 Page Hall. Extension 27.
708 Hillsboro Street.

Richie, T. L. Instructor, Textile School. Tompkins Hall. Extension 55.
211 Groveland Avenue. Telephone 1826.

Riddick, W. C.—Dean of Engineering School. 105 Page Hall. Extension 27.
225 Woodburn Road. Telephone 1456-M.

Riddle, A. A.—Superintendent of Power Plant, Mechanical Engineering Department Power Plant. Extension 14.
2805 Bedford Avenue. Telephone 4468-W.

Rogers, Pansy M. Stenographer, Department of Education. 205 Holladay Hall. Extension 37.
Cary, N. C. Telephone 48-W.

Rogers, W. H. Assistant, Department of Extension and Triple-A Work. 210 Ricks Hall. Extension 53.
2702 Hillsboro Street. Telephone 4584-J.

Rondeau, Henri Boarding Department. Dining Hall.
12 Maiden Lane.

Rowe, Anna C.—Home Demonstration Agent at Large, Agricultural Extension, Division of Home Demonstration Work. 204 Ricks Hall. Extension 69.
130 Hawthorne Road. Telephone 1418-J.

Rowe, Beatrice Stenographer, Athletic Department. 1 Gymnasium. Extension 12.
2701 Clark Avenue. Telephone 867-W.

Rowland, M. R.—Instructor. Mechanical Engineering Department. Shop Bu lding. Extension 25.
803 Glenwood Avenue. Telephone 1073-R.

Ruffner, R. H. Professor, Department of Animal Husbandry and Dairying 115 Polk Hall. Extension 46.
1910 Park Drive. Telephone 3679-J.

Ruggles, Edward W. Director, College Extension Division. 204 Library Building. Extension 40.
2411 Everett Avenue. Telephone 4690.

Sams, C. L.—Extension Apiarist, Zoology and Entomology Department. 104 Zoology Building. Extension 19.
2603 Clark Avenue. Telephone 1775 J.

Sanders, Zoie Cashier, Boarding Department. Dining Hall.
111 Harrison Avenue. Telephone 1263 J.

Satterfield, G. Howard—Associate Professor of Biochemistry, Chemistry Dep artment. 111 Winston Hall. Extension 43.
407 West Park Drive. Telephone 4126-R.

Satterfield, Howard E Associate Professor, Mechanical Engineering Department. 104 Page Hall. Extension 27.
201 Groveland Avenue. Telephone 2455.

Schaub, I. O. Dean, School of Agriculture and Forestry, and Director of Agricultural Extension. 104 Ricks Hall. Extension 51.
Western Boulevard. Telephone 53 F-23.

Schaub, Maud K. Research Fellow, Botany Department. 49 Patterson Hall. Extension 45.
Western Boulevard. Telephone 53-F-23.

Schm'dt, Robert Associate Horticulturist, Agricultural Experiment Sta t'on, Horticulture Department. 307 Polk Hall. Extension 62.
516 Daughtridge Street. Telephone 867 J.

Schoof, H. F. Teaching Fellow, Zoology Department. 105 Zoology Building. Extension 19.
210 Chamberlain Street. Telephone 1745-M.

Scott, Mrs. J. K.—Stenograp'ier, Agricultural Extension. 104 Ricks Hall. Extens'on 51.
1505 Caswell Street. Telephone 2254-J.

Seagraves, W. P.—Instructor, Mathematics Depaitment. 6 Pullen Hall. Extension 8.
123 Forest Road. Telephone 3252 W.

Seawell Elizabeth Stenographer, Agricultural Extension, Division of Home Demonstration Work. 201 Ricks Hall. Extension 69.
Wake Forest, N. C.

Selk'nghaus, W. E. Instructor, Mechanical Engineering Department. 104 Page Hall. Extension 27.
1819 Glenwood Avenue. Telephone 2086-M.

Seegers, L. W. Instructor, History Department. 105 Peele Hall. Ex t'nsion 1.
111 Chamberlain Street.

Sermon, R. R. Director of Athletics, Athletic Department. 1 Gymnasium. Extension 12.
115 Brocks Avenue. Telephone 1161.

Shanklin, J. A. Agent, Department of Agronomy. 25 Patterson Hall. Extension 44.
5½ Dixie Trail. Telephone 3253-W.

Shaw, H. B. Professor, Industrial Engineering Department. 120 Civil Engineering Building. Extension 78.
1507 Ambleside Drive. Telephone 3819-W.

Shaw, K. J. Graduate Student in Botany, September to April, April to September, Agent in U. S. D. A. Patterson Hall (46). Extension 45.
2702 Hillsboro Street. Telephone 4584-J.

Shaw, Luther Extension Plant Pathologist, Botany Department. 46 Patterson Hall. Extension 45.
406 Chamberlain Street. Telephone 3933-M.

Shelley, A. B. R. Instructor, English Department. 106 Pullen Hall. Extension 35.
311 Hillcrest Road. Telephone 1411-W.

Shepherd, M. L.—Auditor and Administrative Assistant, Agricultural Extension Service, Cooperative Extension. 111 Ricks Hall. Extension 49.
Room 201, Fifth Dormitory. Telephone 558.

Sherwood, F. W. Associate, Animal Nutrition, Agricultural Experiment Station. 317 Polk Hall. Extension 21.
318 North Boundary Street. Telephone 3406-W.

Shinn, W. E. Professor, Textile School. 4 Tompkins Hall. Extension 55.
2307 Bedford Avenue.

Shoffner, R. W. Assistant District Agent, Agricultural Extension Service. 206 Ricks Hall. Extension 33.
314 East Park Drive. Telephone 2788-R.

Shore, Mary Order Librarian. Library Building. Extension 68.
1306 Hillsboro Street. Telephone 4244.

Showalter, M. F.—Associate Professor, Chemistry and Education Department. Holladay Hall. Extension 18.
504 Dixie Trail.

Shulenberger, C. B. Associate Professor, Economics Department. 115 Peele Hall. Extension 1.
102, Fourth Dormitory.

Shumaker, Ross—Professor and Head of Department of Architecture. 315 Electrical Engineering Building. Extension 29.
2702 Rosedale Avenue. Telephone 3661-W.

Shunk, Ivan V. Associate Professor, Botany Department. 39 Patterson Hall. Extension 45.
1809 Park Drive. Telephone 1158-J.

Singer, W. E.—Instructor, Chemistry Department. 107 Winston Hall. Extension 58.
127 Hawthorne Road. Telephone 1208-W.

Slocum, G. K. Assistant Professor, Forestry Department. 306 Ricks Hall. Extension 47.
226 Woodburn Road. Telephone 1322.

Smith, Mrs. Estelle T.—District Home Agent, Agricultural Extension, Division of Home Demonstration Work. 204 Ricks Hall. Extension 69.
128 East Edenton Street. Telephone 3556-J.

Smith, F. H. Assistant, Animal Nutrition, Agricultural Experiment Station. 316 Polk Hall. Extension 21.
Apartment 1, Woman's Club. Telephone 3852-J.

Smith, Glenn R. Associate Professor, Agricultural Economics. 118 Ricks Hall. Extension 60.
130 Forest Road. Telephone 2744-W.

Smith, G. Wallace Associate Professor, Mathematics Department. 204 Civil Engineering Building. Extension 78.
132 Woodburn Road.

Smith, Mrs. Hattie C.—Stenographer, Extension Agricultural Engineering Department. 318 Ricks Hall. Extension 57.
2402 Everett Avenue.

Smith, Pauline—District Agent, Home Demonstration Division, Extension Department. 314 Ricks Hall. Extension 68
214 New Bern Avenue. Telephone 1333.

Stallings, R. L. Self-Help Secretary, Y. M. C. A.
Y. M. C. A. Telephone 558.

Stallings, Verdie—Stenographer, Purchasing Department. Holladay Hall. Extension 10.
117 West Park Drive. Telephone 2641-J.

Steele, Nancy H. Secretary to Alumni Office, Alumni Department. Holladay Hall. Extension 32.
2512 Stafford Avenue. Telephone 1386.

Stephens, Mrs. Kenneth—Stenographer, Extension Forestry Department. 306 Ricks Hall. Extension 47.
Apex, N. C.

Stone, R. L.—Instructor, Ceramic Engineering Department. Ceramic Building. Extension 28.
2513 Clark Avenue. Telephone 1152.

Stott, Estelle Harold Stenographer, Division of Publications, Agricultural Extension Service. 5 Ricks Hall. Extension 67.
11 Maiden Lane. Telephone 2436-J.

Stott, Juanita—Statistical Clerk, Registration Office. 202 Holladay Hall. Extension 3.
11 Mai len Lane. Telephone 2436-J.

Stuart, A. D. Seed Specialist, North Carolina Crop Improvement Association. 24 Patterson Hall. Extension 42.
217 East North Street. Telephone 4792.

Stuckey, J. L.—Professor, Geology Department. 2 Primrose Hall. Extension 79.
1911 Sunset Drive. Telephone 3366-W.

Sumner, Mrs. Baye Assistant Purchasing Agent, Purchasing Department. Holladay Hall. Extension 10.
323 Hillsboro Street, Apartment 7. Telephone 4222-M.

Taylor, H. W.—Extension Swine Specialist, Agricultural Extension Service. 102 Polk Hall. Extension 61.
2820 Bedford Avenue. Telephone 958-J.

Thacker, Anne—Extension Studies, Agricultural Extension Service. 108 Ricks Hall. Extension 52.
1031 West South Street. Telephone 1799-J.

Thomas, D. B.—Instructor, Mathematics Department. 205 Page Hall. Extension 23.
205 Forest Road. Telephone 3021.

Thomas, H. C., Technical Sergeant, D. E. M. L.—Administrative Assistant, Military Department. Armory, Frank Thompson Gymnasium. Extension 13.
Sunset Terrace, Western Boulevard.

Thomas, Mary E.—Extension Nutritionist, Agricultural Extension, Division of Home Demonstration Work. 202 Ricks Hall. Extension 69.
221 Hawthorne Road. Telephone 846-R.

Thomas, Roy H.—State Supervisor of Agricultural Education. Third Floor, Holladay Hall. Extension 71.
225 Furches Street. Telephone 1336-J.

Thompson, Miss Daisy W.—Chief Clerk, Treasurer's Office. 105 Holladay Hall. Extension 66.
1117 Hillsboro Street. Telephone 3673.

Thompson, Sallye—Statistician, Department of Education. 203 Holladay Hall. Extension 37.
3011 Hillsboro Street. Telephone 1875-W.

Trollinger, Ida E.—Head Nurse, Infirmary. Extension 687.
Infirmary. Telephone 687.

Trotter, Jeannette Clerk of Admissions, Registration Office. 208 Holladay Hall. Extension 3.
130 Forest Road. Telephone 2744-W.

Tucker, Caroline E.—Stenographer, Zoology and Entomology Department. 101 Zoology Building. Extension 19.
St. Mary's School. Telephone 3721.

Tucker, Harry—Professor of Highway Engineering, and Director of Engineering Experiment Station. 209 Civil Engineering Building. Extension 78.
20 Logan Court. Telephone 609-W.

Tucker, Lottie Clerk, Extension Service. 111 Ricks Hall. Extension 49.
112 Vance Apartments. Telephone 2469-R.

Turner, Frank B. Assistant Professor, Mechanical Engineering Department. 107 Page Hall. Extension 27.
2404 Everett Avenue. Telephone 936-J.

Valentine, Elizabeth A.—Assistant in Catalog Department. Library Building. Extension 38.
Raleigh, N. C. Route No. 5.

Van Note, W. G.—Assistant Professor, Department of Chemical Engineering. 112-A Winston Hall. Extension 80.
105 Harrison Avenue. Telephone 2429-J.

Vaughan, L. L. Professor, Mechanical Engineering Department. 109 Page Hall. Extension 27.
11 Enterprise Street. Telephone 1304.

Veerhoff, Otto—Associate Horticulturist, Horticulture Department, Experiment Station. 307 Polk Hall. Extension 62.
113 North Boylan Avenue. Telephone 3312-M.

Veldhuis, M. K.—Assistant Chemist, U. S. D. A., Food Research Division. 312 Polk Hall. Extension 62.
1702 Hillsboro Street. Telephone 929-M.

Venable, B. W., Major, Infantry Instructor, Military Department. 17 Holladay Hall. Extension 56.
707 West Morgan Street, Apartment 3. Telephone 1548-R.

Von Glahn, J. L.—Business Manager, Athletics Department. Holliday Hall. Extension 36.
Ridge Road. Telephone 3606-W.

Wakefield, Olaf—Assistant in Rural Sociology and Farm Management, Agricultural Economics and Rural Sociology. 119 Ricks Hall. Extension 60.
415 South Boylan Avenue. Telephone 1460-M.

Wall, Rebecca B.—Transcript Clerk, Registrar's Office. 209 Holladay Hall. Extension 3.
1302 Hillsboro Street. Telephone 1702.

Warren, R. S.—Instructor, Physical Education, and Freshman Coach, Athletic and Physical Education Department. Gymnasium. Extension 12.
226 Chamberlain Street. Telephone 2375-J.

Watson, L. P.—Extension Horticulturist, Extension Service, Horticultural Department. 302 Polk Hall. Extension 62.
2809 Bedford Street.

Weathers, Beulah Stenographer, Department of Botany. 37 Patterson Hall. Extension 45.
402 Horne Street. Telephone 2708-J.

Weaver, D. S. Professor, Agricultural Engineering Department.
316 Ricks Hall. Extension 42 (morning).
29 Patterson Hall. Extension 57 (afternoon).
520 Daughtridge Street. Telephone 867-R.

Weaver, J. G.—Assistant Professor, Horticulture Department. Greenhouse. Extension 20.
707 North East Street.

Wellons, T. T.—Superintendent of Buildings, Central Stores and Dormitories. Warehouse. Extension 50.
3130 Stanhope Street. Telephone 3412-W.

Wells, B. W.—Professor of Botany and Head of Department. 37 Patterson Hall. Extension 45.
1605 Park Drive. Telephone 2758-W.

Wheeler, F. B.—Superintendent of Shops, Mechanical Engineering Department. Shop. Extension 25.
20 Maiden Lane. Telephone 2436-W.

Whisnant, Mamie N. Assistant Extension Specialist in Home Management, Home Demonstration Division, Extension Department. 313 Ricks Hall. Extension 68.
1425½ Park Drive. Telephone 3420 W.

Whitford, L. A. Assistant Professor, Botany Department. 39 Patterson Hall. Extension 45.
12 Kirby Street, Pullen Terrace.

Whitney, J. B., Jr.—Teaching Fellow, Botany Department. 2 Patterson Hall. Extension 45.
123 Brooks Avenue. Telephone 3663 W.

Williams, C. B. Head, Department of Agronomy. 19 Patterson Hall. Extension 44.
1405 Hillsboro Street. Telephone 758-J.

Williams, C. F. Associate Horticulturist, Horticulture Department. 305 Polk Hall. Extension 62.
2711 Everett Avenue. Telephone 3044-J.

Williams, H. Page Associate Professor. Mathematics Department. 101 Civil Engineering Building. Extension 76.
2512 Clark Avenue. Telephone 4866.

Williams, L. F. Professor of Organic Chemistry, Chemistry Department. 201 Winston Hall. Extension 58.
1816 Park Drive. Telephone 1212-J.

Williams, Mrs. Lucie R.—Stock Keeper, Chemistry Department. 209 Winston Hall. Extension 58.
206 Chamberlain Street. Telephone 1693.

Williams, N. W.—Assistant Professor and Poultry Plant Manager, Poultry Department. 214 Ricks Hall. Extension 70.
Poultry Plant. Telephone 3250-J.

Williams, Robin M. Assistant Professor, Agricultural Economics and Rural Sociology Department. 119 Ricks Hall. Extension 60.
202 Groveland Avenue. Telephone 1146.

Williamson, Mrs. Charlotte M. Attendant in Browsing Room. Library Building. Extension 68.
530 North Person Street. Telephone 541-W.

Willis, L. G. Soil Chemist, Department of Agronomy. 15 Patterson Hall. Extension 44.
2702 Fairview Road. Telephone 2407-J.

Wilson, A. J.—Professor and Chairman Chemistry Department. 221 Winston Hall. Extension 58.
1808 Park Drive. Telephone 1072-W.

Wilson, T. L.—Assistant Professor, English Department. 7 Pullen Hall. Extension 35.
407 Calvin Road. Telephone 1046-W.

Wingate, Velna—Stenographer, Agricultural Extension Division. 108 Ricks Hall. Extension 52.
Western Boulevard. Telephone 53-F-21.

Winston, Sanford—Professor, Sociology Department. 202 Peele Hall. Extension 1.
120 Forest Road. Telephone 4102-W.

Winters, R. Y.—Director, Agricultural Experiment Station. 107 Ricks Hall. Extension 31.
1908 Park Drive. Telephone 1158-W.

Winton, L. S.—Instructor, Mathematics Department. 101 Civil Engineering Building. Extension 76.
2716 Barnettler Street. Telephone 1942-XW.

Woodhouse, W. W., Jr.—Assistant Agronomist, Department of Agronomy. Patterson Hall. Extension 44.
113½ North Boylan Avenue. Telephone 1895-W.

Wright, J. B.—College Electrician, Service Department and Central Stores. Warehouse. Extension 50.
15 Rosemary Street. Telephone 2925-J.

Wyman, Lenthall Professor, Forestry Department. 303 Ricks Hall. Extension 47.
1837 White Oak Road. Telephone 3517-M.

Wynn, W. K.—Assistant Professor, English Department. 3 Pullen Hall. Extension 35.
502 Dixie Trail.

Wynne, R. B.—Instructor, English Department. 107 Pullen Hall. Extension 35.
1620 Park Drive. Telephone 3391-W.

Young, Mrs. C. H.—Stenographer, Animal Husbandry, Swine Extension. 103 Polk Hall. Extension 61.
2303 Clark Avenue. Telephone 1099-M.

Zehmer, Mrs. Will's K. Stenographer, Animal Industry Department. 210 Polk Hall. Extension 63.
2215½ Ridgecrest Road. Telephone 4278-W.

Student Directory

Name	*Classification*	*School Address*	*Home Address*
Abbott, F. T., Jr.	So. M. E.	1016 W. Cabarrus St.	Raleigh, N. C.
Abraham, L. H.	Jr. M. E.	205 7th, Box 3337	Portsmouth, Va.
Abrahams, A. S.	Jr. M. E.	227 1911, Box 3767	New York, N. Y.
Abrams, J. G.	Sr. Ag. Ec.	303 1911, Box 3783	New Bedford, Mass.
Acai, Stephen	Jr. H. S. T.	121 7th, Box 5191	Donora, Pa.
Adams, E. A.	Fr. Ag. Ed.	5 Hope St.	Taylorsville, N. C.
Adams, G. A.	Sr. Ag. Ec.	208 Watauga, Box 3026	Shelby, N. C.
Adams, I. C.	So. Ag.	119 Cox Ave.	Clayton, N. C.
Adams, J. P.	Fr. Ag. Ed.	5 Hope St.	Taylorsville, N. C.
Adams, T. C.	Fr. Tex.	106 4th, Box 3116	Wallace, N. C.
Adkins, W. W.	So. Ch. E.	215 Park Ave.	Summerfield, N. C.
Aiken, J. S.	So. Tex. Mgt.	2222 Circle Drive	Asheville, N. C.
Aldrich, J. C.	Fr. C. E.	302 5th, Box 3226	Binghamton, N. Y.
Aldridge, J. W.	Fr. M. E.	302 4th, Box 3128	Hamlet, N. C.
Aldridge, R. M.	So. Ag. Ed.	2512 Clark Ave., Box 5022	Vanceyville, N. C.
Alexander, G. C.	Jr. Ag. Spec.	Poultry Plant, Box 5513	Matthews, N. C.
Alford, P. A.	Fr. Ag.	407 Glenwood Ave.	Raleigh, N. C.
Alford, W. C.	So. Ag. Ec.	2 College Court Apt.	Raleigh, N. C.
Allen, C. W.	Jr. Tex. C. and D.	115 Watauga, Box 3015	Sanford, N. C.
Allen, G. J.	Sr. Ch. E.	119 Ashe Ave.	Shelburne Falls, Mass.
Allen, J. S.	Sr. Tex.	10 South, Box 5351	N. Wilkesboro, N. C.
Allen, S. F.	Sr. Ind. Arts	Route 4	Raleigh, N. C.
Allers, J. C.	Fr. Ag.	2004 Hillsboro St.	West Englewood, N. J.
Alligood, B. F.	Sr. Ch. E.	200 E. Edenton St.	Washington, N. C.
Allin, G. R., Jr.	Fr. Ch. E.	205 4th, Box 3123	Ft. Bragg, N. C.
Allison, A. D.	Fr. E. E.	1621 W. Park Drive	Pine Bluff, N. C.
Allison, T. T., Jr.	Sr. Ind. Mgt.	8 Maiden Lane	Charlotte, N. C.
Almond, V. D.	Sr. E. E.	2316 Hillsboro St.	Ashley Heights, N. C.
Altman, L. B.	Fr. C. E.	2714 Vanderbilt Ave.	Raleigh, N. C.
Amero, J. J.	Jr. Cer. E.	310 1911, Box 3790	Gloucester, Mass.
Anderson, A. R.	So. Ch. E.	6 Ferndell Lane	Durham, N. C.
Andrews, A. L.	Fr. Ch. E.	204 5th, Box 3216	Mt. Gilead, N. C.
Andrews, B. G.	So. Ag. Ec.	4 Hope St.	Parmele, N. C.
Andrews, C. P., Jr.	Fr. Ag.	2203 Ridgecrest Road	Kinston, N. C.
Andrews, C. R.	Fr. Ind. Arts	211 5th, Box 3223	Garwood, N. J.
Andrews, Jack Monroe	Jr. Tex. C. and D.	222 Park Ave.	Bonlee, N. C.
Andrews, Junious Mebane	Fr. M. E.	219 South, Box 3551	Roseboro, N. C.
Andrews, Walter Glenn	So. Ag. Ed.	123 Brooks Ave.	Graham, N. C.
Andrews, William Guilford	Sr. Ind. Mgt.	2230 Hillsboro St.	Bethel, N. C.
Angelo, E. J.	So. E. E.	322 1911, Box 3802	Winston-Salem, N. C.
Anton, R. F. X.	Jr. C. E.	125 Woodburn Road	Portsmouth, Va.
Arbuthnot, D. W.	So. E. E.	2004 Hillsboro St.	Leonia, N. J.
Ariail, A. S.	Fr. Ch. E.	222 South, Box 3554	Charlotte, N. C.
Ariail, W. C., Jr.	Sr. Tex.	103 Chamberlain St.	Charlotte, N. C.
Arizpe de la Maza, E.	So. Tex. Mfg.	219 1911, Box 3759	Saltillo, Coah., Mexico
Armstrong, F. M.	Fr. For.	301 4th, Box 3127	Harrisonburg, Va.
Armstrong, R. B.	So. Ag.	212 7th, Box 3344	Asheville, N. C.
Armstrong, T. F.	Fr. Aero. E.	303 5th, Box 3227	Columbia, N. C.
Arnold, M. F.	Fr. C. E.	102 6th, Box 3238	Poughkeepsie, N. Y.
Arnott, G. W.	So. For.	327 1911, Box 3807	Cambridge, N. Y.
Arrowood, H. J.	Fr. M. E.	111 6th, Box 3247	Candler, N. C.
Asbury, L. H., Jr.	Jr. Arch. E.	304 Watauga, Box 3040	Charlotte, N. C.
Ashby, G. M., Jr.	Sr. Ind. Mgt.	124 St. Mary's St.	Raleigh, N. C.
Ashcraft, J. H.	Jr. Ag.	1301 Hillsboro St.	Charlotte, N. C.
Ashton, D. F.	Grad. Ag.	2716 Everett Ave.	Carnation, Wash.
Atkins, J. D.	Fr. For.	106 6th, Box 3242	High Point, N. C.
Atkinson, G. S., Jr.	Fr. Con. E.	405 Frank St.	Fayetteville, N. C.
Atkinson, J. W.	Jr. Ag. Ec.	909 E. Edenton St.	Raleigh, N. C.

Name	*Classification*	*School Address*	*Home Address*
Auman, L. E.	Sr. Ag. Ed.	302 1911, Box 3782	West End, N. C.
Auman, W. R.	Fr. Arch. E.	304 6th, Box 3264	Biscoe, N. C.
Austin, C. S.	Sr. Ag. Ed.	208 7th, Box 3340	Oakboro, N. C.
Avent, J. S.	Fr. M. E.	1 South, Box 3597	Sanford, N. C.
Avery, J. C., Jr.	Sr. E. E.	113 1911, Box 3713	Selma, N. C.
Aycock, C. B.	Jr. H. S. T.	220 E. North St.	Raleigh, N. C.
Ayers, A. G.	Fr. Ag.	5 South, Box 3601	Fairmont, N. C.
Ayers, W. C.	Fr. M. E.	120½ Groveland Ave.	Raleigh, N. C.
Ayscue, P. L.	Fr. M. E.	216 South, Box 3548	Henderson, N. C.
Baerthlein, W.	Sr. E. E.	6 Ferndell Lane	Pawling, N. Y.
Bailey, F. H.	So. Ag.	6 Hope St.	Raleigh, N. C.
Bailey, J. B.	So. For.	1310 Glenwood Ave.	Raleigh, N. C.
Bailey, W. D.	Fr. Hort.	326 South, Box 3590	Woodleaf, N. C.
Bailey, W. McC.	So. For.	124 7th, Box 3324	Richmond, Va.
Baker, B. L., Jr.	So. Ag. Ec.	223 7th, Box 3355	Charlotte, N. C.
Baker, C. V.	Fr. Ag. E.	231 1911, Box 3713	Winston-Salem, N. C.
Baker, H. D.	Fr. E. E.	331 South, Box 3595	Apex, N. C.
Baker, L.	So. Ch. E.	2220 Hillsboro St.	Wilmington, N. C.
Baker, N. B.	Sr. Ag Ec.	125 1911, Box 3725	Reidsville, N. C.
Baker, W. B.	So. For.	201 7th, Box 3333	Reidsville, N. C.
Baldwin, D. B.	Jr. Ind. E.	109 Oberlin Road	Tabor City, N. C.
Ball, E. E.	Fr. Ch. E.	204 4th, Box 3122	Monroe, N. C.
Ballance, H. E.	Fr. Ch. E.	304 7th, Box 3370	Portsmouth, Va.
Ballard, J. P.	Fr. Ag. Ed.	121 South, Box 3521	Varina, N. C.
Bandy, W. B., Jr.	So. C. E.	1007 Harvey St.	Raleigh, N. C.
Banks, W. A.	Jr. Ag.	328 1911, Box 3808	Louisburg, N. C.
Barb, J. E.	Sr. San. E.	218 7th, Box 3350	Hickory, N. C.
Barber, M. J.	Jr. Tex.	1720 Hillsboro St.	Charlotte, N. C.
Barden, H. D.	Jr. Ag. Ed.	222 Park Ave.	Orrum, N. C.
Bardes, H. G.	Sr. H. S. T.	104 7th, Box 3363	Wilkinsburg, Pa.
Barfield, E. A.	Fr. Aero. E.	117 South, Box 3517	Calypso, N. C.
Barkdoll, J. N.	Fr. For.	122 South, Box 3522	Hagerstown, Md.
Barnard, W. N.	S. Ag.	2209 Hope St.	Shawboro, N. C.
Barnard, W. O.	So. Aer. E.	2712 Everett St.	Asheville, N. C.
Barnes, C. B.	So. Ch. E.	1101 Wake Forest Road	Raleigh, N. C.
Barnes, J. W.	Sr. Tex. Mgt.	228 1911, Box 3768	Wilson, N. C.
Barnette, J. R., Jr.	So. Ch. E.	116 Woodburn Road	Huntersville, N. C.
Barnette, J. W.	Fr. M. E.	108 5th, Box 3208	Charlotte, N. C.
Barringer, C. F., Jr.	So. Tex.	304 Duncan St.	Raleigh, N. C.
Barrow, T. E., Jr.	Sr. Tex.	2513 Clarke Ave., Box 5458	Farmville, N. C.
Barfield, E.	So. Aero.	228 7th, Box 3360	Brooklyn, N. Y.
Bartlett, R. B.	So. San. E.	202 Cox Ave.	Swannanoa, N. C.
Bass, E. H.	Fr. Ag.	5 Maiden Lane St.	Wilson, N. C.
Baucom, G. E., Jr.	Jr. Tex.	314 E. Lane St.	Raleigh, N. C.
Baucom, W. O., Jr.	So. M. E.	1408 Hillsboro St.	South Norfolk, Va.
Bayne, C. R.	Sr. M. E. Aero	2513 Clark Ave., Box 5458	N. Plainfield, N. J.
Beam, C. H.	So. Ag. Ed.	9 South, Box 3605	Lawndale, N. C.
Beardslee, A. N.	Sr. M. E.	138 1911, Box 3738	N. Wilkesboro, N. C.
Beasley, W. L.	So. For.	2708 Vanderbilt Ave.	Louisburg, N. C.
Beatty, G. R.	So. Tex.	122 1911, Box 3722	Stanley, N. C.
Beck, H. V.	Fr. M. E.	2 South, Box 3598	Thomasville, N. C.
Beddow, C. A., Jr.	Jr. Arch. E.	2407 Clark Ave., Box 5428	Stamford, Conn.
Beery, C. H., Jr.	So. Ch. E.	104 Logan Court	Goldsboro, N. C.
Bell, G. J.	So. M. E.	212 1911, Box 3752	Greenville, N. C.
Bell, J. L.	So. For.	123 Chamberlain St.	Huntersville, N. C.
Bell, L. P.	Fr. Ag.	222 Park Ave.	Rocky Mount, N. C.
Bell, W. C.	Sr. Cer. E.	339 1911, Box 3819	Greensboro, N. C.
Bell, W. M.	Jr. Ind. Mgt.	8 Maiden Lane	Windsor, N. C.
Belton, J. A.	So. For.	8 Ferndell Lane	Draper, N. C.
Belvin, D. L.	Fr. M. E.	1609 Hillsboro St.	Raleigh, N. C.
Bendigo, E. J.	Fr. Tex. Mgt.	112 5th, Box 3212	Greensboro, N. C.
Benedict, A. J.	Fr. For.	332 South, Box 3596	Tamaqua, Pa.

Name	*Classification*	*School Address*	*Home Address*
Benson, J. J.	Fr. For.	310 South, Box 3574	Pantego, N. C.
Benton, A. M.	So. Ag.	210 Chamberlain St.	Chadbourn, N. C.
Bergman, H.	Fr. Tex.	320 7th, Box 3386	Brooklyn, N. Y.
Berkute, M. K.	Fr. Ag.	312 Chamberlain St.	Deans, N. J.
Berlinsky, E. T.	Jr. H. S. T.	101 7th, Box 3301	Bloomfield, N. J.
Berry, C. M.	Jr. Tex.	113 7th, Box 5212	Spartanburg, S. C.
Berry, F. G.	Fr. C. E.	311 6th, Box 3271	Charlotte, N. C.
Bethell, G. W.	Fr. Ch. E.	331 South, Box 3595	Wilmington, N. C.
Betts, D. B.	Fr. C. E.	615 S. Boylan Ave.	Raleigh, N. C.
Betts, G. E., Jr.	Sr. M. E.	117 Watauga, Box 3017	Fayetteville, N. C.
Beverly, E.	Jr. For.	117 1911, Box 3717	Laurinburg, N. C.
Biggers, P. T.	Fr. Tex.	306 7th, Box 3372	Sanford, Fla.
Biggers, R. W.	So. Ch. E.	1408 Hillsboro St.	Hickory, N. C.
Biggs, B. H.	Jr. Tex.	2402 Hillsboro St.	Rockingham, N. C.
Biggs, J. D.	So. Biol.	220 Chamberlain St.	Washington, N. C.
Bing, A. J.	So. M. E.	1301 Hillsboro St.	Hickory, N. C.
Bing, John E.	Sr. Const. E.	120 1911, Box 3720	Hickory, N. C.
Bishop, J. E.	Sr. M. E.	304 1911, Box 3784	Greensboro, N. C.
Blackburn, A. R.	Sr. Cer. E.	21 Enterprise St.	Wilson, N. C.
Blackmon, J. H.	Sr. Ag. Ed.	2220 Hillsboro St.	Whiteville, N. C.
Blackmore, W. C.	So. Ag. Ed.	12 Enterprise St.	Warsaw, N. C.
Blackwood, E. W.	Sr. Tex. Mfg.	310 Watauga, Box 5351	Swepsonville, N. C.
Blackwood, R. S.	Jr. C. E.	222 Park Ave.	South Portland, Me.
Blake, B. C.	Jr. Ch. E.	222 Park Ave.	Wilmington, N. C.
Blalock, P. C., Jr.	Jr. Ch. E.	2230 Hillsboro St.	Fremont, N. C.
Blanchard, C. F., Jr.	Fr. C. E.	106 Logan Court	Rose Hill, N. C.
Blanchard, W. T.	So. C. E.	106 Logan Court	Rose Hill, N. C.
Blanton, J. S.	Fr. M. E.	7 South, Box 3603	Shelby, N. C.
Bloodgood, R. M.	So. M. E.	17 Enterprise St.	Beaufort, N. C.
Blount, F.	Sr. Ag. Ed.	203 1911, Box 3743	Roper, N. C.
Blount, T. H., Jr	Fr. Aero. E.	112 6th, Box 3248	Washington, N. C.
Bobbitt, G. R., Jr.	Jr. Ind. Mgt.	308 Watauga, Box 3044	Nashville, N. C.
Bodwell, P. G., Jr.	Jr. E. E.	322 Morrison Ave.	Raleigh, N. C.
Boege, F. D.	Fr. Arch. E.	303 4th, Box 3129	Whiteville, N. C.
Boger, C. E., Jr.	Sr. Tex. Mfg.	103 Chamberlain St.	Concord, N. C.
Boland, J. A., Jr.	Sr. Tex. W. and D.	104 Watauga, Box 3004	Burlington, N. C.
Boling, H. H.	Grad. A. H.	224 South, Box 5127	Randleman, N. C.
Boling, H. T.	Jr. A. H.	224 South, Box 3556	Randleman, N. C.
Bollendorf, W. R.	Jr. For.	120½ Groveland Ave	Camp Hill, Pa.
Bolton, S. L.	Fr. Arch. E.	110 5th, Box 3210	Rich Square, N. C.
Boney, G. L., Jr.	Jr. Tex.	211 1911, Box 3751	Wallace, N. C.
Boney, J. C.	Sr. Const. E.	109 1911, Box 3709	Hamlet, N. C.
Boney, L. N., Jr.	Fr. Arch. E.	126 South, Box 3526	Wilmington, N. C.
Boney, L. W., Jr.	Jr. Tex.	112 Watauga, Box 3012	Wallace, N. C.
Borden, S. J.	Jr. C. and D.	226 1911, Box 3766	Wilson, N. C.
Boseman, R. R.	So. Ag.	117 Chamberlain St.	Rocky Mount, N. C.
Bost, J. H.	So. Ag. Ed.	308 Watauga, Box 3026	New London, N. C.
Bost, L. R., Jr.	So. Tex.	307 Watauga, Box 3043	Salisbury, N. C.
Boswell, G. P.	So. Tex.	108 Watauga, Box 3008	Burlington, N. C.
Boswell, H. S.	Jr. Ag. Econ.	230 7th, Box 5163	Burkeville, Va.
Boswell, J. R.	Jr. Ag. Spec.	2702 Hillsboro St.	Summerfield, N. C.
Bourne, R. G. B.	Sr. M. E. Aero.	213 Woodburn Road	Haddon Heights, N. J.
Bowen, J. H., Jr.	So. C. E.	116 Woodburn Road	Atlanta, Ga.
Bowers, E. S., Jr.	Fr. Ch. E.	312 7th, Box 3378	Jackson, N. C.
Bowers, T. L.	Jr. Tex. C. and D.	116 1911, Box 5305	Charlotte, N. C.
Bowman, L. F.	Fr. Arch. E.	209 Park Ave.	Wadesboro, N. C.
Boyd, L. C.	Jr. Ch. E.	6 Enterprise St.	Henderson, N. C.
Boyette, E. F.	So. Ag.	Brooks Ave., Box 5441	Smithfield, N. C.
Boykin, J. A., Jr.	Jr. Aero. E.	6 Ferndell Lane	Darlington, S. C.
Boyles, J. S.	Jr. A. H.	Brooks Ave., Box 5441	Charlotte, N. C.
Bradford, E. G., Jr.	Fr. Aero. E.	109 5th, Box 3209	Morven, N. C.
Brady, D. W.	Fr. E. E.	2 South, Box 3598	Fair Bluff, N. C.
Bragaw, H. C.	Sr. For.	301 5th, Box 5493	Washington, N. C.

Name	*Classification*	*School Address*	*Home Address*
Brake, H. L.	Jr. Hort.	Greenhouse, Box 5254	Rocky Mount, N. C.
Brake, R. W.	Fr. For.	202 4th, Box 3120	Rocky Mount, N. C.
Branch, Mary O'Neal	Jr. H. S. T.	317 Calvin Road	Raleigh, N. C.
Brandon, J. W.	Fr. M. E.	112 6th, Box 3248	Cramerton, N. C.
Brannon, G. M., Jr.	Fr. M. E.	205 5th, Box 3217	Sanford, N. C.
Branson, H. W., Jr.	Fr. Const. E.	803 South, Box 3567	Greensboro, N. C.
Braswell, G. T.	So. E. E.	6 Ferndell Lane, Box 5393	Rocky Mount, N. C.
Brawley, J. P.	So. Tex. Mfg.	1720 Hillsboro St.	Charlotte, N. C.
Brawley, P. L.	So. Ag.	5 Maiden Lane	Mooresville, N. C.
Brawley, W. K.	Jr. Ag.	207 Watauga, Box 3025	Mt. Ulla, N. C.
Bray, L. E.	Fr. Geol. E.	123 South, Box 3523	Elizabeth City, N. C.
Brennan, M. C.	Jr. M. E.	317 Watauga, Box 3053	Port Chester, N. Y.
Brickhouse, W. H.	Sr. For.	201 Park Ave.	Columbia, N. C.
Bridges, T. W.	Jr. Tex. Mfg.	316 Watauga, Box 5533	Lawndale, N. C.
Bridges, W. J.	Sr. For.	120 1911, Box 3720	Charlotte, N. C.
Brigman, L. V.	S. A. H.	Dairy Barn, Box 5127	Barnardsville, N. C.
Briley, W. C.	Fr. E. E.	329 South, Box 3593	Farmville, N. C.
Britt, E. M.	Fr. Tex. Mgt.	311 South, Box 3575	Winston-Salem, N. C.
Britt, R. W.	So. M. E.-Aero.	6 Hope St.	Severn, N. C.
Brock, D. P.	So. Ag.	106 Horne St., Box 5212	Trenton, N. C.
Brockwell, K. H.	Sr. Ind. E.	726 W. Hargett St.	Raleigh, N. C.
Bronson, J. G.	Jr. Ch. E.	216 7th, Box 3348	Durham, N. C.
Brooks, L. C.	So. E. E.	2314 Hillsboro St.	Bryson City, N. C.
Brooks, S. W.	Jr. Tex. Mgt.	10 Enterprise St.	Monroe, N. C.
Brown, E. L.	So. Ag. Ed.	1715 Park Drive	Raleigh, N. C.
Brown, F. C.	Fr. Aero. E.	305 7th, Box 3371	Schenectady, N. Y.
Brown, F. H., Jr.	Sr. Soils	207 1911, Box 3747	Cullowhee, N. C.
Brown, H. G.	Sr. Ag. Econ.	2305 Clark Ave.	Belcross, N. C.
Brown, H. J.	Jr. Tex.	2230 Hillsboro St.	Thoskie, N. C.
Browne, H. K.	Fr. Tex. C. and D.	1301 Hillsboro St.	Durham, N. C.
Brown, J. E.	So. Ag.	113 Watauga, Box 5013	Rich Square, N. C.
Brown, J. F.	Jr. C. E.	225½ Forest Road	Roanoke Rapids, N. C.
Brown, J. W.	Jr. Const. E.	301 6th, Box 3261	Shelby, N. C.
Brown, L. M.	So. Ind. L.	2011½ Fairview Road	Raleigh, N. C.
Brown, L. N.	Sr. Tex. C. and D.	207 4th, Box 3125	Charlotte, N. C.
Brown, P. J., Jr.	Fr. Ag.	603 Willard Place	Charlotte, N. C.
Brown, P. P., Jr.	Sr. Ind. Mgt.	1805 St. Mary's St.	Raleigh, N. C.
Brown, R. C.	Fr. Ag.	117 Chamberlain St.	Rocky Mount, N. C.
Brown, W. V.	Fr. Geol. E.	102 5th, Box 3202	Sanford, Fla.
Brownie, C. T.	Jr. H. S. T.	117 7th, Box 3317	White Plains, N. Y.
Brownlee, C. R.	Sr. T. E.	1012 Harvey St.	Raleigh, N. C.
Browning, G. K.	S. M. E. Aero.	1000 W. Cabarrus St.	Raleigh, N. C.
Browning, R. C.	So. C. E.	1012 Harvey St.	Raleigh, N. C.
Broyhill, F. T.	Fr. Tex.	306 Chamberlain St.	Statesville, N. C.
Bruinooge, H.	Fr. Tex.	2004 Hillsboro St.	Hasbrouck Hts., N. J.
Bruinooge, P., Jr.	So. Tex. Mgt.	2004 Hillsboro St.	Hasbrouck Hts., N. J.
Bryan, W. J.	Fr. Ag. Ed.	4 Maiden Lane	Garner, N. C.
Bryant, C. K., Jr.	Fr. E. E.	212 5th, Box 3224	Gastonia, N. C.
Buchanan, E. F.	Jr. Const. E.	3 Hope St.	Sanford, N. C.
Buckingham, D. Y.	Fr. Tex. Mgt.	204 4th, Box 3122	Jewett City, Conn.
Bugg, S. M.	Sr. H. S. T.	113 7th, Box 3313	Angier, N. C.
Bulla, W. W.	Fr. Ch. E.	105 5th, Box 3205	Asheboro, N. C.
Bullard, A. B.	Fr. Ag.	20 South, Box 3616	Kerr, N. C.
Bullard, P. D.	Fr. Ch. E.	102 South, Box 3502	Roseboro, N. C.
Bullock, J. B.	So. T. E.	128 1911, Box 3728	Henderson, N. C.
Bullock, J. K.	Fr. M. E.	310 South, Box 3574	Durham, N. C.
Bundy, J. B.	Sr. Ch. E.	139 1911, Box 3739	Fayetteville, N. C.
Bundy, O. C.	So. Tex.	214 7th, Box 3346	Jamestown, N. C.
Bunn, R. M.	So. Ag. Ed.	12 Enterprise St.	Rocky Mount, N. C.
Burcham, J. R.	So. Tex.	202 Watauga, Box 3020	Elkin, N. C.
Burnes, J. P.	Fr. Ch. E.	327 7th, Box 3393	Montpelier, Ver.
Burnham, J. M., III	Fr. Cer. E.	308 4th, Box 3134	Charlotte, N. C.
Burns, D. F., Jr.	Sr. Tex. Mgt.	103 Chamberlain St.	Durham, N. C.

Name	*Classification*	*School Address*	*Home Address*
Burr, W. C.	So. Arch. E.	114 Park Ave., Box 5445	Philadelphia, Pa.
Burrage, R. L., Jr.	Fr. Ag.	301 South, Box 3565	Concord, N. C.
Burruss, C. T.	Fr. For.	2118 Ridgecrest St.	Raleigh, N. C.
Burt, R. L.	Fr. M. E.	125 N. Salisbury St.	Raleigh, N. C.
Burton, W. H., Jr.	Jr. Tex.	124 Groveland Ave.	Mebane, N. C.
Butler, A. E., Jr.	Fr. For.	531 N. East St.	Raleigh, N. C.
Butler, C. M.	Sr. Ag. Ed.	2702 Hillsboro St., Box 5471	Clinton, N. C.
Butler, E. G.	Jr. Ag. Ec.	117 Forest Road	Clinton, N. C.
Butler, H. B.	Jr. Ag. Ed.	222 Park Ave.	Clinton, N. C.
Butler, S. A.	Fr. Const. E.	117 Forest Road	Clinton, N. C.
Butler, W. E.	Sr. Ag. Spec.	3 Maiden Lane	Vanceboro, N. C.
Butler, W. S.	Jr. Ag. Ed.	216 Forest Road	Clinton, N. C.
Butterfield, R.	So. Ch. E.	2209 Hope St.	Hawthorne, N. J.
Buys, W. O.	So. C. E.	230 E. Morgan St.	Washington, N. C.
Bynum, W. L.	Sr. Ind. Mgt.	811 N. Bloodworth St.	Raleigh, N. C.
Byrd, E. W.	So. Ag.	230 1911, Box 3770	Whiteville, N. C.
Byrd, Hal Clifford	Fr. Tex.	230 South, Box 3562	Erwin, N. C.
Byrd, Henry Carson	Sr. E. E.	324 1911, Box 3804	Wilmington, N. C.
Cain, R. L.	Fr. For.	6 South, Box 3602	Fayetteville, N. C.
Cain, W. E.	So. Ag. Ed.	106 Watauga, Box 3006	White Oak, N. C.
Calhoun, M. G.	Fr. E. E.	310 5th, Box 3234	Clio, S. C.
Callihan, C. E.	Sr. Ag. Ed.	221½ Forest Road	Whiteville, N. C.
Cameron, A. C.	Jr. Tex.	2224 Hillsboro St.	Olivia, N. C.
Cameron, P. C.	Fr. M. E.	113 South, Box 3513	Calypso, N. C.
Camp, B. G.	Fr. E. E.	223 South, Box 3555	Ahoskie, N. C.
Campbell, J. H.	Jr. Ag. Ed.	5 Infirmary, Box 5575	Taylorsville, N. C.
Campbell, J. S.	Jr. For.	103 Harrison Ave.	Franklin, Va.
Campbell, R. A.	So. E. E.	213 Woodburn Road	Fremont, N. C.
Campbell, W. A.	Jr. For.	1108 Glenwood Ave.	Southport, N. C.
Canada, A. B.	Fr. For.	319 7th, Box 3385	New Milford, Conn.
Canady, M. F.	So. Tex.	103 Chamberlain St.	Wilmington, N. C.
Cannon, H. L.	So. Tex. Mfg.	7 Maiden Lane	Roanoke Rapids, N. C.
Cannon, J. M.	Fr. Ch. E.	213 Woodburn Road	New Bern, N. C.
Cara, D.	Sr. H. S. T.	125 7th, Box 5192	Bellaire, Ohio
Card, T. R.	So. Cer. E.	313 Maywood Ave.	Raleigh, N. C.
Carlisle, W. M.	Sr. Tex. Mfg.	204 Watauga, Box 3022	Rahway, N. J.
Carpenter, J. L.	Sr. Ag. Ed.	222 Park Ave.	Lincolnton, N. C.
Carr, J. D.	Sr. Ag. Ec.	105 Watauga, Box 3005	Clinton, N. C.
Carraway, J. B.	So. Const. E.	1½ S. Person St.	Raleigh, N. C.
Carter, S. H.	Fr. Ag. Ed.	208 South, Box 3540	Democrat, N. C.
Carter, Wilburn Lee	Fr. Ag.	W. Boulevard, Box 5162	Raleigh, N. C.
Carter, William Lester	So. Tex.	Gymnasium, Box 5392	Franklinville, N. C.
Cartwright, L. W.	Fr. M. E.	305 6th, Box 3265	Jacksonville, Fla.
Cates, T. W.	So. Tex. Mfg.	State Hospital	Wendell, N. C.
Catlin, J. T.	Jr. Tex.	21 Enterprise St.	Danville, Va.
Caton, M. O.	So. Ch. E.	116 Woodburn Road	Ayden, N. C.
Caton, T. O.	Jr. C. and D.	116 Woodburn Road	Ayden, N. C.
Caudill, J. E.	Jr. Ind. Mgt.	308 1911, Box 3788	N. Wilkesboro, N. C.
Cauthen, R. B.	Jr. Arch. E.	523 N. Person St.	Raleigh, N. C.
Chaconas, G. P.	Fr. For.	108 5th, Box 3708	Washington, D. C.
Chalk, W. B.	Sr. Tex. Mfg.	115 Woodburn Road	Morehead City, N. C.
Chambers, W. L.	Jr. Ind. Mgt.	2302 Hillsboro St.	Winston-Salem, N. C.
Chandler, F. S.	Sr. C. E.	1408 Hillsboro St.	Barber, N. C.
Chapman, J. W.	Jr. Tex. Mfg.	208 1911, Box 3748	Dover, N. C.
Chapman, W. H.	Grad. Ag.		
Chappell, M. J.	Jr. Ag. Ed.	College Court Apt. 1	Edenton, N. C.
Chatham, R. M., Jr.	Fr. Tex.	103 4th, Box 3113	Elkin, N. C.
Cherevko, A. S.	Sr. M. E.	234 7th, Box 3366	Brooklyn, N. Y.
Cherry, J. W.	Fr. For.	106 6th, Box 3242	Hayesville, N. C.
Cherry, W. W., Jr.	Fr. Ag.	317 7th, Box 3383	Tarboro, N. C.
Cheshire, G., Jr.	Fr. Tex.	1624 Park Drive	Raleigh, N. C.
Cheshire, W. E.	Sr. Ch. E.	301 Park Ave.	Fayetteville, N. C.

Name	*Classification*	*School Address*	*Home Address*
Cheslock, C. J.	Jr. For.	320 1911, Box 3800	Orbisonia, Pa.
Chiemiego, A. A., Jr.	Sr. H. S. T.	128 7th, Box 5332	Burlington, N. J.
Childs, S. J., Jr.	Sr. Ag. Ec.	1710 Hillsboro St.	Hendersonville, N. C.
Chomin, H. T.	Sr. Bus. Ad.	301 Park Ave.	Dunmore, Pa.
Chudzik, S. A.	Sr. Chem.	328 1911, Box 3808	Clifton, N. J.
Clancy, E. I.	Jr. Const. E.	1408 Hillsboro St.	Washington, D. C.
Clapp, B. S.	Jr. Ind. Arts	Gymnasium, Box 5392	Siler City, N. C.
Clark, C. C.	So. Ag.	3 Maiden Lane	Durham, N. C.
Clark, C. E.	Jr. Tex. Mgt.	21 Enterprise St.	Danville, Va.
Clark, K. W.	Sr. Ind. Mgt.	2405 Clark Ave.	Wilmington, N. C.
Clark, R. S.	Jr. Land. Arch.	112 1911, Box 3712	Winston-Salem, N. C.
Clarke, R. T.	Grad. Tex.	124 South, Box 3524	Anderson, S. C.
Clayton, S. B., Jr.	Jr. W. and D.	2405 Clark Ave.	Greensboro, N. C.
Clegg, R. E.	Grad. Tex.	106 Horne St.	
Cline, W. T.	Fr. Tex.	205 Chamberlain St.	Raleigh, N. C.
Cloud, C. L.	Sr. M. E.	7 Maiden Lane	Hamlet, N. C.
Coates, L. W.	Jr. Ag. Ec.	218 1911, Box 3758	Smithfield, N. C.
Coates, R. C.	Fr. Ag. E.	104 6th, Box 3240	Smithfield, N. C.
Coble, E. L., Jr.	Jr. Arch. E.	224 N. Person St.	Raleigh, N. C.
Coble, G. R.	Fr. Ag.	327 South, Box 3591	Greensboro, N. C.
Coble, J. W.	Fr. Tex. Mgt.	23 Logan Court	Albemarle, N. C.
Coburn, F. M.	Fr. C. E.	119 South, Box 3519	Roanoke Rapids, N. C.
Cochrane, R. P.	Fr. M. E.	203 5th, Box 3215	Charlotte, N. C.
Cockman, J. W.	Sr. Tex. Mgt.	1922 Hillsboro St.	Rockingham, N. C.
Cockman, R. T.	Fr. A. F.	2202 Hillsboro St.	Greensboro, N. C.
Cohan, E. A.	Jr. Biol.	116 Groveland Ave., Box 5371	Brooklyn, N. Y.
Cohen, I. H.	Fr. Ag.	311 6th, Box 3271	Yonkers, N. Y.
Cole, M. W., Jr.	Fr. E. E.	320 South, Box 3584	Butters, N. C.
Coleman, J. M., Jr.	Sr. C. E.	1800 St. Mary's St.	Raleigh, N. C.
Coleman, R., Jr.	So. Ch. E.	1922 Hillsboro St.	Birmingham, Ala.
Coleman, R. F., Jr.	So. C. E.	Y. M. C. A., Box 5276	Wilmington, N. C.
Collins, D. E.	So. For.	720 St. Mary's St.	Phillipsburg, N. J.
Collins, M. Jr.	Fr. C. E.	204 South, Box 3536	Maysville, N. C.
Collins, S. J. Jr.	Fr. M. E.	305 South, Box 3569	Durham, N. C.
Colucci, J.	So. Ind. E.	2306 Hillsboro St.	Wilmington, N. C.
Colvin, David	So. Ch. E.	705 E. Franklin St.	Raleigh, N. C.
Colwell, C. E.	So. Tex.	206 1911, Box 3746	Wilmington, N. C.
Colwell, W. L., Jr.	Jr. For.	240 1911, Box 3780	Washington, D. C.
Combs, A. B., Jr.	Sr. M. E.	2238 Circle Drive	Raleigh, N. C.
Combs, L. M.	Fr. Aero.	316 7th, Box 3382	Nags Head, N. C.
Comolli, M.	Sr. Ind. Mgt.	6 Hope St.	Elberton, Ga.
Connell, F. L.	Sr. M. E.	122 1911, Box 3722	Mt. Holly, N. C.
Conner, P. C.	Jr. For.	8 Ferndell Lane	Buffalo Ridge, Va.
Conrad, C. G.	Sr. Ind. Mgt.	128 7th, Box 3326	Greensboro, N. C.
Conrad, E. B.	Fr. Ch. E.	8 South, Box 3604	Charlotte, N. C.
Cook, C.	Fr. M. E.	308 6th, Box 3268	Merchantville, N. J.
Cooke, H. C.	Sr. H. S. T.	303 7th, Box 5311	Poughkeepsie, N. Y.
Cooke, H. L.	Fr. Ag.	210 South, Box 3542	Littleton, N. C.
Coon, E. H., Jr.	So. C. E.	117 7th, Box 3317	Watertown, Conn.
Cooper, H. L.	Jr. Arch. E.	17 Enterprise St.	Nashville, N. C.
Copeland, A. R.	Fr. Ag.	110 5th, Box 3210	George, N. C.
Copley, L. L.	So. Ag.	112 Cox Ave.	Rougemont, N. C.
Coppedge, A. B.	So. Tex. C. and D.	323 South, Box 3587	High Point, N. C.
Corbett, W. F.	Sr. Tex. C. and D.	2402 Hillsboro St.	Wilmington, N. C.
Correll, S. M.	Fr. Ag.	Dairy Barn, Box 5127	Cleveland, N. C.
Correll, W. C.	Fr. Aero.	302 South, Box 3566	Albemarle, N. C.
Council, J. B.	Fr. Tex. Mfg.	105 6th, Box 3241	Hallsboro, N. C.
Coward, W. B.	So. Tex. Mgt.	117 Park Ave.	Rocky Mount, N. C.
Cox, J. W.	So. Ind. E.	208 1911, Box 3748	Corolla, N. C.
Craig, L.	Sr. For.	2402 Hillsboro St.	Asheville, N. C.
Crane, L. R.	Jr. E. E.	Route 1	Raleigh, N. C.
Craven, K. R.	Fr. Tex.	109 6th, Box 3245	Charlotte, N. C.

Name	*Classification*	*School Address*	*Home Address*
Crawford, H. A.	Fr. Ag.	106 Horne St., Box 5421.	Statesville, N. C.
Crawford, H. R.	So. M. E.-Aero.	2804 Hillsboro St.,Box 5401	Henderson, N. C.
Crawford, M.	Fr. Tex. Mfg.	132 South, Box 3532	Spartanburg, S. C.
Crawford, M. H.	So. M. E.	1123 Harvey St.	Wilson, N. C.
Crawley, W. P.	Jr. Tex. Mfg.	206 Watauga, Box 3024 .	Littleton, N. C.
Creath, J. W.	Fr. Ag. Ed.	106 5th, Box 3206 ..	Woodsdale, N. C.
Creech, H. T.	So. Ag.	College Court Apt. 5	Smithfield, N. C.
Crenshaw, D. M.	So. M. E.	1531 Caswell St.	Raleigh, N. C.
Cress, W. C.	So. Cer. E.	205 Watauga, Box 3023 .	Mt. Ulla, N. C.
Crews, W. E.	Sr. Ch. E.	113 1911, Box 3713	Hamlet, N. C.
Crist, E. V., Jr.	Sr. Biol.	227 7th, Box 3359.	Timberville, Va.
Croll, G. H.	So. A. H.	10 Enterprise St. .	Ridgewood, N. J.
Cromartee, H. L., Jr.	Fr. E. E.	310 7th, Box 3376 .	Maplewood, N. J.
Crosland, R. B., Jr.	Jr. M. E.	2513 Clark Ave., Box 5458	Charlotte, N. C.
Crouch, F. F., Jr.	So. Ch. E.	501 E. Franklin St. .	Raleigh, N. C.
Crowell, J. A.	Fr. E. E.	322 South, Box 3586	Concord, N. C.
Cruikshank, Mrs. Margaret	Grad. Ind. Arts .	St. Marys School	Raleigh, N. C.
Cullen, P. B.	Jr. Tex. W. and D.	211 7th, Mail: 104 Logan Court .	Fall River, Mass.
Cunningham, F. C.	So. Ind. E.	1615 Fairview Road .	Raleigh, N. C.
Cunningham, R. R.	Jr. H. S. T.	1615 Fairview Road.	Raleigh, N. C.
Curl, E. G.	Fr. M. E.	101 South, Box 3501	Holly Springs, N. C.
Curran, A. L.	Fr. Ag. Ed.	24 Dixie Trail	Cairnbrook, Pa.
Curry, J. F.	Sr. Ch. E.	6 Hope St.	Lebanon, Tenn.
Curtis, Edward Hal	Sr. Tex. Mfg.	106 1911, Box 3706	Climax, N. C.
Curtis, Eugene Harold	Fr. Ag. Ed.	Route 1	Cary, N. C.
Curtis, R. C.	Fr. Ag.	Route 1	Cary, N. C.
Curtis, R. W.	Fr. C. E.	306 6th, Box 3266 .	Hayesville, N. C.
Cutchin, W. H.	Sr. A. H.	303 Watauga, Box 3039 .	Franklin, Va.
Cyrus, H. N.	Jr. E. E.	239 1911, Box 3779	Rocky Mount, N. C.
Dail, M. M.	Sr. C. E.	334 1911, Box 3814	Greenville, N. C.
Dale, C. K.	So. For.	128 1911, Box 3728	Portsmouth, Va.
Dalrymple, N. M.	Sr. Tex. Mfg.	10 South, Box 5351	Jonesboro, N. C.
Dalton, M. M.	Fr. M. E.	308 5th, Box 3232	Durham, N. C.
Dalton, W. N.	Fr. Tex.	311 South, Box 3575.	Winston Salem, N. C.
Daly, O. A.	Jr. M. E.-Aero.	119 1911, Box 3719 .	Raleigh, N. C.
Dammann, A.	Jr. Cer. E.	Gymnasium, Box 5402 .	Amityville, N. Y.
Darst, W. H., Jr.	Sr. E. E.	1609 Park Drive	Raleigh, N. C.
Daughtridge, R. L.	So. Ag.	2004 Hillsboro St.	Rocky Mount, N. C.
Daughtry, J. M.	So. For.	204 7th, Box 3336.	Roanoke Rapids, N. C.
Davenport, L. L., Jr.	Jr. M. E.	17 Enterprise St.	Nashville, N. C.
Davenport, W. H.	Fr. Ag. Ed.	107 6th, Box 3243.	Kinston, N. C.
Davidson, E. P.	Fr. E. E.	205 4th, Box 3123	Murphy, N. C.
Davidson, F. M.	Jr. Tex.	319 1911, Box 3799.	Gibsonville, N. C.
Davidson, J. B.	Jr. Ag. Spec.	Poultry Plant, Box 5513	Swannanoa, N. C.
Davidson, J. W.	Sr. M. E. Aero.	2004 Hillsboro St.	Murphy, N. C.
Davidson, M. E., Jr.	Fr. C. E.	409 Calvin Road	Raleigh, N. C.
Davis, A. E.	So. Ch. E.	131 1911, Box 3731	Burlington, N. C.
Davis, A. J.	So. E. E.	303 6th, Box 3263	Charlotte, N. C.
Davis, C. Craig, Jr.	Fr. Arch. E.	123 South, Box 3523 .	Wilmington, N. C.
Davis, G. W.	Fr. Ag.	301 Park Ave. .	Arcola, N. C.
Davis, H. C., Jr.	Fr. M. E.	107 South, Box 3507	Lexington, N. C.
Davis, J. E., Jr.	Grad. Ag. Ec.		
Davis, J. I., Jr.	Grad. Ag. Ec.	2412 Everett Ave.	Athens, Ga.
Davis, J. P., Jr.	Jr. Ag. Ec.	202 1911, Box 3742	Salisbury, N. C.
Davis, J. T.	Fr. For.	207 6th, Box 3255	Yadkinville, N. C.
Davis, J. W.	Sr. For.	121 1911, Box 3721	Otto, McKeesport, Pa.
Davis, M. W., III.	So. Tex.	214 South, Box 3546	Charlotte, N. C.
Davis, N. C.	Jr. Ind. Mgt.	1922 Hillsboro St.,Box 5627	Elizabeth City, N. C.
Davis, P. L.	Sr. For.	2316 Hillsboro St.	Waynesville, N. C.
Davis, P. P.	Sr. H. S. T.	130 7th, Box 5282.	Elizabeth City, N. C.
Davis, R. L.	Jr. Ch. E.	1806 Hillsboro St.	Charlotte, N. C.

Name	*Classification*	*School Address*	*Home Address*
Davis, W. E.	Fr. E. E.	220 Cox Ave.	Connelly Springs, N. C.
Davis, W. G.	Sr. For.	221½ Forest Road.	Maggie, N. C.
DeBoy, W. H.	Jr. Ch. E.	407 N. Person St.	Raleigh, N. C.
Decker, F. A., Jr.	So. Tex.	306 Chamberlain St.	Charlotte, N. C.
Dees, L. A.	So. Tex. Mfg.	315 7th, Box 3381	Concord, N. C.
Dees, R. E., Jr.	Fr. Ch. E.	126 South, Box 3526	Greensboro, N. C.
Delamar, C. D.	Sr. Ch. E.	133 1911, Box 3733	Durham, N. C.
De Lane, J. C.	Sr. Ch. E.	303 Forest Road	Hickory, N. C.
Delphin, H.	Sr. For.	119 Cox Ave., Box 5482	Coney Island, N. Y.
Del Pico, R.	So. E. E.	301 Park Ave.	Vedado-Havana, Cuba
De Marcay, C. M.	So. Tex. C. and D.	220 7th, Box 3352	Savannah, Ga.
Denton, H. R.	Sr. H. S. T.	6 Ferndell Lane	Rahway, N. J.
Denton, W. L.	Fr. Voc. Ed.	126 Forest Road	Wood, N. C.
Derbyshire, S. W.	So. Cer. E.	304 South, Box 3568	Raleigh, N. C.
De Vane, J. L.	So. Ag	117 Park Ave.	Tomahawk, N. C.
Dewar, S. D.	Sr. Ag. Ed.	217 1911, Box 3757	Fuquay Springs, N. C.
Dewey, G. B.	Fr Tex. Mgt.	Gymnasium, Mail: 104 Logan Court	Pulaski, Va.
Deyton, J. M.	Sr. For.	1813 White Oak Road	Green Mountain, N. C.
Diaz, R.	Jr. M. E.	College Court Apt. 5, Box 5173	San Juan, Puerto Rico
Dickerson, E. N.	Fr. Ag.	4 Maiden Lane	Kinston, N. C.
Dickey, E. H.	Sr. E. E.	115 Park Ave., Box 5414	Laurinburg, N. C.
Dickinson, J. E., Jr.	Sr. E. E.	227 7th, Box 3359	Mooresville, N. C.
Dilling, M., Jr.	Sr. Tex. Mfg.	316 Watauga, Box 5533	Gastonia, N. C.
Dillingham, M. M.	Jr. For.	1809 Sunset Drive	Barnardsville, N. C.
Dixon, D. C.	Jr. For.	125 1911, Box 3725	Belle Mead, N. J.
Dixon, R. E.	Jr. Tex.	310 Watauga, Box 3046	Winston Salem, N. C.
Di Veso, A. A.	Fr. Ind. Arts	21 South, Box 5233	White Plains, N. Y.
Dobbins, G. B.	Sr. Ch. E.	619 Wycock St.	Raleigh, N. C.
Dobson, J. A.	Fr. Ag.	308 South, Box 3572	Statesville, N. C.
Dobson, S. H.	So. Ag.	237 1911, Box 3777	Statesville, N. C.
Dolphin, J.	Jr. Tex. Mfg.	225 Hawthorne Road	Marysville, N. B., Can.
Donovan, D. W.	Fr Ch. E.	103 N. Boylan Ave.	Raleigh, N. C.
Dossenbach, J. R.	Sr. Dairy Mfg.	2004 Hillsboro St.	Leonia, N. J.
Doster, J. E., Jr.	Fr. E. E.	111 South, Box 3511	Gibson, N. C.
Dotger, F. W., Jr.	Fr. Ag.	203 5th, Box 3215	Charlotte, N. C.
Doub, A., Jr.	So. Ag	3016 White Oak Road, Mail: Route 1	Raleigh, N. C.
Dover, J. T., Jr.	Fr. Tex. Mgt.	2004 Hillsboro St.	Shelby, N. C.
Dozier, J. L.	So. Ch. E.	2015 Glenwood Ave.	Raleigh, N. C.
Driver, M	So. M. E. Aero.	211 Watauga, Box 3029	Dunn, N. C.
Dry, C. L.	Fr. Ag. Ed.	110 6th, Box 3246	Richfield, N. C.
Dryc, R. J.	Sr. Ag. Ed.	208 7th, Box 3340	Oakboro, N. C.
Duff, W. P.	Sr. Tex. Mfg.	21 Enterprise St.	Elizabeth City, N. C.
Dulin, C. J.	Jr. Ch. and D.	313 Watauga, Box 3049	Charlotte, N. C.
Dunkelberger, G. W.	Fr. For.	334 7th, Box 3400	Kutztown, Pa.
Dunn, R. W.	Sr Tex.	2407 Clark Ave., Box 5428	Rocky Mount, N. C.
Dunn, W. B.	Fr. For	213 South, Box 3545	Kennerdell, Pa.
Dunnagan, C. R.	Jr. Tex. Mfg.	102 Watauga, Box 3002	Yadkinville, N. C.
Durham, D. W.	Sr. Ch. E.	301 6th, Box 3261	Carthage, N. C.
Durham, E. E.	Fr. Ag. Ed.	209 5th, Box 3221	Kernersville, N. C.
Eaddy, H. E	Grad. Ag.	2316 Hillsboro St.	
Eagles, J. I.	Sr. Ag. Ec.	2302 Clark Ave., Box 5404	Macclesfield, N. C.
Eagles, S. S.	Sr. Ch. E.	2411 Everett Ave.	Wilson, N. C.
Eaker, R. C.	Jr. For.	201 Park Ave.	Cherryville, N. C.
Eakins, R. B.	Fr. M. E.	18 South, Box 3614	Wilmington, N. C.
Earley, C.	So. Ag. Ed.	218 South, Box 3550	Rutherfordton, N. C.
Early, H. W., Jr.	Fr. For.	215 Park Ave.	Aulander, N. C.
East, R. E.	Fr. For.	110 7th, Box 5191	White Sulphur Springs, W. Va.
Easterling, C. A.	So. For.	2402 Everett Ave.	Wise, Va.

Name	Classification	School Address	Home Address
Echerd, C. P.	Fr. Tex. Mfg.	22 South, Box 3618	Greensboro, N. C.
Edge, G. W.	Fr. Cer. E.	210 5th, Box 3222	Rocky Mount, N. C.
Edge, J. N.	Fr. Ag.	326 South, Box 3590	Fayetteville, N. C.
Edge, N. P., Jr.	Sr. For.	223 1911, Box 3763	Rocky Mount, N. C.
Edgerton, E. R.	Jr. Ag. E.	2302 Clark Ave., Box 5164	Kenly, N. C.
Edmonds, G. L.	Fr. For.	119 South, Box 3519	Roanoke Rapids, N. C.
Edmonson, R. T.	Sr. Ind. Mgt.	1301 Hillsboro St.	Washington, N. C.
Edwards, C. M.	So. Tex.	215 7th, Box 3347	Stamford, N. Y.
Edwards, L. M.	So. M. E.	312 Linden Ave.	Durham, N. C.
Edwards, L. V., Jr.	So. C. E.	325 1911, Box 3805	Hemp, N. C.
Edwards, R. I.	So. For.	306 Chamberlain St.	Charlotte, N. C.
Edwards, R. L.	So. Ag. Ed.	106 Logan Court	Spring Hope, N. C.
Edwards, William Alfred	Sr. Ag. Spec.	131 7th, Box 3331	Danville, Va.
Edwards, William Archie, Jr.	Jr. C. E.	236 1911, Box 3776	Princeton, N. C.
Edwards, W. J.	Fr. Ch. E.	2202 Hillsboro St.	Raleigh, N. C.
Efird, K. P., Jr.	Sr. Ch. E.	1806 Hillsboro St.	Albemarle, N. C.
Eisenberg, M.	Fr. Ch. E.	218 South, Box 3550	Durham, N. C.
Elam, A. B.	Sr. Tex. C. and D.	202 Watauga, Box 3020	High Point, N. C.
Elam, P. R.	Jr. Ag. Ed.	314 E. Park Drive	Kings Mountain, N. C.
Ellington, E. D.	So. Ag. Ed.	123 Brooks Ave.	Graham, N. C.
Elliott, E. D.	Fr. Ag.	5 Hope St.	Hiddenite, N. C.
Elliott, R. F.	So. M. E. Aero.	220 Cox Ave., Box 5361	Rich Square, N. C.
Ellis, W. H.	So. Cer. E.	216 Watauga, Box 3034	Henderson, N. C.
Emin, Ali	Grad. Tex. Mfg.	301 Park Ave.	Nazilli, Turkey
Enfield, C. W.	Jr. Tex.	211 Groveland Ave.	Graham, N. C.
Engelman, W.	Fr. Hort.	330 7th, Box 3396	Tyrone, Pa.
Enloe, J., Jr.	Jr. Ag. Ed.	2902 Fairground Ave., Box 5455	Franklin, N. C.
Entwistle, E. W.	Jr. Phy. Ed.	105 7th, Box 3305	Old Orchard Beach, Me.
Epps, L. M., Jr.	Fr. M. E.	205 South, Box 3537	Newton, N. C.
Ericson, E. H., Jr.	Fr. For.	229 South, Box 3561	Manchester, Mass.
Ernst, T.	Sr. Aero. E.	304 1911, Box 3784	Toms River, N. J.
Espey, J. W.	Jr. Tex.	119 7th, Box 3319	Hickory, N. C.
Estes, G. S., Jr.	Sr. Tex.	204 Watauga, Box 3022	West Orange, N. J.
Eudy, H. A.	Grad. Ag. Ec.	226 Hillsboro St.	Raleigh, N. C.
Evans, W. G., II	Jr. For.	213 Woodburn Road	Wilmington, N. C.
Everett, H. R.	Fr. Ch. E.	303 South, Box 3567	Greensboro, N. C.
Fabrizi, A. P.	Jr. C. E.	301 Park Ave.	Geneva, N. Y.
Falls, H. S.	Jr. C. and D.	1301 Hillsboro St.	Fallston, N. C.
Fallwell, M. L.	Fr. Ch. E.	1600 St. Mary's St.	Raleigh, N. C.
Fanning, W. L.	So. Tex.	314 Watauga, Box 3050	Shelby, N. C.
Faris, C. B., Jr.	So. Ag.	W. Boulevard	Raleigh, N. C.
Farlow, J. N.	So. C. E.	3011 Hillsboro St.	Greensboro, N. C.
Farr, R. W.	So. E. E.	130 Forest Road	Portland, Me.
Farrior, J. W.	Jr. For.	240 1911, Box 3870	Burgaw, N. C.
Farrior, M. L.	So. Ag. Ed.	2 Logan Court	Rose Hill, N. C.
Farrior, W. P.	Fr. Ag.	312 South, Box 3576	Willard, N. C.
Feather, J. A., Jr.	Sr. Tex. Chem.	1720 Hillsboro St.	New Bedford, Mass.
Fehley, W. F.	Fr. Tex. Mfg.	134 7th, Box 3402	Phillipsburg, N. J.
Feit, S.	Fr. For.	325 7th, Box 3391	Brooklyn, N. Y.
Felton, C. H.	Fr. Tex.	Gymnasium, Box 5402	Rocky Mount, N. C.
Ferguson, R. S.	Fr. San. E.	212 6th, Box 3260	Waynesville, N. C.
Fetner, R. J.	So. For.	2220 Hillsboro St.	Hamlet, N. C.
Filicky, J. G.	Fr. Ch. E.	517 S. Salisbury St.	Raleigh, N. C.
Findlay, J. H.	Jr. For.	2604 Hillsboro St.	Charlotte, N. C.
Fisher, F. H.	Sr. Ind. Mgt.	312 Chamberlain St., Box 5291	Raleigh, N. C.
Fisher, H.	Fr. Tex.	116 Groveland Ave.	Brooklyn, N. Y.
Fisher, J. H.	So. Ag. Ed.	335 1911, Box 3815	Salisbury, N. C.
Fisher, W. H.	Jr. M. E.	104 1911, Box 3704	Brasstown, N. C.
Fitzmaurice, E. A.	Jr. Tex. Mfg.	1702 Hillsboro St.	Mohall, N. D.
Flake, J. E.	Fr. Ag.	105 5th, Box 3205	Wadesboro, N. C.

Name	*Classification*	*School Address*	*Home Address*
Flannagan, E. G., Jr.	Jr. Arch. E.	2402 Hillsboro St.	Henderson, N. C.
Flanagan, J. D.	Jr. Tex. Ch. and D.	212 Cox Ave.	Soddy, Tenn.
Fleming, C. J., Jr.	Jr. Aero. E.	2 Hope St.	Henderson, N. C.
Fleming, L. P., Jr.	So. M. E.	327 1911, Box 3807	Asheville, N. C.
Fleming, P. F.	Jr. For.	320 1911, Box 3800	Mt. Union, Pa.
Fletcher, L. V.	So. E. E.	1413 Scales St.	Raleigh, N. C.
Flowe, J. S., Jr.	So. Tex. Mfg.	1922 Hillsboro St.	Greensboro, N. C.
Floyd, G. H., Jr.	Sr. For.	111 Watauga, Box 3011	Fairmont, N. C.
Forbes, I. H.	Sr. A. H.	Brooks Ave., Box 5441	Gastonia, N. C.
Fornero, H.	Sr. Hwy. E.	324 7th, Box 3390	Orange, N. J.
Forrest, H. K.	So. Ag.	519 Polk St.	Raleigh, N. C.
Forsythe, W. C.	Jr. M. E.	127 1911, Box 3727	Hendersonville, N. C.
Fort, J. D.	Jr. Ag. Ec.	College Court Apt. 1	Clinton, N. C.
Fortunato, C. P.	Fr. Ind. Arts	114 7th, Box 3319	Ypsilanti, Mich.
Foster, J. M.	So. Aero. E.	31 Shepherd St.	Raleigh, N. C.
Foster, W. L.	Sr. For.	204 7th, Box 3336	Littleton, N. C.
Fountain, W. R.	Jr. Ind. Mgt.	213 Watauga, Box 3031	Wilmington, N. C.
Fousheé, J. G.	So. Ch. E.	226 7th, Box 3358	Greensboro, N. C.
Fox, A. J.	Sr. Tex.	234 1911, Box 3774	Troutman, N. C.
Fox, C. A.	Sr. For.	321 1911, Box 3801	Asheboro, N. C.
Fox, G. P.	Fr. Arch. E.	301 7th, Box 3367	Rocky Mount, N. C.
Francis, W. F.	Fr. Ag.	407 Dixie Trail	Crumpler, N. C.
Franck, R. W.	Fr. M. E.	6 South, Box 3602	Richlands, N. C.
Franklin, C. D.	Fr. Ag.	104 4th, Box 3114	Lake Taxaway, N. C.
Franklin, W. H.	Grad. Ch. E.	2302 Fairview Road	Raleigh, N. C.
Franklin, W. L.	So. Ag.	301 Watauga, Box 3037	Franklin, N. C.
Frazier, T. R., Jr.	Fr. E. E.	204 6th, Box 3252	Warrenton, N. C.
Fredericks, J. W.	Jr. Tex. C. and D.	2220 Hillsboro St.	Wilmington, N. C.
Freeman, D. N.	Fr. Ag.	Route 6, Raleigh	Colerain, N. C.
Freeman, G. R.	Jr. Tex. C. and D.	116 1911, Box 3716	Norwood, N. C.
Freeman, W. B.	So. M. E.	Power Plant, Box 5241	Charlotte, N. C.
French, V. W.	Sr. C. E.	103 Park Ave.	Raleigh, N. C.
Frink, E. E.	So. For.	124 1911, Box 3724	Bladenboro, N. C.
Frink, J. C.	Jr. Ag.	324 7th, Box 3390	Bladenboro, N. C.
Fry, G. W.	Jr. Tex.	131 7th, Box 3331	Raleigh, N. C.
Fryc, J. T., Jr.	So. For.	334 1911, Box 3814	Wardensville, W. Va.
Fulcher, G. H.	Fr. Tex. Mgt.	16 South, Box 3612	Leaksville, N. C.
Fulenwider, E., Jr.	Jr. Ind. Arts	301 Watauga, Box 5483	Burlington, N. C.
Fulghum, J. S., Jr.	Jr. Ind. Mgt.	615 Wills Forest St.	Raleigh, N. C.
Fuller, W. E.	Grad. Ag.		
Fulp, C. L.	Jr. Tex. Mfg.	232 1911, Box 3772	Kernersville, N. C.
Furr, J. W.	Sr. Tex. C. and D.	2004 Hillsboro St., Box 5565	High Point, N. C.
Gadd, C. W.	So. H. S. T.	119 7th, Box 3319	Charlotte, N. C.
Gaither, J. B.	Jr. Tex.	1301 Hillsboro St.	Raleigh, N. C.
Gale, C. S.	Sr. Const. E.	1214 Cowper Drive	Raleigh, N. C.
Gallo, J. E.	Fr. Ind. Arts	21 South, Box 5233	Yonkers, N. Y.
Gardner, F. E.	Fr. M. F. Aero.	132 South, Box 3532	Smithfield, N. C.
Garner, C. J.	Fr. For.	117 Chamberlain St.	Newport, N. C.
Garodnick, I. O.	Grad. Voc. Ed.	301 Park Ave.	Newark, N. J.
Garrabrant, J. R.	Sr. M. E.	309 1911, Box 3789	Wilmington, N. C.
Garrard, W. E.	Jr. Ag. E.	326 1911, Box 3806	Durham, N. C.
Garren, G. M.	Grad. Agr.		
Garrett, W. R.	Sr. Tex. C. and D.	1720 Hillsboro St.	Rockingham, N. C.
Garrison, R. V.	So. Ag.	201 1911, Box 3741	Merchantville, N. J.
Gash, W. D.	Sr. For.	202 Cox Ave.	Swannanoa, N. C.
Gaskins, E. L.	So. Ind. E.	201 7th, Box 3333	Grifton, N. C.
Gaskins, W. W.	Jr. Cer. E.	310 1911, Box 3790	New Bern, N. C.
Gattis, C. M., Jr.	Fr. Cer. E.	329 South, Box 3593	Louisburg, N. C.
Gaw, J. G.	Sr. M. E.	21 Enterprise St.	Greensboro, N. C.
Gaylord, O. J.	Jr. Ag. Ed.	203 1911, Box 3743	Jamesville, N. C.
Geitner, J. M.	Sr. Ch. E.	1806 Hillsboro St.	Hickory, N. C.
Gerber, T.	Fr. For.	330 7th, Box 3396	Brooklyn, N. Y.

Name	*Classification*	*School Address*	*Home Address*
Gerlock, A. J.	Sr. For.	117 N. Salisbury St.	Mt. Union, Pa.
Getz, G. G.	Sr. E. E.	221 1911, Box 3761	Winston Salem, N. C.
Gewehr, A. R.	Fr. Tex. Mfg.	314 7th, Box 3380	S. Orange, N. J.
Gibbons, W. E.	Fr. For.	103 6th, Box 3239	Bogota, N. J.
Gibbs, H. S., Jr.	Fr. Cer. E.	115 Woodburn Road	Morehead City, N. C.
Gibbs, L. W.	Jr. Ag. Ec.	323 1911, Box 3803	Engelhard, N. C.
Gibson, F. B.	Sr. A. H.	213 1911, Box 3753	Gibson, N. C.
Gibson, P. J.	So. Ag.	229 1911, Box 3769	Franklin, N. C.
Gilbert, D. L.	Jr. Ind. Mgt.	305 Watauga, Box 3041	Dunn, N. C.
Giles, J. F.	Jr. Zool.	306 Watauga, Box 3042	Archdale, N. C.
Gill, M. A.	So. Aero. E.	224 7th, Box 3356	Hawthorne, N. J.
Gillespie, E. C.	Fr. Ag.	314 South, Box 3578	Hollis, N. Y.
Gillespie, Effie L.	Sr. H. S. T.	Cary, N. C.	Cary, N. C.
Gillespie, H. M., Jr.	Fr. M. E.	310 7th, Box 3376	Spring Lake, N. J.
Gilmore, J. F.	So. E. E.	1806 Hillsboro St.	Oxford, N. C.
Gingross, M. J.	Fr. For.	110 7th, Box 3310	Marquette, Mich.
Glod, W. J.	Fr. E. E.	228 South, Box 3560	Castle Hayne, N. C.
Goad, T. G.	Sr. M. E.	315 S. Boylan Ave.	Raleigh, N. C.
Godfrey, R. K.	Grad. Ag.	223 Brooks Ave.	Sussex, N. J.
Godwin, C. R.	Fr. Ag.	803 Holt Drive	Raleigh, N. C.
Goforth, G. M.	Fr. Ag. Ed.	16 South, Box 3612	Shelby, N. C.
Gomo, K. P.	Jr. Arch. E.	2004 Hillsboro St.	High Point, N. C.
Goode, C. F.	Sr. H. S. T.	130 7th, Box 5172	Cliffside, N. C.
Goodman, A. D.	So. Tex.	2405 Clark Ave.	High Point, N. C.
Goodman, V. J.	Jr. Ag. Spec.	306 1911, Box 3786	Concord, N. C.
Goodwin, R. N.	Jr. M. E.	Dixie Trail, Route 5	Salemburg, N. C.
Gore, F. C.	Sr. Ch. E.	2407 Clark Ave.	Weldon, N. C.
Grady, R. H.	Jr. San. E.	339 1911, Box 3819	Kinston, N. C.
Graham, R. B., Jr.	Jr. Tex. C. and D.	103 Chamberlain St.	Charlotte, N. C.
Graham, T. K.	Fr. Tex.	306 South, Box 3570	Greenville, S. C.
Graham, W. B., Jr.	Jr. Tex. Mfg.	104 Logan Court	Vass, N. C.
Granger, R. H.	Fr. Cer. E.	101 4th, Box 3111	Greensboro, N. C.
Granger, W. B.	So. Cer. E.	139 1911, Box 3739	Greensboro, N. C.
Grant, I. F.	So. M. E.	340 1911, Box 3820	Newport News, Va.
Grantham, J. E.	Jr. Const. E.	307 1911, Box 3787	Rocky Mount, N. C.
Graves, F. W., Jr.	Jr. Ch. E.	1620 Hillsboro St.	Mebane, N. C.
Gray, C. J.	So. M. E.	218 7th, Box 3350	Wilmington, N. C.
Greaves, J., Jr.	Jr. Tex. Mgt.	320 7th, Box 3386	New Bedford, Mass.
Green, A. H.	So. For.	311 7th, Box 3377	Zebulon, N. C.
Greene, E. M., Jr.	Fr. Ag. Ed.	19 South, Box 3615	Peachland, N. C.
Green, P.	Jr. M. E.	108 1911, Box 3708	Sylva, N. C.
Green, R. J.	Fr. Ch. E.	306 E. Peace St.	Raleigh, N. C.
Greenlee, W. G.	Fr. Ag.	207 5th, Box 3219	Marion, N. C.
Gregg, P. P.	Fr. Const. E.	24 South, Box 3620	Albemarle, N. C.
Gregory, I. C.	Sr. Ag.	127 1911, Box 3727	Greensboro, N. C.
Griffin, B.	Jr. For.	209 Hillcrest Road	Nashville, N. C.
Griffin, C. A.	Fr. Ag.	304 5th, Box 3228	Rocky Mount, N. C.
Griffin, J. E.	Fr. Ch. E.	107 4th, Box 3117	Sanford, N. C.
Griffin, James Henry	Sr. For.	120 7th, Box 5212	Asheville, N. C.
Griffin, John Henry	Sr. Ch. E.	119 Ashe Ave.	Monroe, N. C.
Griffin, R. J.	Grad. Tex. C. and D.	115½ Park Ave.	Wilmington, N. C.
Griffin, T. J.	Fr. M. E.	104 South, Box 3504	Neuse, N. C.
Griffin, W. B.	So. Arch. E.	129 1911, Box 3729	Goldsboro, N. C.
Griffith, D. W.	So. M. E.-Aero.	101 Watauga, Box 3001	Kernersville, N. C.
Griffiths, P. A.	Jr. For.	1902 Stone St.	Raleigh, N. C.
Grubbs, C. J.	Fr. M. E.	101 South, Box 3501	Winston Salem, N. C.
Guerrant, E. L.	Sr. M. E.	135 1911, Box 3735	Winston Salem, N. C.
Guthrie, H. C.	So. M. E.	331 1911, Box 3811	Swan Quarter, N. C.
Guy, W. H., Jr.	Fr. Ch. E.	2603 Clark Ave.	Hampton, Va.
Gwaltney, H. G.	Jr. E. E.	322 1911, Box 3802	Winston-Salem, N. C.
Hackney, J. C.	Grad. Ag. (Chem.).	311 Hillcrest Road	Greensboro, N. C.
Hagen, G. H.	So. Hwy. E.	120 Harding St., Box 207	Raleigh, N. C.

Name	*Classification*	*School Address*	*Home Address*
Hale, B. F.	So. Tex. Mfg.	1216 Courtland Drive.	Pine Apple, Ala.
Hales, M. Dorothaleen.	Sr. H. S. T.	5 S. Person St.	Raleigh, N. C.
Hall, C. J.	So. E. E.	220½ Cox Ave.	Rockingham, N. C.
Hall, C. O.	So. Ch. E.	211 7th, Box 3343	Saluda, N. C.
Hall, J. W.	Fr. Ch. E.	125 South, Box 3525	Mt. Ulla, N. C.
Hall, K. W.	So. Cer. E.	1710 Hillsboro St.	Pickwick Dam, Tenn.
Hall, L. N.	Jr. Ag. Ed.	217 Watauga, Box 3035	Salisbury, N. C.
Hall, L. W.	Fr. Ag.	231 South, Box 3563	Stem, N. C.
Halperin, M.	Sr. Ind. E.	229 1911, Box 3769	Baltimore, Md.
Hamilton, C. E.	Fr. E. E.	307 South, Box 3571	Beaufort, N. C.
Hamilton, D. E.	Fr. Tex.	125 South, Box 3525.	Charlotte, N. C.
Hamilton, J. E.	Jr. Ind. Mgt.	305 Watauga, Box 3041	Godwin, N. C.
Hamlin, J. J., Jr.	Jr. Ag.	235 1911, Box 3775	High Point, N. C.
Hammond, J. H.	Jr. Land. Arch.	213 N. Bloodworth St.	Wilmington, Del.
Hampp, C. W.	Fr. M. E.	227 South, Box 3559	High Point, N. C.
Handy, R. P.	So. Ag. Ec.	106 Logan Court	Grassy Creek, N. C.
Hanna, G. V., Jr.	So. Tex.	125 Woodburn Road	Shelby, N. C.
Harden, J. H.	Jr. E. E.	50 1911, Box 3821	Graham, N. C.
Harley, B. R.	Fr. For.	205 5th, Box 3217	Chadbourn, N. C.
Harper, C. P.	Fr. Ag.	222 Park Ave.	Rocky Mount, N. C.
Harper, D. B.	So. Ag.	Route 1	Garner, N. C.
Harper, W. M.	Jr. Ag. Ed.	Route 1	Garner, N. C.
Harrelson, F. R.	So. E. E.	124 1911, Box 3724.	Elm City, N. C.
Harrill, T. S.	So. E. E.	134 1911, Box 3734	Kings Mountain, N. C.
Harris, B. F., Jr.	So. Ch. E.	7 Maiden Lane	Henderson, N. C.
Harris, C. D.	Jr. For.	332 1911, Box 3812	Lexington, N. C.
Harris, C. I.	Fr. For.	113 Cox Ave.	Elizabeth City, N. C.
Harris, C. P.	Fr. Ch. E.	307 5th, Box 3231	Elizabeth City, N. C.
Harris, C. S.	So. Ag. Ec.	1818 Glenwood Ave.	Raleigh, N. C.
Harris, D. C.	So. Tex.	12 Enterprise St.	Thomasville, N. C.
Harris, G. V.	So. Ch. E.	2209 Hope St.	Hawthorne, N. J.
Harris, J. H.	Sr. L. Arch.	Montgomery St.	Siler City, N. C.
Harris, R. W.	Fr. Aero. E.	3 South, Box 3599	Spring Hope, N. C.
Harrison, B. S.	Fr. For.	304 5th, Box 3228	Rocky Mount, N. C.
Harrison, H. L.	So. Tex.	1922 Hillsboro St.	Scotland Neck, N. C.
Hart, D. S.	Fr. Aero. E.	325 7th, Box 3391	West Helena, Ark.
Hart, E. C.	Jr. Ch. E.	232 7th, Box 3364	Hartford, Conn.
Hartley, H. J.	Jr. For.	120½ Groveland Ave.	Clifton Forge, Va.
Hash, W. A.	Fr. Ag. Ed.	202 South, Box 3534	Piney Creek, N. C.
Hassell, J. J., Jr.	Sr. Ch. E.	203 1911, Box 3743.	Roper, N. C.
Hastings, T. E.	Fr. E. E.	118 South, Box 3518	Camden, N. C.
Hatley, J. W.	Fr. Ag.	120 South, Box 3520	Oakboro, N. C.
Hattaway, A. C.	So. Tex.	2513 Clark Ave.	Greensboro, N. C.
Hawes, S. J.	Jr. Tex. C. and D.	103 Chamberlain St.	Charlotte, N. C.
Hay, T. T.	Fr. Ind. E.	105 Glenwood Ave.	Raleigh, N. C.
Hayden, N. H.	Sr. H. S. T.	106 7th, Box 5332	Youngstown, Ohio
Haynes, J. C.	So. Cer. E.	2804 Hillsboro St., Box 5401	Winston Salem, N. C.
Haynes, T. E.	Fr. Aero. E.	328 7th, Box 3394	Burlington, N. C.
Hayworth, M. S.	Fr. Con. E.	202 1911, Box 3742.	Asheboro, N. C.
Healy, W. M., Jr.	Fr. E. E.	521 N. Wilmington St.	Raleigh, N. C.
Hearn, C. C.	Fr. E. E.	328 7th, Box 3394	New Hill, N. C.
Hedgpeth, J. A.	So. Cer. E.	214 Watauga, Box 3032	Rowland, N. C.
Heidelbach, B. A., Jr.	Fr. For.	307 4th, Box 3133	Danville, Va.
Heilman, E. J.	Sr. Tex.	109 Watauga, Box 3009	Phoenixville, Pa.
Hein, A. F.	Sr. For.	233 7th, Box 5482	Bronx, N. Y.
Helms, C. A.	Fr. E. E.	304 7th, Box 3370	Waxhaw, N. C.
Helms, E. V.	So. Tex.	116 7th, Box 3316	Charlotte, N. C.
Heltzel, J. B.	Sr. For.	334 1911, Box 3814	Wardensville, W. Va.
Henderson, T. B.	Sr. For.	205 Ashe Ave.	Williamsburg, Va.
Hendren, T. E.	So. Ag. Ed.	115 Woodburn Road	Hiddenite, N. C.
Hendrix, J. W.	Jr. For.	2201 Clark Ave.	Asheville, N. C.
Henley, E. P.	So. Tex.	329 1911, Box 3809	Durham, N. C.
Henry, R. M.	Sr. For.	1301 Hillsboro St.	Russellville, Ark.

Name	*Classification*	*School Address*	*Home Address*
Heritage, E. H.	Sr. Ch. E.	700 W. Jones St.	Raleigh, N. C.
Herring, G. H.	Jr. Ag. Spec.	110 Watauga, Box 3010	Goldsboro, N. C.
Hertz, N. S.	Jr. Ch. E.	217 7th, Box 3349	Long Branch, N. J.
Hicks, Natalie E.	Jr. H. S. T.	1009 W. Lenoir St.	Raleigh, N. C.
Higgins, J. C., Jr.	Fr. For.	318 South, Box 3582	Harrisburg, N. C.
Hilburn, W. B., Jr.	Fr. Tex. Mfg.	108 South, Box 3508	Bladenboro, N. C.
Hildebrand, B. A.	Fr. Ch. E.	202 4th, Box 3120	Lincolnton, N. C.
Hill, L. O.	Jr. Ag. Ed.	314 1911, Box 3794	Vanceboro, N. C.
Hill, P. G., Jr.	So. Tex.	Gymnasium, Box 5402	Rocky Mount, N. C.
Hilton, J. W.	Fr. For.	1610 Ambleside Drive	Raleigh, N. C.
Hindrichs, R. J.	Fr. Ind. E.	129 South, Box 3529	Rutherford, N. J.
Hines, J. B.	Jr. Tex.	109 7th, Box 5172	Winston Salem, N. C.
Hines, J. C.	Sr. Ch. E.	201 Watauga, Box 3019	Rowland, N. C.
Hines, R. C.	So. Tex.	123 7th, Box 3323	Spartanburg, S. C.
Hines, T. I.	Sr. H. S. T.	231 1911, Box 3771	Winston Salem, N. C.
Hinkle, C. G.	Fr. M. E.	2412 Everett Ave.	Greensboro, N. C.
Hinson, H. G.	Fr. Con. E.	332 7th, Box 3398	Raleigh, N. C.
Hinson, J. L.	Grad. Ag. Ec.	2305 Clark Ave., Box 5417	Stanfield, N. C.
Hinson, L. J.	Fr. Ag.	111 5th, Box 3211	Jackson Springs, N. C.
Hobbs, E. L.	So. Aero. E.	222 Park Ave.	Delco, N. C.
Hoch, P. F.	Fr. Ag. E.	119 Ashe Ave.	Poughkeepsie, N. Y.
Hodge, B. B., Jr.	Fr. Ag. Ed.	212 Cox Ave.	Rowland, N. C.
Hoek, M.	Jr. H. S. T.	103 7th, Box 3303	Long Island, N. Y.
Holder, J. A., Jr.	So. Tex.	137 1911, Box 3737	Asheboro, N. C.
Holeman, W. B.	Sr. Ind. Mgt.	211 Woodburn Road	Oxford, N. C.
Hollamon, J. S.	Sr. Ag. Sp.	Polk Hall, Box 5127	Farmville, N. C.
Holland, L.	So. Ag.	5 Infirmary, Box 5575	Charles, N. C.
Holland, T. B.	Jr. Ag. Ed.	Raleigh, Route 4.	Holly Springs, N. C.
Holler, D. F.	Sr. Ag.	6 Enterprise St.	Union Mills, N. C.
Hollifield, E. L.	Fr. M. E.	304 South, Box 3568	Jamaica, N. Y.
Hollis, J. W.	Jr. M. E.	2226 Hillsboro St.	Laurinburg, N. C.
Holloway, V. L.	Jr. Ag. Ed.	103 1911, Box 3703	Sioux, N. C.
Holmes, S. C.	So. M. E. Aero.	327 1911, Box 3807	Cambridge, N. Y.
Holshouser, C. O.	Fr. Tex.	Gymnasium, Box 5392	Rockwell, N. C.
Holshouser, V. A.	Fr. Tex.	Gymnasium, Box 5392	Rockwell, N. C.
Honeycutt, A. J., Jr.	Jr. For.	208 Chamberlain St.	Raleigh, N. C.
Hood, R. P.	Sr. Ind. Mgt.	2210 Ridgecrest St.	Raleigh, N. C.
Hood, S. S.	So. Ind. Mgt.	2210 Ridgecrest St.	Raleigh, N. C.
Hood, W. D.	So. Ch. E.	2405 Clark Ave., Box 5475	Smithfield, N. C.
Hooks, E. T.	So. Ag.	114 1911, Box 3714	Fremont, N. C.
Hooks, J. W.	Fr. Ag.	14 South, Box 3610	Whiteville, N. C.
Hoover, P. A.	So. Ch. E.	116 Groveland Ave.	Raleigh, N. C.
Horney, E. S.	Sr. Tex. C. and D.	124 South, Box 3524	Greensboro, N. C.
Horney, V. V.	Fr. Ag. E.	303 Forest Road	High Point, N. C.
Horton, A., Jr.	So. Aero. E.	1708 Park Drive	Raleigh, N. C.
Horton, C. L.	Fr. Ag. Ed.	104 South, Box 3504	Wendell, N. C.
Howard, H. G.	Fr. For.	327 7th, Box 3393.	Montpelier, Ver.
Howard, J. N.	Sr. Hort.	210 Watauga, Box 3028	Greensboro, N. C.
Howell, C. F.	Jr. Aero. E.	219 1911, Box 3759	Whitakers, N. C.
Howell, M. T.	Sr. Ind. Arts	203 Watauga, Box 5532	Greensboro, N. C.
Howell, O. J.	Fr. Ag.	312 6th, Box 3272.	Goldsboro, N. C.
Howerton, T. M., Jr.	Sr. For.	130 Woodburn Road	Asheville, N. C.
Howle, V. W., Jr.	So. Ind. Arts	102 Watauga, Box 3002	Andrews, S. C.
Hoyle, M. H., Jr.	So. E. E.	207 Watauga, Box 3020	Cooleemee, N. C.
Hoyle, W. F.	So. For.	331 7th, Box 3397	Zebulon, N. C.
Hubbard, James Begg	Sr. For.	112 Watauga, Box 3012	Williamsburg, Va.
Hubbard, Jesse Bolton	Fr. M. E.	115 South, Box 3515	Spray, N. C.
Hube, W. K.	Jr. For.	2402 Everett Ave.	Wise, Va.
Hudson, E. C., Jr.	So. Ch. E.	317 1911, Box 3797	Wilmington, N. C.
Hudspeth, N. L., Jr.	So. Ch. E.	105 Watauga, Box 3005	Yadkinville, N. C.
Huff, J. L.	Jr. For.	201 1911, Box 3741	Mars Hill, N. C.
Huffman, R. L., Jr.	So. Ch. E.	212 Groveland Ave.	Brookfield, Mo.
Huggins, E. M.	So. Ch. E.	747 Hillsboro St.	Hillsboro, N. C.

Name	*Classification*	*School Address*	*Home Address*
Huggins, W. S.	Fr. C. E.	23 South, Box 3619	Clarkton, N. C.
Hughes, D. P.	So. For.	2402 Hillsboro St.	Colerain, N. C.
Hughes, R. A.	So. Ag.	304 4th, Box 3130	Parkton, N. C.
Huhra, E.	Fr. Ag.	127 7th, Box 3327	Donora, Pa.
Hulak, S. M.	Sr. Ch. E.	132 1911, Box 3732	Burgaw, N. C.
Hunnicutt, R. L.	Fr. M. E.	1 South, Box 3597	Monroe, N. C.
Hunt, W. T., Jr.	Fr. E. E.	108 6th, Box 3244	Apex, N. C.
Hunter, C. A.	Fr. Ag.	207 South, Box 3539	Charlotte, N. C.
Hunter, G. W.	Jr. For.	525 N. East St.	Raleigh, N. C.
Hunter, H. B.	Sr. A. H.	210 Watauga, Box 3028	Charlotte, N. C.
Hunter, J. E.	Fr. M. E.	212 5th, Box 3224	Charlotte, N. C.
Hunter, J. W.	Sr. M. E.	324 1911, Box 3804	Wilmington, N. C.
Hunter, N. J.	So. Ag.	2220 Hillsboro St.	Prentiss, N. C.
Hunter, W. L.	Jr. Tex. C. and D.	239 1911, Box 3779	Salisbury, N. C.
Huntley, W. F.	Sr. Ch. E.	2220 Hillsboro St.	Monroe, N. C.
Hurst, E. L.	Sr. For.	2402 Everett Ave., Box 5515	Hubert, N. C.
Hurst, J. R.	So. Ag.	2902 Fairground Ave.	Franklin, N. C.
Hyatt, W. H.	Fr. C. E.	226 South, Box 3558	Waynesville, N. C.
Hyman, E. W.	Fr. Tex. Mgt.	2209 Hope St.	Scotland Neck, N. C.
Ihrie, P., Jr.	Sr. Tex. W. and D.	1301 Hillsboro St.	Rock Hill, S. C.
Ingram, S. O., Jr.	Fr. For.	111 6th, Box 3247	Arden, N. C.
Irving, J. W., Jr.	So. Tex. Mfg.	401 N. Person St.	Wentworth, N. C.
Irby, P. B.	So. Cer. E.	1913 McCarthy St.	Raleigh, N. C.
Isaacs, H. E.	So. E. E.	112 7th, Box 3312	Struthers, Ohio
Isenhour, C. W.	Fr. Cer. E.	211 6th, Box 3259	Salisbury, N. C.
Jacobson, W. D.	Jr. Ch. E.	209 Park Ave.	New York, N. Y.
Jakofsky, W.	Fr. For.	108 4th, Box 3118	Bronx, N. Y.
James, C. L.	Fr. Ag.	120 South, Box 3520	Oakboro, N. C.
James, R. M.	So. Ind. E.	213 7th, Box 3345	Rocky Mount, N. C.
Jaskwhich, E. J.	Sr. Tex. C. and D.	102 7th, Box 3302	Kenosha, Wis.
Jenkins, B. P., Jr.	Jr. Ag.	316 1911, Box 3796	Shelby, N. C.
Jennette, C. R.	Fr. E. E.	208 5th, Box 3220	New Bern, N. C.
Jennings, H. E.	Jr. Aero. Op.	401 S. McDowell St.	Raleigh, N. C.
Jewell, W. L.	Fr. Const. E.	221 South, Box 3553	Sanford, N. C.
Johnson, B. L.	Fr. Ag.	307 6th, Box 3267	Scotland Neck, N. C.
Johnson, C. E.	Sr. Tex. Mfg.	104 Watauga, Box 3004	Liberty, N. C.
Johnson, E. H.	Fr. Con. E.	225 1911, Box 3765	Angier, N. C.
Johnson, E. S.	So. Tex.	311 1911, Box 3791	Kannapolis, N. C.
Johnson, F. J.	Sr. C. E.	221 7th, Box 3353	Raleigh, N. C.
Johnson, H., Jr.	Jr. Tex.	1601 St. Mary's St.	Raleigh, N. C.
Johnson, H. L.	Jr. C. E.	225 1911, Box 3765	Angier, N. C.
Johnson, John Earle	Sr. Ch. and D.	313 1911, Box 3937	New Bedford, Mass.
Johnson, John Enoch	Fr. Ag.	20 South, Box 3616	Wallace, N. C.
Johnson, J. M.	Sr. Ch. E.	2220 Hillsboro St.	Pittsboro, N. C.
Johnson, M. L.	Fr. Ag.	211 South, Box 3543	Benson, N. C.
Johnson, P. E., Jr.	Fr. M. E.	201 4th, Box 3119	Four Oaks, N. C.
Johnson, P. M., Jr.	So. E. E.	316 7th, Box 3382	Greensboro, N. C.
Johnson, Ralph Scott	So. For.	705 W. South St.	Raleigh, N. C.
Johnson, Robert Sexton	Fr. Ag. Ed.	121 South, Box 3521	Kipling, N. C.
Johnson, T. C.	Fr. Tex. C. and D.	120 7th, Box 3320	Paw Creek, N. C.
Johnson, W. B.	Fr. C. E.	103 South, Box 3503	Selma, N. C.
Johntz, R. F.	Fr. C. E.	330 South, Box 3594	Winston-Salem, N. C.
Jolitz, H. P.	Jr. Tex.	306 1911, Box 3786	Winston-Salem, N. C.
Jollay, T. M.	So. For.	115 Forest Road	Durham, N. C.
Jolly, A. L.	Fr. For.	320 South, Box 3584	Holland, Va.
Jones, C. S.	So. Tex.	10 South, Box 3606	Belhaven, N. C.
Jones, F. H.	Fr. M. E.	2232 Circle Drive	Raleigh, N. C.
Jones, J. H.	So. Tex. Mfg.	7 N. Bloodworth St.	Raleigh, N. C.
Jones, J. R., Jr.	So. Ag.	111 1911, Box 3711	Sylva, N. C.
Jones, J. W.	Fr. Cer. E.	24 Dixie Trail	Winston-Salem, N. C.
Jones, R. L., Jr.	So. Ag. Ed.	118 N. Wilmington St.	Greensboro, N. C.

Name	*Classification*	*School Address*	*Home Address*
Jones, S. E., Jr.	Fr. C. E.	232 South, Box 3564	Swansboro, N. C.
Jones, T. R., Jr.	So. Ch. E.	1105 W. Cabarrus St.	Roseboro, N. C.
Jones, W. H.	So. For.	226 7th, Box 3358	N. Wilkesboro, N. C.
Jones, W. L.	Jr. Tex. Mgt.	Dining Hall, Box 5133	Woodruff, S. C.
Jones, W. M.	Jr. Const. E.	2513 Clarke Ave.	Wilson, N. C.
Jones, W. W.	Sr. Tex. Mgt.	10 Enterprise St.	Greensboro, N. C.
Jordan, R. W.	Sr. Ind. Mgt.	127 S. Bloodworth St.	Milton, N. C.
Joyner, B. F.	So. Ch. E.	116 Woodburn Road	Spring Hope, N. C.
Joyner, J. B.	Jr. Chem.	College Court Apt. 1	Fuquay Springs, N. C.
Kale, R. B.	Jr. Tex. Mfg.	1922 Hillsboro St.	Mebane, N. C.
Kalnen, T. R.	So. M. E. Aero.	225 7th, Box 3357	Castle Hayne, N. C.
Kareiva, V. V.	Jr. For.	118 7th, Box 3318	Scranton, Pa.
Karlman, M. M.	Fr. For.	326 7th, Box 3392	Newark, N. J.
Kasey, V. F.	So. Ch. E.	A-301 Boylan Apts.	Greenville, N. C.
Katz, J. L.	Jr. Ch. E.	116 Groveland Ave.	Morganton, N. C.
Kearns, T. C.	Fr. Ag.	327 South, Box 3591	Pleasant Garden, N. C.
Keating, J. A.	Jr. H. S. T.	128 7th, Box 3328	Woodbridge, N. J.
Kelly, B. B.	Fr. Tex.	622 Boylan Ave.	Raleigh, N. C.
Kelly, W. R.	So. Arch. E.	110 N. Wilmington St.	Raleigh, N. C.
Kennedy, F. R., Jr.	So. M. E.	Power Plant, Box 5241	Waynesville, N. C.
Kennedy, J. H.	Fr. M. E.	Power Plant, Box 5241	Waynesville, N. C.
Kermon, R. M., Jr.	Fr. Ch. E.	127 South, Box 3527.	Wilmington, N. C.
Keys, C. P.	Fr. E. E.	118 South, Box 3518	Winston Salem, N. C.
Keys, R. C.	Jr. Ind. Mgt.	232 7th, Box 3364	Washington, N. C.
Killam, G. R., Jr.	Jr. Ch. E.	222 1911, Box 3762	East Orange, N. J.
Killeri, M. R.	Fr. For.	5 Hope St.	Pittston, Pa.
Kinard, J. D.	Grad. Ag. Ec.	2412 Everett Ave.	Ninety Six, S. C.
King, C. D.	Jr. Cer. E.	125 Hawthorne Road	Wilmington, N. C.
King, D. C.	Jr. M. E.	312 Watauga, Box 3048	Wilmington, N. C.
King, J. M.	So. Ag. Ec.	College Court Apt. 1	Clinton, N. C.
King, J. T.	Fr. Ag.	Route 4	Raleigh, N. C.
King, J. W.	Fr. Ch. E.	107 4th, Box 3117	Tillery, N. C.
King, T. L.	Jr. Ag. Ed.	20 Bagwell Ave., Box 5383	Turkey, N. C.
Kirby, B. M.	Fr. Ag.	329 7th, Box 3395	Mullica Hill, N. J.
Kirby, S. J., Jr.	Fr. Ag.	333 7th, Box 3399	Walnut Cove, N. C.
Kirkland, C. W., Jr.	So. E. E.	202 7th, Box 3334	Bellaire, Ohio
Kirkman, J. V.	So. Tex. Mfg.	106 Horne St.	Durham, N. C.
Kirschner, H.	Sr. H. S. T.	129 7th, Box 3329	Brooklyn, N. Y.
Kiser, D. W.	Fr. Ag. Ed.	2316 Hillsboro St.	Bessemer City, N. C.
Kizer, G. H.	Fr. E. E.	103 5th, Box 3203	Rhodhiss, N. C.
Kline, H. R.	So. For.	8 Ferndell Lane	Bethlehem, Pa.
Kluttz, M. J., Jr.	Jr. C. E.	2621 Leesville Road	Raleigh, N. C.
Knott, B. R.	So. Ind. Eng.	109 Oberlin Road	Wendell, N. C.
Knott, L. H.	So. E. E.	323 1911, Box 3803	Oxford, N. C.
Knox, R. B., Jr.	Sr. Cer. E.	10 Enterprise St.	Newton, N. C.
Koella, E., Jr.	Fr. Tex.	211 South, Box 3543	Rockford, Tenn.
Kolarik, T. M.	Fr. Ch. E.	19 South, Box 3615	Raritan, N. J.
Koon, W. F.	Jr. Tex. Mfg.	216 1911, Box 3761	Hickory, N. C.
Kraynak, M. J.	Fr. For.	108 7th, Box 3308	Ellwood, Pa.
Kreimer, B. L.	Fr. C. E.	116 Oberlin Road	Bronx, N. Y.
Kubisa, F.	Sr. Ph. Ed.	115 7th, Box 5163	W. Babylon, L. I., N. Y.
Kugler, F. S., Jr.	So. Ind. E.	6 Ferndell Lane	Salem, N. J.
Kuhns, C. D.	Fr. For.	334 7th, Box 3400	Kutztown, Pa.
Kurfehs, G. J., Jr.	Sr. Hwy. E.	14 Maiden Lane	Jersey City, N. J.
Kuzma, P. J.	Jr. H. S. T.	115 7th, Box 5163	Kalamazoo, Mich.
Lackey, R. O.	So. Ag.	303 Forest Road	Lenoir, N. C.
Lail, J. P.	So. Tex. Mfg.	1408 Hillsboro St.	Barber, N. C.
Lainof, R. I.	So. Ind. Arts	229 7th, Box 3661	Brooklyn, N. Y.
Lake, R. S.	So. Tex. Mgt.	1301 Hillsboro St.	Manhasset, N. Y.
Lambe, C. M., Jr.	So. Cer. E.	413 Calvin Road	Raleigh, N. C.
Lamb, D. M.	Sr. Ch. E.	125 Woodburn Road	Baltimore, Md.

Name	*Classification*	*School Address*	*Home Address*
Lamb, L. H., Jr.	Fr. Ag.	322 South, Box 3586	Garland, N. C.
Lamb, R. V.	Fr. E. E.	203 6th, Box 3251	Elizabeth City, N. C.
Lambert, A. R.	So. Tex. C. and D.	315 Watauga, Box 3051	Greensboro, N. C.
Lancaster, A. G.	Jr. Tex. Mfg.	2230 Hillsboro St.	Henderson, N. C.
Lancaster, E. J.	So. E. E.	125 Woodburn Road	Winston-Salem, N. C.
Land, H. L.	So. M. E.-Aero.	116 Woodburn Road	Hamlet, N. C.
Land, J. S., Jr.	Fr. E. E.	103 4th, Box 3113	Columbia, S. C.
Lander, H. F.	Fr. M. E.	108 4th, Box 3118	Monroe, N. C.
Landrum, Roy	Sr. Tex. W. and D.	2603 Clarke Ave.	Spindale, N. C.
Lane, C. S.	Fr. M. E.	102 5th, Box 3202	Leaksville, N. C.
Lane, E. W.	Jr. Cer. E.	216 7th, Box 3348	Charlotte, N. C.
Lane, V. H.	Jr. Ind. Mgt.	321 1911, Box 3801	Greensboro, N. C.
Lane, Z. B., Jr.	Fr. E. E.	302 6th, Box 3262	Wilson, N. C.
Langdon, J. D.	Jr. Cer. E.	125 Woodburn Road	Linden, N. C.
Langdon, J. L.	Fr. Ag.	209 6th, Box 3257	Smithfield, N. C.
Lange, C. F.	Sr. Ch. E.	201 6th, Box 3249	Melrose Park, Pa
Lardieri, J.	Sr. Ind. Mgt.	119 Cox Ave., Box 5251	Newark, N. J.
Lardner, R. P.	Fr. For.	208 South, Box 3540	Brooklyn, N. Y.
Larkin, R. C.	So. Ag.	3 Maiden Lane	Wheeling, Ill.
Lasley, J. B.	So. M. E.	Power Plant, Box 5241	Greensboro, N. C.
Lathan, W. F.	So. Ag. Ed.	1710 Hillsboro St.	Monroe, N. C.
Laughlin, M. L., Jr.	Fr. Voc. Ag.	306 South, Box 3570	Tarboro, N. C.
Laughter, J. G.	Fr. Cer. E.	214 South, Box 3546	Norlina, N. C.
Lawler, T. F.	Jr. Ind. Mgt.	129 7th, Box 3329	Kalamazoo, Mich.
Lawrence, M. O., Jr.	So. E. E.	1408 Hillsboro St.	Portsmouth, Va.
Leake, T. C.	Fr. Tex. Mfg.	130 South, Box 3530	Rockingham, N. C.
Leary, W. T.	Jr. H. S. T.	110 Watauga, Box 3010	Edenton, N. C.
Le Coney, H. M.	Sr. M. E.	212 Watauga, Box 3030	Asheville, N. C.
Ledbetter, H. D.	Jr. Tex. Mfg.	17 Enterprise St.	Rockingham, N. C.
Ledbetter, H. W.	So. Ag. Ed.	338 1911, Box 3818	Asheville, N. C.
Lee, E. L.	Fr. Ag.	226 South, Box 3558	Fairmont, N. C.
Lee, J. A.	Fr. Tex. Mgt.	2412 Everett St.	Ft. Benning, Ga.
Lee, J. T.	Sr. H. S. T.	Cary, N. C., Route 1	Dunn, N. C.
Lee, R. D.	So. M. E.	2230 Hillsboro St.	Greensboro, N. C.
Lee, R. G.	So. E. E.	125 Woodburn Road	Winston Salem, N. C.
Lee, R. K.	Fr. For.	205 6th, Box 3253	Lugoff, S. C.
Leet, J.	Jr. M. E.-Aero.	207 7th, Box 3339	Lakewood, N. J.
Lenkowsky, E.	Jr. Biol.	315 1911, Box 3795	Cedarhurst, N. Y.
Leonard, F. O.	Fr. C. E.	223 South, Box 3555	Welcome, N. C.
Leonard, W. H.	Fr. Ch. E.	107 South, Box 3507	Lexington, N. C.
Lewis, B. E.	Fr. M. E.	411 Kimsey St.	Raleigh, N. C.
Lewis, J. A.	Fr. M. E.	319 South, Box 3583	Wilmington, N. C.
Lewis, J. M.	Fr. Ag.	2412 Everett Ave., Box 5477	Parkton, N. C.
Lewis, R. B.	Fr. A. H.	302 South, Box 3566	Farmville, N. C.
Lewis, R. H.	Sr. Ch. E.	313 1911, Box 3793	Westport, Mass.
Liles, L. C., Jr.	Sr. Ag. Ed.	Raleigh, N. C., Route 4	Wendell, N. C.
Lilly, H. M., Jr.	So. C. E.	220 1911, Box 3760	Ramseur, N. C.
Lindley, H. C., Jr.	Fr. Ind. E.	10 Enterprise St., Box 5065	Winston-Salem, N. C.
Lindsey, E. L.	Fr. Ind. E.	131 South, Box 3531	Draper, N. C.
Lineberger, C. A.	Fr. Ch. E.	4 South, Box 3600	Charlotte, N. C.
Lineberry, P. F.	So. Ch. E.	Blind Institute	Raleigh, N. C.
Linkhaw, W. D.	Fr. E. E.	208 4th, Box 3126	Lumberton, N. C.
Little, C. S., Jr.	Fr. M. E.	315 Watauga, Box 3051	Southside, N. C.
Livera, L. A.	Jr. E. E.	6 Ferndell Lane	New York, N. Y.
Lockhart, E. M.	So. Ch. E.	230 1911, Box 3770	Hillsboro, N. C.
Lockhart, J. C., Jr.	So. E. E.	12 Enterprise St.	Raleigh, N. C.
Lockhart, R. V., Jr.	So. Ag.	317 1911, Box 3797	Monroe, N. C.
Loftin, H. P.	Fr. Ag.	1301 Hillsboro St.	Kinston, N. C.
Lominac, J. J.	Fr. For.	217 South, Box 5904	Asheville, N. C.
Long, R. W.	Fr. Ag. Ed.	14 South, Box 3610	Tarboro, N. C.
Longest, B. B.	Fr. Const. E.	210 5th, Box 3222	Rocky Mount, N. C.
Loomis, W. E.	Sr. M. E.	309 South, Box 3573	Bloomfield, Conn.
Loos, R. A.	So. Aero. E.	1718 Hillsboro St.	Haddon Heights, N. J.

Name	*Classification*	*School Address*	*Home Address*
Lorek, J. P.	Jr. Aero. E.	228 7th, Box 3360	Castle Hayne, N. C.
Losick, A. I.	So. Ch. E.	116 Groveland Ave., Box 5371	West New York, N. J.
Love W. T.	Fr. Arch. E.	307 5th, Box 3231	Elizabeth City, N. C.
Lovelace, E. K.	So. E. E.	6 Ferndell Lane	New Bern, N. C.
Lovelace, N. F.	Sr. C. E.	333 1911, Box 3813	Macclesfield, N. C.
Lovvorn, R. L.	Grad. Ag.	303 Hillcrest Road	Raleigh, N. C.
Lovvorn, W. M.	Fr. For.	303 Hillcrest Road.	Raleigh, N. C.
Lowdermilk, A. J.	Jr. Ch. E.	2201 Clark Ave., Box 5313	Mt. Gilead, N. C.
Lowery, C. C.	So. For.	102 1911, Box 3702	Collettsville, N. C.
Lowry, T. F.	Fr. M. E.	332 South, Box 3596	Elizabeth City, N. C.
Lozier, P. J.	Fr. Ag.	323 7th, Box 3389	Grantwood, N. J.
Luck, S. L., Jr.	Fr. Arch. E.	206 6th, Box 3254	Greensboro, N. C.
Lull, H. W.	Jr. For.	3201 Hillsboro St.	Asheville, N. C.
Lyday, R. J.	So. Ag. Ed.	120 1911, Box 3720	Brevard, N. C.
Lyerly, P. J.	Jr. Ag. Ed.	115 1911, Box 3715	Granite Quarry, N. C.
Lynch, H. B.	Fr. Ag.	2508 Vanderbilt Ave.	Mebane, N. C.
Lyon, J. V.	So. For.	131 1911, Box 3731	Creedmoor, N. C.
McArthur, D. L.	Fr. Tex.	210 6th, Box 3258	Wakulla, N. C
McAuley, L. Y.	Fr. M. E.	309 7th, Box 3375	Sanford, N. C.
McCabe, R. P.	Fr. Cer. E.	2608 Lochmore Drive	Raleigh, N. C.
McCall, J. E.	So. Ag. Ec.	215 South, Box 3547	Ellerbe, N. C.
McCallum, C. J., Jr.	Sr. Ag. Ec.	218 Watauga, Box 3036	Rowland, N. C.
McCanless, J. C.	So. E. E.	2220 Hillsboro St.	Hamlet, N. C.
McClurd, J. R., Jr.	Jr. Arch. E.	2 Logan Court	Shelby, N. C.
McClure, W. W.	So. Ag. Ed.	110 Cox Ave.	Goodland, Kan.
McCollum, D. L.	So. Tex.	220½ Cox Ave.	Wentworth, N. C.
McColman, J. A., Jr.	Fr. For.	107 6th, Box 3243	Gibson, N. C.
McCormick, T. B.	Fr. M. E. Aero.	1810 Park Drive	Laurinburg, N. C.
McCoy, J. G.	So. For.	1720 Hillsboro St.	Banner Elk, N. C.
McCullough, T. P.	Grad. Phys.	215 Park Ave., Box 5453	Vardaman, Miss.
McDonald, A. C.	Jr. Tex. C. and D.	222 Park Ave.	Wilmington, N. C.
McDowell, H. L.	Sr. M. E.	1922 Hillsboro St.	Scotland Neck, N. C.
McDowell, W. O.	Fr. M. E.	211 Hawthorne Road	Scotland Neck, N. C.
McDuffie, W. R.	So. Ag.	2312 Hillsboro St.	Lumberton, N. C.
McEachern, D. R.	So. Tex. Mgt.	313 Watauga, Box 3049	Concord, N. C.
McFadden, F. W.	Fr. Ch. E.	112 South, Box 3512	Asheville, N. C.
MacFadyen, R. L.	Fr. Ag. Ed.	225 South, Box 3557	Cameron, N. C.
McGowan, H. A.	Jr. E. E.	Box 363, Smithfield	Wilmington, N. C.
McHargue, D. H.	Fr. Ag. Ed.	306 4th, Box 3132	Statesville, N. C.
Mackay, J. H.	Sr. Arch. E.	140 1911, Box 3740	Clayton, N. J.
McKenzie, E. K.	Fr. E. E.	322 7th, Box 3388	Pinehurst, N. C.
MacKenzie, R.	Jr. Cer. E.	2405 Clark Ave.	Wilmington, N. C.
McKimmon, A.	So. Cer. E.	519 N. Blount St.	Raleigh, N. C.
McKimmon, J.	Sr. Tex.	519 N. Blount St.	Raleigh, N. C.
McKinley, D. O.	Fr. Ag.	108 South, Box 3508	New York, N. Y.
McKenney, L. P.	Fr. For.	225½ Forest Road	Asheville, N. C.
McKnight, E. R.	Fr. M. E.	806 Cowper Drive, Box 5562	Charlotte, N. C.
McLaughlin, J. L.	Sr. Cer. E.	119 1911, Box 3719	Gloucester, Mass.
McLaughlin, W. S.	Fr. Cer. E.	119 1911, Box 3719	Gloucester, Mass.
McLaurin, D. L.	So. Cer. E.	214 Watauga, Box 3032	Rowland, N. C.
McLean, D. H.	Jr. E. E.	210 1911, Box 3750	Bladenboro, N. C.
McLean, D. W.	Jr. M. E.	206 Watauga, Box 3024	Asheville, N. C.
McLean, J. L., Jr.	Jr. Ind. Mgt.	318 W. Edenton St.	Raleigh, N. C.
Macleod, James Burt	Fr. E. E.	208 4th, Box 3126	Lumberton, N. C.
McLeod, John Blue	Jr. For.	2201 Clark Ave.	Vass, N. C.
McLeod, W. A.	Fr. Ag. Ed.	201 South, Box 3533	Taylorsville, N. C.
McManis, T. J., Jr.	Jr. For.	106 1911, Box 3706	Pleasant Garden, N. C.
MacMichael, D. J.	Fr. For.	326 7th, Box 3392	Upper Darby, Pa.
McMillan, M. B.	So. Tex.	126 1911, Box 3726	St. Pauls, N. C.
McNeely, R. T.	Fr. Cer. E.	311 5th, Box 3235	Mooresville, N. C.

Name	*Classification*	*School Address*	*Home Address*
McNeill, H. M.	Jr. Tex.	201 Watauga, Box 3019	Rowland, N. C.
McPhail, R. V.	So. Tex.	1301 Hillsboro St.	Hamlet, N. C.
McPhaul, H. W.	So. Ag.	207 6th, Box 3255	Red Springs, N. C.
McPherson, W. W.	Jr. Ag. Ec.	210 1911, Box 3750	Mebane, N. C.
McSwain, C. B.	Sr. Ch. E.	132 1911, Box 3732	Dallas, N. C.
McSwain, H. R.	So. Tex. W. and D.	209 1911, Box 3749	Shelby, N. C.
Madero, J. T.	Fr. Tex. Mgt.	219 1911, Box 3759	Parra, Coah., Mex.
Mahler, G. C.	Fr. Con. E.	308 7th, Box 3374	Wilmington, N. C.
Mahoney, J. F.	Jr. H. S. T.	105 7th, Box 5192	Wheeling, W. Va.
Makepeace, W. R.	So. Con. E.	8 Maiden Lane	Sanford, N. C.
Malpass, P. W.	Sr. Con. E.	109 1911, Box 5157	Delco, N. C.
Mangum, D. B.	Fr. Ag.	1633 Glenwood Ave.	Raleigh, N. C.
Mangum, M. W.	Sr. Ag. Ed.	2402 Hillsboro St.	Monroe, N. C.
Mann, M. G., Jr.	So. Ag.	2020 St. Mary's St.	Raleigh, N. C.
Mann, O. W.	Jr. Tex.	9 South, Box 3605	Albemarle, N. C.
Mann, S. N.	Fr. Ag.	206 South, Box 3538	Asheville, N. C.
Mann, W. R.	Sr. Aer. E.	307 1911, Box 3787	Whitakers, N. C.
Manning, A. D.	So. Ag.	222 Park Ave.	Winterville, N. C.
Manning, B. F.	Fr. E. E.	312 6th, Box 3272	Parmele, N. C.
Mark, L.	Jr. H. S. T.	117 7th, Box 5262	New York, N. Y.
Markley, W. M.	Fr. E. E.	318 7th, Box 3384	Rutledge, Pa.
Marsh, G. W., Jr.	So. Ag. Ed.	225 7th, Box 3357	Bath, N. C.
Marsh, R. S.	Jr. Ag. E.	101 Watauga, Box 3001	Monroe, N. C.
Marshburn, W. J., Jr.	Jr. For.	210 1911, Box 3750	Burgaw, N. C.
Martin, F. S.	Sr. Tex.	2220 Hillsboro St.	Henderson, N. C.
Martin, H. C.	So. For.	236 1911, Box 3776	Roanoke, Va.
Martin, J. F., Jr.	Fr. For.	122 South, Box 3522	Wadesboro, N. C.
Martin, R. H.	Sr. Tex. W. and D.	Dixie Trail	Apex, N. C.
Martin, W. H.	Jr. Ch. E.	2407 Clark Ave.	Winston Salem, N. C.
Mask, F. E.	Sr. Ch. E.	2302 Hillsboro St.	Greensboro, N. C.
Mason, M. H.	So. Tex.	124 Groveland Ave.	Mebane, N. C.
Mass, R. J.	Sr. H. S. T.	102 7th, Box 5281.	Bellaire, Ohio
Massengill, L. E.	Fr. C. E.	220 South, Box 3552	Four Oaks, N. C.
Massey, J. T.	Jr. E. E.	531 New Bern Ave.	Raleigh, N. C.
Mastrolia, F. F.	Jr. H. S. T.	111 7th, Box 5262	East Boston, Mass.
Matheney, W. V.	Jr. Tex. Mgt.	116 7th, Box 5231	Pulaski, Va.
Matheson, H. D.	Grad. Ch.	2316 Hillsboro St.	Jackson Springs, N. C.
Mathewson, C.	Grad. For.		
Mathieson, E. V.	Fr. Ag. Ec.	6 South, Box 3602	Donora, Pa.
Matson, P.	Fr. For.	305 5th, Box 3229	Norfolk, Va.
Matthews, C. M.	Sr. For.	207 4th, Box 3125	Albuquerque, N. Mex.
Matthews, J. A.	Sr. For.	104 Logan Court	Southern Pines, N. C.
Mattocks, A. N.	So. M. E.	220 1911, Box 3760	Greensboro, N. C.
Mattocks, T. C.	So. Ag. Ed.	301 Park Ave.	Gillett, N. C.
Mattocks, W.	Fr. Tex. Mfg.	7 South, Box 3603	Eagle Springs, N. C.
Mattson, A. T.	So. Aero E.	2513 Clark Ave., Box 5458	East Hampton, N. Y.
Matys, J.	Sr. For.	121 1911, Box 3721	Clifton, N. J.
Maultsby, J. D.	Fr. Ch. E.	Gymnasium	Kernersville, N. C.
Mauney, J. M.	Fr. Tex. Mfg.	105 4th, Box 3115	Lincolnton, N. C.
Mauney, W. V.	Jr. Tex.	1301 Hillsboro St.	Lincolnton, N. C.
Maupin, V.	Jr. Cer. E.	Clark Ave.	Raleigh, N. C.
May, L. T.	So. Ch. E.	215 W. Davie St.	Henderson, N. C.
May, S. R., Jr.	So. Tex.	214 7th, Box 3346	Spring Hope, N. C.
Mayfield, B. H.	Sr. For.	209 Watauga, Box 3027	Murphy, N. C.
Mayfield, F. D.	Sr. For.	209 Watauga, Box 3027	Murphy, N. C.
Mayo, H. A.	Sr. Tex.	220 Hillsboro St.	Raleigh, N. C.
Mayo, S. C., Jr.	Grad. Ag. Ec.		
Mayo, W. L.	Jr. M. E.	2202 Hillsboro St.	Greenville, N. C.
Mayton, R. L.	Jr. H. S. T.	Box 129, Cary	Cary, N. C.
Meacham, D. W.	So. M. E. Aero.	2220 Hillsboro St.	Hamlet, N. C.
Mead, H. N.	So. Ag.	311 Watauga, Box 3047	Greensboro, N. C.
Meadows, J. A.	Jr. Ag.	1301 Hillsboro St.	New Bern, N. C.

Name	*Classification*	*School Address*	*Home Address*
Meadows, W., Jr.	Fr. E. E.	18 South, Box 3614	New Bern, N. C.
Means, H. D.	Fr. Ch. E.	219 South, Box 3551	Concord, N. C.
Means, R. P.	Fr. M. E.	321 7th, Box 3387	Trenton, N. J.
Meekins, M. H.	Sr. M. E.	109 1911, Box 3709	Wanchese, N. C.
Mehaffey, G. W.	So. For.	2302 Hillsboro St.	Hendersonville, N. C.
Melton, J. S.	So. Agr.	Dining Hall, Box 5133	Hendersonville, N. C.
Merritt, P. D.	So. Tex.	117 Park Ave.	Rose Hill, N. C.
Meunier, F. A., Jr.	Fr. M. E.	308 6th, Box 3268	Merchantville, N. J.
Mewborn, G. L., Jr.	So. Ag. Ec.	215 Park Ave.	Snow Hill, N. C.
Michael, J. E.	So. For.	117 1911, Box 3717	Wadesboro, N. C.
Middleton, H. M.	Sr. Tex. Mfg.	14 Enterprise St., Box 5452	Warsaw, N. C.
Milholland, J. L., Jr.	So. E. E.	1922 Hillsboro St.	Statesville, N. C.
Milks, L. E., Jr.	Fr. Tex. Mfg.	202 South, Box 3534	Asheboro, N. C.
Miller, C. L.	So. M. E.	212 7th, Box 3344	Rockwell, N. C.
Miller, D. C.	Fr. Ag. Ed.	6 Hope St.	Warsaw, N. C.
Miller, F. E., Jr.	Fr. E. E.	1628 Park Drive	Raleigh, N. C.
Miller, J. C.	Jr. Chem.	2407 Clark Ave., Box 5428	Devon, Conn.
Miller, J. F.	So. Ag.	191 Chamberlain St.	Raleigh, N. C.
Miller, J. T.	Fr. Agr.	207 5th, Box 3219	Marion, N. C.
Milloway, W. H., Jr.	So. E. E.	2513 Clark Ave.	Greensboro, N. C.
Millsaps, E. S., Jr.	So. Agr.	222 7th, Box 3354	Asheboro, N. C.
Mintz, LeR.	Jr. Ag. Ec.	1 Y. M. C. A.	Shallotte, N. C.
Mitchell, R. H.	So. M. E. Aero.	2901 Hillsboro St., Box 5024	Raleigh, N. C.
Mitchell, R. P., Jr.	So. C. E.	220 Cox Ave., Box 5361	Reidsville, N. C.
Mitchem, J. W., Jr.	Fr. Con. E.	611 Glenwood Ave.	Raleigh, N. C.
Mitchiner, J. A.	Fr. Ag. E.	303 5th, Box 3227	Youngsville, N. C.
Mobley, J. L.	Fr. C. E.	102 6th, Box 3238	Williamston, N. C.
Moir, T. R.	Sr. Tex. Mfg.	133 1911, Box 3733	Walkertown, N. C.
Monroe, R., Jr.	Sr. M. E.	115 Park Ave., Box 5414	Laurinburg, N. C.
Monroe, W. C.	Sr. Ag.	6 Enterprise St.	Council, N. C.
Montague, G. A.	So. Ch. E.	Route 5	Raleigh, N. C.
Moore, A. H., Jr.	Fr. M. E.	328 South, Box 3592	Oxford, N. C.
Moore, A. L.	Fr. C. E.	105 6th, Box 3241	Macclesfield, N. C.
Moore, A. M., Jr.	Jr. Tex.	504 Oakwood Ave.	Raleigh, N. C.
Moore, C. N.	So. M. E.	212 Watauga, Box 3030	Washington, N. C.
Moore, C. T.	So. Tex. C. and D.	119 Park Ave.	Rutherfordton, N. C.
Moore, G. A., Jr.	Sr. Ind. Mgt.	2107 Woodland Ave.	Raleigh, N. C.
Moore, J. E., Jr.	Jr. Ch. E.	603 Holt St.	Raleigh, N. C.
Moore, W. S.	Jr. Ag. Ed.	1707 Park Drive	Raleigh, N. C.
Moorefield, J. P.	Jr. For.	331 1911, Box 3811	Greensboro, N. C.
Moran, T. F.	Fr. Ind. E.	311 5th, Box 3235	Westfield, N. J.
Morehead, J. L.	Fr. Tex. Mfg.	303 Forest Road	Lumberton, N. C.
Morgan, H. L.	Jr. E. E.	318 Watauga, Box 3054	Canton, N. C.
Morgan, J. L.	Fr. Cer. E.	104 5th, Box 3204	Gibsonville, N. C.
Morris, H. C.	So. Ch. E.	116 Woodburn Road	Charlotte, N. C.
Morris, H. D.	Jr. Ag. Sp.	403 Horne St.	Miami, Fla.
Morris, J. B.	Fr. E. E.	205 Chamberlain St.	Asheville, N. C.
Morris, L. S.	Jr. Tex.	1715 Park Drive	Salisbury, N. C.
Morris, R. N.	Fr. Ind. E.	11 South, Box 3607	Canton, N. C.
Morris, W. B.	Fr. Ch. E.	323 7th, Box 3389	Aulander, N. C.
Morris, W. S.	Fr. M. E.	115 Woodburn Road	Beaufort, N. C.
Morrisette, P. G.	So. C. E.	115 Hawthorne Road	Camden, N. C.
Morrison, R. E.	Fr. Tex. Mfg.	309 5th, Box 3233	Laurel Hill, N. C.
Morrison, R. H., Jr.	Sr. Ch. E.	201 6th, Box 5308	Charlotte, N. C.
Morrison, T. F., Jr.	Jr. Tex. Mfg.	21 Enterprise St.	Concord, N. C.
Morton, H. D.	Fr. Tex. Mgt.	312 7th, Box 3378	Mohnton, Pa.
Moseley, C. L.	So. M. E. Aero.	617 W. Jones St.	Raleigh, N. C.
Moss, S. B.	Jr. Chem.	120 Forest Road	Albemarle, N. C.
Mucheck, J. F.	Fr. Ind. E.	115 7th, Box 5163	Benwood, W. Va.
Mullen, H. P.	Jr. Tex. Mfg.	309 Watauga, Box 3045	Lincolnton, N. C.
Mullen, L. A.	So. For.	309 Watauga, Box 3045	Lincolnton, N. C.
Murchison, K.	Fr. Ag.	211 5th, Box 3223	Washington, D. C.
Murdoch, R. W.	Jr. A. H.	2316 Hillsboro St.	Troutman, N. C.

Name	*Classification*	*School Address*	*Home Address*
Murphy, G. E.	Jr. Biol.	101 7th, Box 3301	Springfield, Mass.
Murphy, G. R., Jr.	So. Tex.	404 Chamberlain St., Box 5514	Asheville, N. C.
Murphy, J.	So. Tex.	404 Chamberlain St., Box 5514	Asheville, N. C.
Murphy, M. M.	Fr. For.	220½ Cox Ave.	Portland, Me.
Murray, J. L.	So. Aero. E.	17 Enterprise St.	Newton, N. C.
Murray, J. P.	Fr. Ag.	19 South, Box 3615	Burgaw, N. C
Muse, J. B., Jr.	So. Dairy	106 Logan Court	Carthage, N. C.
Musso, B. J.	So. Tex.	118 Watauga, Box 3018	Walsenburg, Colo.
Myers, J. L.	Fr. Ch. E.	116 Woodburn Road	Ahoskie, N. C.
Myers, R.	Jr. M. E.	123 1911, Box 3723	Biltmore, N. C.
Nading, H. A., Jr.	Sr. Ch. E.	231 1911, Box 3771	Winston Salem, N. C.
Naiman, R. D.	Fr. E. E.	211 6th, Box 3259	Asheville, N. C.
Nakoneczny, M. W.	Fr. M. E.	201 South, Box 3533	Burgaw, N. C.
Nass, H.	So. Tex.	210 7th, Box 3342	New York, N. Y.
Neikirk, J. O.	Sr. Tex.	2604 Hillsboro St.	Charlotte, N. C.
Nelson, L. D.	Sr. Ind. Mgt.	10 Enterprise St.	Washington, N. C.
Nelson, R. M.	Jr. For.	336 1911, Box 3816	Chambersburg, Pa.
Nelson, R. T.	Fr. E. E.	2230 Hillsboro St.	Henderson, N. C.
Nelson, S. E.	Fr. Tex.	206 6th, Box 3254	Grifton, N. C.
Nelson, S. O.	So. For.	336 1911, Box 3816	Chambersburg, Pa.
Nesbitt, M. E.	Sr. Ag. Ed.	338 1911, Box 3818	Fletcher, N. C.
Newlin, J. B.	Jr. Ag.	125 Glenwood Ave.	Mebane, N. C.
Newnam, J. A.	Fr. E. E.	212 6th, Box 3260	Leaksville, N. C.
Newsom, R. N.	Jr. E. E.	125 Woodburn Road	LaGrange, N. C.
Nichols, Antrine	Sr. Chem.	2304 Fairview Road	Raleigh, N. C.
Nichols, E. B., Jr.	So. M. E.	317 Watauga, Box 3053	Moorestown, N. J.
Nicholson, H. C.	Fr. Ag.	303 4th, Box 3129	Cowarts, N. C.
Nicholson, R. C.	Sr. H. S. T.	2307 Lake Drive	Raleigh, N. C.
Nicholson, R. L.	Sr. For.	126 Forest Road	Graham, N. C.
Nickels, W. W.	Jr. C. E.	123 Ashe Ave.	Raleigh, N. C.
Nigro, J.	Fr. For.	307 7th, Box 3373	New York City, N. Y.
Niswonger, G. B.	Fr. M. E.	308 Forest Road	Raleigh, N. C.
Nooe, H. R., Jr.	So. E. E.	330 1911, Box 3810	Pittsboro, N. C.
Norman, G. E., Jr.	Jr. Tex. Mfg.	309 1911, Box 3789	Charlotte, N. C.
Norman, J. M.	Fr. C. E.	310 6th, Box 3270	Goldsboro, N. C.
Norman, R. A.	Sr. Ind. E.	1922 Hillsboro St.	Bath, N. C.
Noulles, G. T.	Sr. Ch. E.	6 Hope St.	Wilson, N. C.
Novick, W. C.	So. M. E.	123 7th, Box 3323	Frackville, Pa.
Novitzkie, A. A.	Fr. For.	301 7th, Box 3367	Maspeth, N. Y.
Nunalee, W. M.	Fr. Ch. E.	225 South, Box 3557	Burgaw, N. C.
Odum, L. H.	So. M. E.	2312 Hillsboro St.	Lumberton, N. C.
Ogburn, L. I.	Fr. Ag.	Angier	Angier, N. C.
Ogletree, J. W.	Sr. Tex. C. and D.	Y. M. C. A.	Roanoke Rapids, N. C.
O'Herron, W. D.	Fr. Ch. E.	114 7th, Box 5553	Springfield, Mass.
Olive, D. M.	Fr. Ch. E.	209 6th, Box 3257	Mt. Gilead, N. C
Oliver, A. A.	So. Tex.	922 Hillsboro St., Box 5627	High Point, N. C.
Oliver, R. L.	Jr. Biology	2627 Fairview Road.	Raleigh, N. C.
Osborne, W. M.	Jr. Ag. Ec.	117 Woodburn Road, Box 5443	Stanfield, N. C.
Osgood, W. J.	Fr. M. E.	110 South, Box 3510	Wellesley Hills, Mass.
Osiecki, E. W.	So. Tex.	303 Watauga, Box 5274	Perth Amboy, N. J.
Overbey, B. L.	So. Tex.	215 Park Ave.	Fieldale, Va.
Overcash, J. P.	Jr. Hort.	Greenhouse, Box 5254	Kannapolis, N. C.
Overman, H. S.	Jr. M. E.	126 1911, Box 3726	Elizabeth City, N. C.
Owen, E. B.	So. Ind. E.	131 Hawthorne Road	Raleigh, N. C.
Owen, Margaret	Sr. H. S. T.	131 Hawthorne Road	Raleigh, N. C.
Owens, H. A.	So. Ch. E.	222 7th, Box 3354	Rocky Mount, N. C.
Owens, O. P.	Grad. Ag.	13 South, Mail: Care of Botany Dept.	Ellenboro, N. C.

Name	*Classification*	*School Address*	*Home Address*
Pace, B. S.	Fr. For.	116 Woodburn Road	Raleigh, N. C.
Page, C. L.	So. For.	226 1911, Box 3766	Fairmont, N. C.
Page, D. D.	So. E. E.	Route 5	Raleigh, N. C.
Page, W. J.	So. Soils	216 Forest Road	Autryville, N. C.
Palmer, M. C.	Sr. Hort.	303 1911, Box 3783	Tryon, N. C.
Palmer, W. R.	Sr. A. H.	103 1911, Box 3703	Clyde, N. C.
Parker, A. L.	Fr. Ag.	106 South, Box 3506	Charlotte, N. C.
Parker, D. C.	Fr. Ag.	104 4th, Box 3114	Fountain, N. C.
Parker, J. D.	So. Ag. Ed.	115 Woodburn Road	Murfreesboro, N. C.
Parker, J. L.	Fr. C. E.	220 South, Box 3552	Four Oaks, N. C.
Parker, L. A.	Fr. Ag.	Route 4	Raleigh, N. C.
Parker, R. L.	Sr. Tex. C. and D.	103 Chamberlain St.	Franklinton, N. C.
Parker, W. F.	So. Ag.	326 1911, Box 3806	Gibson, N. C.
Parkinson, C. R.	Jr. Ch. E.	318 1911, Box 3798	Fairhaven, Mass.
Parks, J. R.	Fr. Con. E.	117 South, Box 3517	Statesville, N. C.
Parks, T. F.	So. Tex. Mfg.	303 Forest Road	Lenoir, N. C.
Parsons, L. R.	So. For.	6 Ferndell Lane	Burlington, N. J.
Pastore, P. N.	Grad. Voc. Ed.	109 South, Box 3509	Newark, N. J.
Patrick, J. L.	So. Ag. Ed.	302 Watauga, Box 3038	Grifton, N. C.
Patterson, A. L.	Fr. M. E.	2701 Clark Ave., Box 5492	Houstonville, N. C.
Patton, J. D.	So. Ag. Sp.	205 Watauga, Box 3023	Franklin, N. C.
Patton, W. H., Jr.	Fr. Ch. E.	116 Woodburn Road	Andrews, N. C.
Pavlovsky, A. J.	So. Ind. Arts	112 7th, Box 3312	Struthers, Ohio
Payne, J. H.	Sr. Ag.	107 1911, Box 3707	Albion, N. Y.
Payne, M. B.	Sr. Tex. Mfg.	213 7th, Box 3345	Kannapolis, N. C.
Payne, R. J.	Fr. Tex. Mfg.	216 South, Box 3548	Kannapolis, N. C.
Payne, R. S.	Jr. M. E.	2314 Hillsboro St.	Hertford, N. C.
Payne, W. M.	So. M. E.	2813 Mayview Road	Taylorsville, N. C.
Peacock, W. A. J.	So. Tex.	104 Logan Court	Goldsboro, N. C.
Pearsall, D. W.	Fr. M. E.-Aero.	328 South, Box 3592	Rocky Point, N. C.
Pearson, H. L.	Fr. M. E.	24 South, Box 3620	Highlands, N. C.
Peatross, O. F.	So. Tex.	817 Brooklyn St.	Raleigh, N. C.
Peden, F. T., Jr.	Fr. Cer. E.	206 South, Box 3538	Canton, N. C.
Peele, S. J., Jr.	Jr. Tex.	123 1911, Box 3723	Belhaven, N. C.
Pendleton, C. A.	Sr. Tex.	114 Watauga, Box 3014	Roanoke Rapids, N. C.
Peninger, H. M.	Fr. Ch. E.	301 South, Box 3565	Concord, N. C.
Penland, G. E.	Sr. Tex. W. and D.	2706 Vanderbilt Ave.	Asheville, N. C.
Pennington, W. D.	So. E. E.	409 Dixie Trail	Nathans Creek, N. C.
Penny, R. C.	So. Tex.	306 5th, Box 3032	Raleigh, N. C.
Pergerson, H. C.	Fr. Aero. E.	215 Park Ave.	Louisburg, N. C.
Perks, L.	Fr. For.	103 6th, Box 3239	Brooklyn, N. Y.
Perry, E. R.	Jr. A. H.	13 Polk Hall, Box 5127	Sugar Grove, N. C.
Perry, H. G.	Sr. Tex.	214 1911, Box 5552	Wallace, N. C.
Perry, K. E.	Fr. Ch. E.	Millbrook	Millbrook, N. C.
Perry, L. L.	Fr. For.	318 South, Box 3582	Cumnock, N. C.
Perry, W. J.	Fr. E. E.	110 6th, Box 3246	Cofield, N. C.
Peters, C. E.	So. Ch. E.	221 Ashe Ave.	Grafton, Mass.
Peters, J. R.	Jr. For.	8 Ferndell Lane	Bronx, N. Y.
Peterson, C. H.	So. For.	213 Woodburn Road	Leechburg, Pa.
Peterson, H. C.	Fr. Ag. Ed.	302 7th, Box 3368	Yonkers, N. Y.
Peterson, W. J.	Sr. H. S. T.	118 1911, Box 3718	Clinton, N. C.
Pharr, J. Y., Jr.	Fr. Tex. C. and D.	103 5th, Box 3203	Concord, N. C.
Phibbs, E. J., Jr.	Sr. Tex. C. and D.	115 1911, Box 3715	High Point, N. C.
Phifer, W. L.	Fr. G. Ag.	322 7th, Box 3388	Kings Mountain, N. C.
Philbeck, T. E.	Jr. Ch. E.	315 1911, Box 3795	Shelby, N. C.
Phillips, F. N., Jr.	Sr. Const. E.	2603 Clark Ave.	Hamlet, N. C.
Phillips, J. W.	Fr. Ag.	114 South, Box 3514	Mebane, N. C.
Phillips, W. F.	Fr. Ag.	2 Maiden Lane, Box 5511	Sanford, N. C.
Phillips, W. R., Jr.	Jr. E. E.	Route 3	Raleigh, N. C.
Phrydas, P. A.	So. E. E.	129 1911, Box 3729	Greensboro, N. C.
Pickard, W. S.	Jr. Ind. Mgt.	6 Enterprise St.	Durham, N. C.
Picket, W. C.	Jr. C. E.	5 Dixie Trail	Raleigh, N. C.
Pickles, W. H.	Fr. For.	315 South, Box 3579	Bayboro, N. C.

Name	*Classification*	*School Address*	*Home Address*
Pierce, Honoree W.	Jr. H. S. T.	122 Ashe Ave.	Apex, N. C.
Pierce, J. C., Jr.	So. Ag.	311 Watauga, Box 3047	Grassy Creek, N. C.
Pierce, J. W.	So. M. E.	103 Chamberlain St.	Swarthmore, Pa.
Piloseno, D. A.	Jr. H. S. T.	125 7th, Box 5192	Bellaire, Ohio
Pinkham, J. R.	Sr. M. E.	138 1911, Box 3738	Washington, N. C.
Pittman, P. R., Jr.	Fr. M. E.	204 South, Box 3536	Maysville, N. C.
Pittman, R. L.	Jr. Ag. Ed.	220 7th, Box 3352	Fairmont, N. C.
Plaster, J. C.	So. Ag. Ed.	2302 Hillsboro St.	Hickory, N. C.
Plonk, W. A.	Fr. Agr.	322 7th, Box 3388	Kings Mountain, N. C.
Plummer, H. W.	So. For.	1301 Hillsboro St.	Asheville, N. C.
Pollard, W. B., Jr.	So. Tex.	13 Enterprise St.	Winton, N. C.
Pollock, D. M., Jr.	Jr. Tex.	1922 Hillsboro St.	High Point, N. C.
Pollock, R. C.	Jr. E. E.	101 1911, Box 3701	Kinston, N. C.
Pollock, W. E.	So. Ag. Ec.	1718 Hillsboro St.	Trenton, N. C.
Poole, H. H.	Fr. C. E.	2220 Hillsboro St.	Hamlet, N. C.
Poovey, T. E.	Jr. Tex.	2405 Clark Ave.	Granite Falls, N. C.
Pope, C. H.	Sr. Ag. Ed.	2 Logan Court	Rose Hill, N. C.
Pope, S. W.	Fr. Ag.	309 5th, Box 3233	Enfield, N. C.
Posey, C. F.	Fr. For.	3011 Hillsboro St.	Horse Shoe, N. C.
Posten, J. H.	Fr. M. E.-Aero.	321 7th, Box 3387	Atlantic Highlands,N.J.
Poteet, R. L.	Sr. Ch. E.	114 1911, Box 3714	Bramwell, W. Va.
Potter, A. D.	So. Tex.	134 1911, Box 3734	Barium Springs, N. C.
Pou, J. W.	Jr. Ag.	5 Maiden Lane	Elmwood, N. C.
Powell, J. F.	Sr. H. S. T.	206 Pine St.	Raleigh, N. C.
Powell, R. V.	Jr. M. E.	111 1911, Box 3711	Newport News, Va.
Power, J. T.	So. M. E.	1710 Hillsboro St.	Highshoals, N. C.
Powers, D. R.	So. M. E.-Aero.	206 7th, Box 3338	St. Pauls, N. C.
Powers, J. N.	So. For.	122 W. Jones St.	Raleigh, N. C.
Powers, L. W.	Fr. Ag.	203 South, Box 3535	Moyock, N. C.
Poyner, G. S.	So. For.	202 Groveland Ave.	Raleigh, N. C.
Poyner, J. M.	Grad. Ch. E.	202 Groveland Ave.	Raleigh, N. C.
Pratt, C. C.	Jr. Ag.	231 7th, Box 3363	Winston-Salem, N. C.
Price, C. L., Jr.	So. C. E.	125 1911, Box 3725	Whiteville, N. C.
Price, F. H., Jr.	Fr. Ag.	228 South, Box 3560	Shelby, N. C.
Pruden, W. H.	So. Ag.	218 1911, Box 3758	Margarettsville, N. C.
Pugh, E. St. C., Jr.	So. Arch. E.	303 Hillcrest Road	Elizabeth City, N. C.
Pully, R. M.	So. Tex. Mfg.	3202 Clark Ave.	Woodsdale, N. C.
Purifoy, D. H.	So. Ag.	206 7th, Box 3338	Bachelor, N. C.
Quintard, E. A.	Jr. Tex.	1622 Park Drive	Charlotte, N. C.
Rabb, W. W.	Sr. H. S. T.	128 7th, Box 3328	Lenoir, N. C.
Rabon, J. L.	Jr. Ag. Ed.	821 Hillsboro St.,Box 5462	Chadbourn, N. C.
Raby, J. P.	So. Ag.	8 Ferndell Lane	West's Mill, N. C.
Ragsdale, T. C.	Jr. Tex. Mgt.	21 Enterprise St.	Jamestown, N. C.
Ramsey, A. H.	Fr. Tex. Mfg.	4 South, Box 3600	Charlotte, N. C.
Ramsay, C. M.	Sr. Const. E.	3 Hope St.	Raleigh, N. C.
Ramsey, D. L.	Jr. Tex. Mfg.	Y. M. C. A., Box 5276	Charlotte, N. C.
Ramsey, G. H.	So. For.	205 Chamberlain St.	Asheville, N. C.
Rand, K. T.	Jr. Ind. Mgt.	2220 Creston Road	Raleigh, N. C.
Randolph, E. O., Jr.	So. Ch. E.	212 Groveland Ave.	Morganton, N. C.
Randolph, H. F.	Fr. M. E.-Aero.	2900 Hillsboro St.	Raleigh, N. C.
Rankin, H., Jr.	Fr. M. E.	313 7th, Box 3379	Gastonia, N. C.
Ratliff, H. E.	So. Vo. Ag.	329 1911, Box 3809	Wadesboro, N. C.
Ray, C. G.	Fr. For.	130 Woodburn Road	Walnut Cove, N. C.
Ray, W. A.	Fr. Ch. E.	313 South, Box 3577	Fayetteville, N. C.
Ray, M. E.	Jr. C. E.	R. F. D. 1	Raleigh, N. C.
Raymond, A. G.	So. Ind. E.	206 1911, Box 3746	Moorestown, N. J.
Reaves, W. P.	Fr. Tex. Mgt.	116 Woodburn Road	Greensboro, N. C.
Reavis, R. P.	So. M. E.	117 South, Box 3517	Statesville, N. C.
Redding, J. F.	Jr. Tex.	137 1911, Box 3737	Asheboro, N. C.
Redmon, B. B.	So. M. E.	211 Hawthorne Road.	Cleveland, N. C.
Reed, C.	Fr. For.	319 South, Box 3583	Hays, Kan.

Name	*Classification*	*School Address*	*Home Address*
Reed, E. L.	Sr. C. E.	309 South, Box 3573	Wagram, N. C.
Reed, G. W., Jr.	Fr. For.	130 Forest Road	Drexel Hill, Pa.
Reeves, J. F.	So. For.	205 Chamberlain St.	Weaverville, N. C.
Reeves, R. B., Jr.	Fr. Cer. E.	228 E. Park Drive	Raleigh, N. C.
Reeves, T. L.	So. Ag. E.	2603 Clark Ave., Box 5551	Sanford, N. C.
Regan, C. S.	Fr. Ag. Ed.	2411 Everett Ave.	Apex, N. C.
Regan, D. A., Jr.	Fr. Ag.	312 South, Box 3576	Boardman, N. C.
Regdon, A. A.	Sr. H. S. T.	103 7th, Box 3303	Homestead, Pa.
Register, H. G.	Fr. Ch. E.	215 South, Box 3547	Rocky Mount, N. C.
Remmey, A. E. M.	So. Tex. Mfg.	1922 Hillsboro St.	Greensboro, N. C.
Remmey, R. C., Jr.	Fr. Ch. E.	310 6th, Box 3270	Greensboro, N. C.
Renn, C. W.	Fr. Ag.	233 1911, Box 3773	Winston Salem, N. C.
Renn, J. A.	So. Ind. Arts	233 1911, Box 3773	Winston-Salem, N. C.
Reno, J. L.	Fr. Ag.	113 South, Box 3513	Canton, N. C.
Repony, W. C.	Jr. Chem.	912 Boylan Drive	Clifton, N. J.
Retter, W. H.	Fr. Ch. E.	134 7th, Box 3402	Stonington, Conn.
Rettew, R. E.	Sr. Tex. C. and D.	106 Watauga, Box 3006	Altamahaw, N. C.
Reynolds, C. H.	So. Tex.	220 Cox Ave., Box 5361	Duffield, Va.
Reynolds, D. C.	So. Tex.	109 7th, Box 5172	Amesbury, Mass.
Reynolds, E. J.	Fr. Geol. E.	229 7th, Box 3361	
Reynolds, R. H., Jr.	So. E. E.	312 Forest Road	Raleigh, N. C.
Rhyne, C. A.	Fr. Tex.	313 South, Box 3577	Mt. Holly, N. C.
Rice, H. C.	Fr. M. E. Aero.	2513 Clark Ave., Box 5458	Hildebran, N. C.
Richardson, D. L.	Fr. E. E.	105 Seawell Ave.	Raleigh, N. C.
Richardson, E. F., Jr.	So. M. E.	115 Woodburn Road, Box 5353	New Bern, N. C.
Richardson, J. T.	Sr. Ag. Ec.	107 Watauga, Box 3007	Turbeville, Va.
Riddick, W. W., Jr.	Fr. Tex.	225 Woodburn Road	Demopolis, Ala.
Ridenhour, M. H.	Fr. Ch. E.	203 South, Box 3535	Cooleemee, N. C.
Riggs, S. G., Jr.	Sr. Cer. E.	2406 Hillsboro St.	Raleigh, N. C.
Ritch, R. E.	Jr. E. E.	322 New Bern Ave.	Raleigh, N. C.
Ritter, W. H.	Fr. Tex.	202 5th, Box 3214	Greensboro, N. C.
Rivenbark, T. A., Jr.	Sr. Ind. E.	203 7th, Box 3335	Watha, N. C.
Rivers, T. W.	Jr. C. E.	107 1911, Box 3707	Greenville, N. C.
Roach, H. O.	Sr. For.	224 1911, Box 3764	Lowell, N. C.
Roberson, M. T.	So. E. E.	2407 Clark Ave.	Williamston, N. C.
Roberson, W.	Fr. M. E.	231 South, Box 3563	Durham, N. C.
Roberts, F. T.	Sr. A. H.	211 Watauga, Box 3029	Mt. Gilead, N. C.
Roberts, G. B.	So. Ag. Ed.	117 Chamberlain St.	Newport, N. C.
Roberts, L. H.	Fr. Ag.	12 South, Box 3608	Stem, N. C.
Robertson, A. D., Jr.	Jr. E. E.	2314 Hillsboro St.	Lumberton, N. C.
Robertson, R. J.	Fr. For.	217 South, Box 3557	Annapolis, Md.
Robeson, G. F., Jr.	Fr. Ch. E.	325 South, Box 3589	Greensboro, N. C.
Robinette, R. T.	Fr. Tex. Mfg.	116 South, Box 3516	Albemarle, N. C.
Robinson, E. M.	Jr. Tex.	104 7th, Box 5363	Wallace, Idaho
Robinson, E. T.	Fr. Ag.	102 South, Box 3502	Charlotte, N. C.
Robinson, F. P.	Fr. M. E.	307 7th, Box 3373	Fayetteville, N. C.
Robinson, G. C.	Fr. Cer. E.	305 South, Box 3569	Cooleemee, N. C.
Robinson, H. G., Jr.	Fr. M. E.	106 South, Box 3506	Charlotte, N. C.
Robinson, I. R.	Jr. Tex. Mfg.	603 Cutler St.	Southport, N. C.
Rodriguez, C. V.	Fr. M. E.	323 South, Box 3587	Ponce, Puerto Rico.
Rogers, D. L.	So. Tex. Mfg.	2513 Clark Ave.	Albemarle, N. C.
Rogers, E. P.	So. E. E.	120½ Groveland Ave.	Statesville, N. C.
Rogers, J. E.	So. Tex.	340 1911, Box 3820	Concord, N. C.
Rogers, J. M.	Fr. M. E.	203 4th, Box 3121	Clio, S. C.
Rogers, M. F.	So. Tex. Mfg.	306 5th, Box 3230	Mebane, N. C.
Rogers, S. D.	Jr. M. E.	103 Watauga, Box 3003	Wilmington, N. C.
Rolland, T. J., Jr.	So. Ch. E.	219 7th, Box 3351	Greensboro, N. C.
Rood, A. B.	Fr. M. E.	101 4th, Box 3111	Greensboro, N. C.
Rook, F. E.	Fr. For.	312 5th, Box 3236	Roanoke Rapids, N. C.
Rooney, A. E.	Fr. Tex.	112 7th, Box 3312	Bellevue, Pa.
Rose, D. R.	So. For.	124 7th, Box 3324	Marshall, Minn.
Ross, B. L.	So. Hwy. E.	303 Forest Road	Durham, N. C.

Name	*Classification*	*School Address*	*Home Address*
Ross, B. P.	Fr. C. E.	230 South, Box 3562	Lillington, N. C.
Ross, G. R., Jr.	Sr. M. E.	1130 Harvey St.	Raleigh, N. C.
Ross, L. C.	Fr. Ag.	325 South, Box 3589	Greensboro, N. C.
Rossi, C. L.	So. C. E.	208 Groveland Ave.	Torrington, Conn.
Rouse, D. W.	So. E. E.	106 Logan Court	Rose Hill, N. C.
Rowland, W. T.	Fr. M. E.	309 6th, Box 3269	Charlotte, N. C.
Ruark, J. C.	Fr. Tex. Mfg.	2202 Hillsboro St.	Southport, N. C.
Ruddock, H. A.	So. Ch. E.	2402 Hillsboro St.	Charlotte, N. C.
Rudisill, Ben R.	So. Tex. Mfg.	2405 Clark Ave., Box 5475	Cherryville, N. C.
Rufty, J. W.	So. Tex. W. and D.	227 1911, Box 3767	Spencer, N. C.
Rugh, J. G.	Fr. M. E.	15 South, Box 3611	Bridgeton, N. J.
Runkle, C. D.	So. Ch. E.	220½ Cox Ave.	Waynesboro, Va.
Runnion, R. S., Jr.	Jr. E. E.	1025 Harvey St.	Raleigh, N. C.
Rupp, H. R.	So. For.	320 1911, Box 3800	Mechanicsburg, Pa.
Russell, C. F.	Sr. For.	224 1911, Box 3764	Hubert, N. C.
Russell, C. R.	So. M. E.	103 Dixie Trail, Box 1496	Raleigh, N. C.
Russell, W. C.	So. Tex.	106 Horne St.	Albemarle, N. C.
Rux, L. J.	Jr. Cer. E.	2220 Hillsboro St.	Henderson, N. C.
Ryder, E. W.	Jr. For.	6 Ferndell Lane, Box 5393	Shippensburg, Pa.
Ryneska, J. F.	Sr. Ind. Mgt.	106 7th, Box 5332, S. C. S.	Amesbury, Mass.
Ryther, C. A.	Sr. Ind. Mgt.	2230 Hillsboro St.	Carthage, N. Y.
Sabol, F. P.	So. Cer. E.	202 7th, Box 3334	Campbell, Ohio
Sabolyk, R.	Fr. Ind. Arts	21 South, Box 5314	Yonkers, N. Y.
Sachaklian, C. H.	Jr. Con. E.	130 1911, Box 3730	Marcellus, N. Y.
Sandidge, Phil	So. Cer. E.	221 Ashe Ave.	Bladenboro, N. C.
Sadler, C. R.	So. Tex.	215 Park Ave.	Charlotte, N. C.
Safrit, L. Y.	Fr. M. E.	2807 Bedford Ave.	Beaufort, N. C.
Sailer, S. S.	So. Tex. Mgt.	212 Groveland Ave.	East Orange, N. J.
Sallenger, A. H.	So. E. E.	1301 Hillsboro St.	Florence, S. C.
Saltzman, A. R.	Jr. Ch. E.	207 7th, Box 3339	Bradley Beach, N. J.
Sanderford, E. C.	Spec. M. E.		
Sanders, M.	Fr. E. E.	128 South, Box 3528	Franklin, N. C.
Sanders, W. M.	Jr. Ag. Ec.	113 Cox Ave.	Hubert, N. C.
Sandfoss, A. J.	So. Tex. Mfg.	121 7th, Box 5191	Newport, Ky.
Sands, K. M.	So. Tex.	133 7th, Box 5231	Pulaski, Va.
Sanford, B. E.	Fr. For.	221 Linden Ave.	Raleigh, N. C.
Sapp, J. A.	Fr. Tex.	119 S. Dawson St.	Raleigh, N. C.
Sarrocco, F. A.	Sr. Ind. Mgt.	209 Park Ave., Box 5251	Newark, N. J.
Satterfield, D.	So. Tex.	125 Woodburn Road	Danville, Va.
Satterfield, L. S.	Jr. Tex. Mfg.	125 Woodburn Road	Danville, Va.
Saunders, M. D.	Jr. Ch. E.	2513 Clark Ave., Box 5458	Gastonia, N. C.
Sauvain, E. B.	So. Tex.	21 Enterprise St.	Concord, N. C.
Savini, J.	Fr. E. E.	318 7th, Box 3384	No. Hanover, Mass.
Sawyer, E. L.	Jr. Ch. E.	114 Watauga, Box 3014	Red Springs, N. C.
Sawyer, J. P., Jr.	So. Cer. E.	115 Hawthorne Road, Box 5394	Elizabeth City, N. C.
Sayre, E. H.	Fr. Cer. E.	304 4th, Box 3130	Tryon, N. C.
Scales, P. B. K.	Sr. Ind. E.	136 Woodburn Road	Raleigh, N. C.
Scarborough, H. V., Jr.	Sr. E. E.	50 1911, Box 3821	Macon, N. C.
Schandler, J. M.	Sr. Tex. C. and D.	116 Groveland Ave., Box 5371	Asheville, N. C.
Schlenger, D. E.	So. M. E.-Aero.	216 1911, Box 3756	Jersey City, N. J.
Schneider, H.	Jr. Tex. Mfg.	116 Groveland Ave., Box 5371	Brooklyn, N. Y.
Scholes, W. A.	So. Cer. E.	1301 Hillsboro St.	Detroit, Mich.
Scholtz, W. W.	Jr. Ag. Spec.	1922 Hillsboro St.	Charlotte, N. C.
Schoof, H. F.	Grad. Ent.	210 Chamberlain St.	Wortendyke, N. J.
Schreiber, W. A., Jr.	Jr. Ag. Ec.	1922 Hillsboro St.	Charlotte, N. C.
Schrock, H. M.	Sr. Con. E.	2412 Everett Ave.	Somerset, Pa.
Schwerdt, J. J., Jr.	Jr. H. S. T.	111 7th, Box 5262	Everett, Mass.
Schworm, R.	Fr. Cer. E.	202 6th, Box 3250	Charlotte, N. C.
Schworm, S.	Fr. Ind. Arts	202 6th, Box 3250	Charlotte, N. C.

Name	*Classification*	*School Address*	*Home Address*
Scott, E. S.	Jr. Const. E.	14 Maiden Lane	Fayetteville, N. C.
Scott, Helen M.	Sr. H. S. T.	108 Horne St.	Greenwich, Conn.
Sears, E. M., Jr.	Jr. M. E.-Aero.	117 Park Ave.	Akron, Ohio
Sears, James White	Jr. Tex. Mgt.	103 Chamberlain St.	Belhaven, N. C.
Sears, Joseph Walter	So. Aero.	614 W. Lane St.	Goldsboro, N. C.
Seely, J. F.	Jr. Ch. E.	2201 Clark Ave., Box 5313.	Chester, Pa.
Seitz, W. P.	So. Ag.	204 5th, Box 3216	Newton, N. C.
Sener, D.	Jr. Ch. E.	117½ Park Ave.	Miami, Fla.
Sewell, J. D.	Sr. E. E.	2316 Hillsboro St.	Murfreesboro, N. C.
Seymour, R. R.	So. Tex. Mgt.	Route 1, Cary	Cary, N. C.
Shafer, R. E.	Grad. Ag. Ec.		
Shallington, T. W.	Fr. C. E.	107 5th, Box 3207	Bolton, N. C.
Shapiro, J.	Fr. For.	333 7th, Box 3399	Salem, N. J.
Sharp, W. D.	Fr. E. E.	207 South, Box 3539	Greensboro, N. C.
Shaw, J. Q.	Fr. Ag.	2702 Hillsboro St.	Durham, N. C.
Shaw, K. J.	Grad. Ag.	2702 Hillsboro St.	Durham, N. C.
Shearon, J. R.	So. E. E.	117 Park Ave.	Bunn, N. C.
Shelley, R. W.	So. For.	303 Forest Road	Forksville, Pa.
Sherrill, G. M.	So. Ag.	117 Woodburn Road	Winston-Salem, N. C.
Sherwin, S. T.	Fr. Ch. E.	116 South, Box 3516	Greensboro, N. C.
Shields, F. P.	Fr. Ag.	116 Woodburn Road.	Scotland Neck, N. C.
Shimer, C. B.	Jr. For.	222 1911, Box 3762	Wilmington, N. C.
Shoe, G. W.	Fr. Arch. E.	303 6th, Box 3263	Bethel, N. C.
Shoemaker, A. W.	Fr. Tex. C. and D.	329 7th, Box 3395	Burlington, N. C.
Shooter, H. L.	Fr. Ag. Ec.	112 South, Box 3512	Rowland, N. C.
Shore, E. L.	Jr. Ag.	325 1911, Box 3805	Clyde, N. C.
Short, T. T.	Sr. E. E.	2302 Hillsboro St.	Enfield, N. C.
Shumaker, M. L.	So. Ag.	114 Park Ave., Box 5445, S. C. S.	Philadelphia, Pa.
Shumate, R. D., Jr.	Fr. M. E.	115 South, Box 3515	Spray, N. C.
Shumway, O. A.	Jr. Ch. E.	318 1911, Box 3798	Fairhaven, Mass.
Sigmon, R. M., Jr.	Fr. E. E.	310 5th, Box 3234	Salisbury, N. C.
Sikes, L. E.	Sr. Tex. W. and D.	2228 Circle Drive	Salemburg, N. C.
Siler, A. J.	Fr. E. E.	105 South, Box 3505	Charlotte, N. C.
Silver, W. C., Jr.	Fr. E. E.	232 South, Box 3564	Marshall, N. C.
Simkins, R. I.	Sr. Con. F.	203 7th, Box 3335	Goldsboro, N. C.
Simmons, A. W.	Fr. For.	221 South, Box 3553	Athens, Tenn.
Simmons, G. F.	Sr. E. E.	123½ Park Ave.	Pawling, N. Y.
Simmons, W. B.	Fr. Ag.	321 South, Box 3585	Mount Airy, N. C.
Simpson, W. C.	Fr. E. E.	1621 W. Park Drive	Norfolk, Va.
Sitton, M. D.	Fr. Ch. E.	222 South, Box 3554	Charlotte, N. C.
Skarren, J. H.	Fr. E. E.	307 South, Box 3571	Beaufort, N. C.
Slesinger, M. L.	Fr. Tex. C. and D.	412 New Bern Ave.	Raleigh, N. C.
Sloan, J. C., Jr.	Jr. Ch. E.	234 1911, Box 3774	Davidson, N. C.
Sloan, T. G.	Jr. Tex. C. and D.	316 1911, Box 3796	Charlotte, N. C.
Slocumb, C. D., Jr.	Jr. Tex.	8 Maiden Lane	Goldsboro, N. C.
Slocum, R. W.	So. For.	2316 Hillsboro St.	Lakewood, Pa.
Small, J. E.	Fr. Tex.	315 7th, Box 3381	Concord, N. C.
Small, W. B.	Jr. Ind. Mgt.	103 Watauga, Box 3003	Washington, N. C.
Smart, C. S., Jr.	Fr. Tex.	217 7th, South, Box 3549	Concord, N. C.
Smathers, F. L.	Fr. M. E.-Aero.	2813 Hillsboro St.	Asheville, N. C.
Smith, A., Jr.	Jr. Ind. Mgr.	319 1911, Box 3799	Kinston, N. C.
Smith, A. J.	So. Ag. Ed.	308 1911, Box 3788	Goldsboro, N. C.
Smith, A. M.	So. Ch. E.	217 Watauga, Box 3035	Elkin, N. C.
Smith, E. F.	So. Ch. E.	332 1911, Box 3812	Lexington, N. C.
Smith, E. W.	So. For.	223 7th, Box 3355	Norfolk, Va.
Smith, F. L.	So. Ag. Ed.	123 Chamberlain St.	Denton, N. C.
Smith, F. O.	Fr. Aero. E.	2209 Hope St.	McLeansville, N. C.
Smith, F. S.	Jr. Ind. Arts	811 Glenwood Ave.	Raleigh, N. C.
Smith, G. E., Jr.	Jr. For.	107 Watauga, Box 3007	Greenville, S. C.
Smith, G. H., Jr.	Grad. Ag. Ec.	111 Oberlin Road	White Oak, N. C.
Smith, G. R.	So. Tex. C. and D.	119 Park Ave.	Goldsboro, N. C.
Smith, H. B.	Jr. Ch. E.	307 Watauga, Box 3043	New Bern, N. C.

Name	*Classification*	*School Address*	*Home Address*
Smith, H. S.	So. Ch. E.	215 Watauga, Box 3033	Hickory, N. C.
Smith, I. W.	Jr. For.	1710 Hillsboro St.	Hendersonville, N. C.
Smith, J., Jr.	Jr. Con. E.	130 1911, Box 3730	Leaksville, N. C.
Smith, James McCree	So. C. E.	318 Ricks Hall	Raleigh, N. C.
Smith, James Milton	Sr. Ch. E.	215 Watauga, Box 3033	Hickory, N. C.
Smith, J. N.	Fr. Cer. E.	111 5th, Box 3211	New Bern, N. C.
Smith, J. R., Jr.	So. E. E.	806 Cowper Drive, Box 5562	Charlotte, N. C.
Smith, J. S.	Fr. For.	105 4th, Box 3115	Lincolnton, N. C.
Smith, L. M., Jr.	Jr. Dairy Mfg.	Pool Road	Raleigh, N. C.
Smith, L. W.	Fr. Aero. E.	130 Woodburn Road	Angier, N. C.
Smith, N. G., Jr.	Fr. Ch. E.	208 6th, Box 3256	Goldsboro, N. C.
Smith, O. F.	Jr. Arch. E.	204 1911, Box 3744	Benson, N. C.
Smith, Pauline	Grad. H. S. T.	214 New Bern Ave.	Raleigh, N. C.
Smith, R. L.	Fr. M. E.	202 5th, Box 3214	Greensboro, N. C.
Smith, Robert Spencer	So. Ag.	3 Maiden Lane	Vanceboro, N. C.
Smith, Roy Stewart	Sr. M. E.	104 Logan Court, Box 5294	Charlotte, N. C.
Smith, T. E.	Grad. Ag.		
Smith, W. C.	Fr. Ag.	103 South, Box 3503	Rich Square, N. C.
Smith, W. W.	Fr. E. E.	210 South, Box 3542	Ransomville, N. C.
Smothers, O. W.	Jr. Ind. Mgt.	122 7th, Box 5172	Winston-Salem, N. C.
Smyre, H. A.	Fr. M. E.	112 5th, Box 3212	Greensboro, N. C.
Snipes, H. G.	Jr. Ag. Ed.	20 Bagwell Ave., Box 5383	Ahoskie, N. C.
Snipes, M. L.	Fr. For.	317 South, Box 3581	Sanford, N. C.
Snook, R. C.	Jr. E. E.	6 Ferndell Lane	Roselle, N. J.
Snow, W. C.	Fr. For.	302 4th, Box 3128	Richmond, Va.
Snyder, G. W.	So. C. E.	209 1911, Box 3749	Wadesboro, N. C.
Sorrell, R.	Jr. M. E. Aero.	1405 Wake Forest Road	Raleigh, N. C.
Southerland, D. R.	Sr. Ind. Mgt.	335 1911, Box 3815	Goldsboro, N. C.
Southerland, F. M.	Jr. Tex. C. and D.	1922 Hillsboro St.	Durham, N. C.
Spain, L. R.	So. Ch. E.	333 1911, Box 3813	Norlina, N. C.
Spainhour, E. S., Jr.	Sr. E. E.	117 Watauga, Box 3017	Winston Salem, N. C.
Spainhour, J. E.	Jr. Tex. C. and D.	232 1911, Box 3772	N. Wilkesboro, N. C.
Spear, W. H.	Fr. M. E.	330 South, Box 3594	Winston Salem, N. C.
Spears, A. R., Jr.	Fr. Aero. E.	2702 Hillsboro St.	Canton, N. C.
Speer, F. R.	So. Soils	303 Forest Road	Boonville, N. C.
Speer, W. A.	Sr. M. E.	9 Y. M. C. A.	Boonville, N. C.
Speich, J. R., III	Fr. For.	2004 Hillsboro St.	Hasbouck Heights, N. J.
Spence, J. G.	Fr. For.	208 6th, Box 5236	Suffolk, Va.
Spence, M. B.	Sr. Ind. Mgt.	106 Horne St.	Kinston, N. C.
Spencer, M. F.	So. Tex. C. and D.	215 1911, Box 3755	Salisbury, N. C.
Spitalnik, L. P.	Sr. For.	230 7th, Box 3362	New York, N. Y.
Spivey, P. E.	Fr. For.	209 5th, Box 3221	Chadbourn, N. C.
Spool, M.	Fr. C. E.	107 5th, Box 3027	Queens, N. Y.
Spruill, C. K.	Fr. Cer. E.	201 4th, Box 3119	Mount Olive, N. C.
Squires, C. J.	Jr. Tex.	124 1911, Box 3724	Draper, N. C.
Squires, E. W.	Fr. Ch. E.	3 South, Box 3599	Draper, N. C.
Stallings, C. M.	So. E. E.	2701 Clark Ave.	Enfield, N. C.
Stallings, E. M.	So. For.	237 1911, Box 3777	Selma, N. C.
Stallings, R. L.	Jr. Ind. Mgt.	Y. M. C. A.	Bridgeton, N. C.
Stanley, T. L., Jr.	Fr. E. E.	215 Park Ave.	Lawrenceville, Va.
Stanton, J. O., Jr.	Fr. Ind. E.	511 Cleveland St.	Raleigh, N. C.
Starnes, A. V.	Fr. Ag. E.	514 Oakwood Ave.	Zebulon, N. C.
Starnes, M. E.	Fr. Ag.	409 Chamberlain St.	Monroe, N. C.
Steckman, J. C.	Fr. For.	108 7th, Box 3308	Ellwood City, Pa.
Steele, J. F.	Jr. C. E.	2512 Stafford Ave.	Raleigh, N. C.
Steele, J. J.	So. For.	102 1911, Box 3702	Lenoir, N. C.
Stephenson, J. M.	Sr. Ch. E.	621 West Jones	Raleigh, N. C.
Stephenson, R. W.	Sr. Ch. E.	6 Hope St.	Severn, N. C.
Stepp, J. C.	Sr. Tex. Mfg.	2513 Clark Ave.	Hickory, N. C.
Stevens, J. H.	Jr. Tex. W. and D.	2405 Clark Ave.	Lancaster, S. C.
Stevenson, J. E.	Fr. Cer. E.	2113 Glenwood Ave.	Raleigh, N. C.
Stewart, M. J.	So. Tex. C. and D.	2405 Clark Ave.	Wellesby Hills, Mass.

Name	*Classification*	*School Address*	*Home Address*
Stinnette, C. R., Jr.	Sr. Chem.	301 5th, Y. M. C. A.	Asheville, N. C.
Stinson, J. N., Jr.	Jr. Tex.	209 7th, Box 3341	Woodruff, S. C.
Stokes, C. C., Jr.	So. Ch. E.	Raleigh, Route 4	Raleigh, N. C.
Stokes, E. L., Jr.	So. M. E.	2402 Hillsboro St.	Colerain, N. C.
Storey, C. H., Jr.	So. E. E.	204 1911, Box 3744	Wilmington, N. C.
Stott, C. C.	Sr. H. S. T.	11 Maiden Lane	Raleigh, N. C.
Stott, P. C.	Fr. Tex.	17 South, Box 3613	Wendell, N. C.
Strait, J. H.	Fr. M. E.	12 Enterprise St.	Fall River, Mass.
Strawbridge, J. N.	Fr. E. E.	308 5th, Box 3232	Durham, N. C.
Strickland, A. T.	So. C. E.	113 Watauga, Box 3013	Louisburg, N. C.
Strong, J. M.	So. Tex.	124 Groveland Ave.	Charlotte, N. C.
Stroud, J. J.	So. Con. E.	106 Horne St., Gen. Del.	Southern Pines, N. C.
Stroup, H. W.	Fr. Aero. E.	308 South, Box 3752	Cherryville, N. C.
Strupler, A. T.	So. Tex.	1922 Hillsboro St.	Fayetteville, N. C.
Stuart, A. H.	Fr. Tex. C. and D.	Route 6, Baugh Apt.	Snow Camp, N. C.
Stuart, C. W., Jr.	So. Tex.	210 Groveland Ave., Box 5443, S. C. S.	Winston Salem, N. C.
Stuart, T. L.	Grad. Ag. Ec.	2305 Clark Ave.	Mebane, N. C.
Stuckey, R. C., Jr.	Fr. Cer. E.	308 4th, Box 3134	Charlotte, N. C.
Stutts, C. L.	Fr. Gen. Ag.	620 Hillsboro St.	Star, N. C.
Suggs, W. P.	Fr. Tex. Mfg.	Raleigh, Route 4	Raleigh, N. C.
Sullivan, J. L.	Jr. Ind. Mgt.	231 7th, Box 3363	Wilson, N. C.
Sullivan, J. W.	Fr. Ind. Arts	21 South, Box 5314	Staten Island, N. Y.
Summey, S. C.	Jr. Tex.	103 Chamberlain St.	Shelby, N. C.
Suther, G. A.	So. M. E.	1718 Hillsboro St.	Charlotte, N. C.
Sutton, D. A.	Fr. Gen. Ag.	332 7th, Box 3398	Goldsboro, N. C.
Sutton, F. M.	Sr. Ch. E.	2220 Hillsboro St.	Monroe, N. C.
Sutton, T. H., IV	Fr. Const. E.	209 Park Ave.	Fayetteville, N. C.
Swanson, S. R.	So. For.	5 Hope St.	Belmont, N. C.
Sweeney, E. C.	Fr. For.	203 4th, Box 3121	Clio, S. C.
Szulik, R. W.	Jr. Tex. Ch.	206 5th, Box 3218	New Bedford, Mass.
Talley, C. E.	Fr. E. E.	104 6th, Box 3240	Semora, N. C.
Tarkenton, W. V.	Jr. Biology	5 Dixie Trail, Route 6	Norfolk, Va.
Tarleton, B.	So. E. E.	221 Ashe Ave.	Monroe, N. C.
Tatum, Jess. B.	Jr. Tex.	122 7th, Box 3322	McColl, S. C.
Tatum, John B.	Fr. For.	8 South, Box 3604	McColl, S. C.
Taylor, H. M., Jr.	Fr. M. E.	227 South, Box 3559	High Point, N. C.
Taylor, I. L.	So. For.	233 7th, Box 3365	Harrisburg, N. C.
Taylor, L. S.	So. E. E.	203 Watauga, Box 5532	Greenville, N. C.
Taylor, M. H.	So. For.	2316 Hillsboro St.	High Point, N. C.
Taylor, M. P.	Jr. Ag. Ed.	217 1911, Box 3757	Enfield, N. C.
Taylor, P. H.	Fr. Land. Arch.	302 5th, Box 3226	Flushing, N. Y.
Taylor, T. K.	So. M. E.	330 1911, Box 3810	Lewisville, N. C.
Taylor, W. G., Jr.	Fr. M. E.	1710 Hillsboro St.	Asheville, N. C
Taylor, W. N.	So. E. E.	224 7th, Box 3356	Jonesboro, N. C.
Teague, C. C.	Jr. Tex. Mfg.	320 Cutler St.	Raleigh, N. C.
Teague, D. M.	So. Ch. E.	2412 Everett Ave.	Sanford, N. C.
Teague, J. R.	Sr. Ch. E.	1618 Hillsboro St.	Hickory, N. C.
Teague, N.	Jr. M. E.	304 6th, Box 3264	Goldsboro, N. C.
Teague, S. P.	Jr. Ag. Ed.	409 Dixie Trail, Box 5484	Newland, N. C.
Teeter, R. H.	Sr. C. and D.	3011 Hillsboro St.	Charlotte, N. C.
Templeton, A. J., Jr.	Sr. Ind. Mgt.	311 Hillcrest Road	Raleigh, N. C.
Terrell, W. S., III	Sr. Ch. E.	302 1911, Box 3782	Norlina, N. C.
Thacker, W. C.	Jr. Ag.	207 1911, Box 3747	Greensboro, N. C.
Thiem, J. E.	So. Ag.	1508 Hillsboro St.	Raleigh, N. C.
Thigpen, J. K.	Sr. Con. E.	140 1911, Box 3740	Rocky Mount, N. C.
Thomas, A. L., Jr.	Sr. M. E.	137 1911, Box 3737	Hyde, Md.
Thomas, E. D.	Sr. Ch. E.	208 Ashe Ave.	Mt. Airy, N. C.
Thomas, H. C.	Fr. Ch. E.	130 South, Box 3530	Rockingham, N. C.
Thomas, H. E.	So. Ch. E.	312 1911, Box 3792	Winston-Salem, N. C.
Thomas, H. L.	So. Ag.	216 Watauga, Box 3034	Oakboro, N. C.
Thompson, F. D.	So. For.	303 Hillcrest Road	Morven, N. C.

Name	*Classification*	*School Address*	*Home Address*
Thompson, F. N.	Sr. M. E.	Gymnasium, Box 5402	Wilson, N. C.
Thompson, G. T.	So. Tex.	115 7th, Box 5163	Kenosha, Wis.
Thompson, J. B.	So. Tex.	120 7th, Box 5282	Mt. Holly, N. C.
Thompson, J. D.	Fr. Ag.	119 Park Ave.	Goldsboro, N. C.
Thompson, J. F.	So. E. E.	311 1911, Box 3791	Graham, N. C.
Thompson, J. L.	So. Arch. E.	Box 1220, Raleigh	Rocky Mount, N. C.
Thompson, J. N.	Sr. Ag. Spec.	2302 Clark Ave., Box 5513	Black Creek, N. C.
Thompson, J. R.	So. Tex.	1702 Hillsboro St., Box 5542	Shelby, N. C.
Thompson, J. W.	Fr. Ch. E.	1614 Scales St.	Raleigh, N. C.
Thompson, P. S.	So. Ag. Ec.	211 Hawthorne Road	Cleveland, N. C.
Thompson, R. M.	Sr. H. S. T.	126 7th, Box 5282	Mt. Holly, N. C.
Thompson, W. H.	Sr. Ind. Mgt.	109 E. Whitaker Mill Rd.	Raleigh, N. C.
Thorn, I. W.	Jr. E. E.	101 1911, Box 3701	Rahway, N. J.
Thorne, J. C.	Jr. Ag. Ec.	8 Berndell Lane	Selma, N. C.
Thornburg, W. H.	Fr. M. E.	301 4th, Box 3127	Candor, N. C.
Thornton, L. E.	So. Ag.	214 1911, Box 3754	Hampton, Va.
Thorpe, V. A.	Sr. Ch. E.	2220 Hillsboro St.	Wilmington, N. C.
Thrift, W. J.	So. Ind. Arts	2406 Fairview Road	Raleigh, N. C.
Tilley, Pauline E.	Jr. Biol.	6 N. Bloodworth St.	Raleigh, N. C.
Tillman, J. L.	Fr. Tex. Mfg.	111 South, Box 3511	Wadesboro, N. C.
Tobin, J. E.	Fr. Tex. C. and D.	311 7th, Box 3377	Courtland, N. Y.
Todd, M. C.	So. E. E.	212 1911, Box 3752	Wendell, N. C.
Tollison, J. B.	Jr. Tex. Mgt.	1325 Sycamore St.	Raleigh, N. C.
Tommola, U.	Fr. M. E. Aero.	305 7th, Box 3371	Brooklyn, N. Y.
Torrans, K. R.	Sr. Tex. W. and D.	2609 Clark Ave.	Warsaw, N. C.
Towery, J. A.	So. Tex.	125 Woodburn Road	Concord, N. C.
Traylor, D. F.	So. For.	109 7th, Box 3309	Murfreesboro, N. C.
Triplett, T. R.	Fr. E. E.	102 Dupont Circle	Kerr, N. C.
Troxler, L. W.	Sr. For.	303 7th, Box 3369	Elon College, N. C.
Truitt, W. B.	Jr. M. E.	110 1911, Box 3710	Greensboro, N. C.
Truitt, W. O.	Jr. M. E.	110 1911, Box 3710	Greensboro, N. C.
Truslow, F. O.	Fr. Ind. E.	131 South, Box 3531	Draper, N. C.
Tucker, Boyd	So. Gen. Ag.	20 Logan Court	Lovingston, Va.
Tucker, B. S.	So Cer. E.	St. Mary's School	Raleigh, N. C.
Tull, Eugenia	Jr. H. S. T.		
Tunnell, J. L.	Jr. Ag. E.	116 Watauga, Box 3016	Swan Quarter, N. C.
Turlo, S. J.	So. Tex. Mfg.	107 7th, Box 5461	Waterville, N. C.
Turner, C. M.	Sr. A. H.	Polk Hall, Room 13, Box 5127	Reidsville, N. C.
Tyndall, J. G., II	Fr. Ch. E.	317 South, Box 3581	Fort Bragg, N. C.
Tyner, L. C.	So. M. E.	1902 Fairview Road	Raleigh, N. C.
Tyner, T. M.	Jr. Tex.	125 Woodburn Road	Shelby, N. C.
Tyren, T. T.	Fr. M. E.	305 4th, Box 3131	Durham, N. C.
Tyson, W. G., Jr.	Fr. Ch. E.		
Underhill, W. H.	Sr. Tex. W. and D.	228 1911, Box 3768	Wendell, N. C.
Upchurch, F. J., Jr.	So. Tex.	Route 3	Raleigh, N. C.
Vann, I. M., Jr.	Fr. E. E.	314 South, Box 3578	Clinton, N. C.
Vanderscoff, C. R.	Fr. E. E.	110 South, Box 3510	Springfield, Mass.
Vanstory, J. H.	Fr. Ag	306 4th, Box 3132	Charles, N. C.
Varner, O. T.	Sr. Voc. Ed.	301 1911, Box 3781	Whittier, N. C.
Vaughn, A. R.	Fr. M. E.	7 Maiden Lane	Raleigh, N. C.
Vaughan, E. S.	Jr. Ch. E.	10 Enterprise St. Box 5065	Washington, N. C.
Vick, R. E.	Sr. M. E.	13 Enterprise St.	Sanford, N. C.
Viverette, C. E.	Sr. E. E.	2316 Hillsboro St.	Sharpsburg, N. C.
Viverette, W. E.	So. E. E.	2316 Hillsboro St.	Sharpsburg, N. C.
Von Appen, F. M.	Fr. For.	319 7th, Box 3385	Brooklyn, N. Y.
Von Canon, J. C.	Jr. Ag.	213 Watauga, Box 3031	Banner Elk, N. C.
Von Oesen, H. M.	Jr. Con. E.	312 Watauga, Box 3048	Wilmington, N. C.
Wade, B. T., Jr.	Jr. E. E.	118 N. Wilmington St.	Raleigh, N. C.
Wade, H. F.	Fr. M. E.-Aero.	109 6th, Box 3245	Barnesville, N. C.

Name	*Classification*	*School Address*	*Home Address*
Waehli, H. V.	Jr. Ch. E.	217 7th, Box 3349	New York, N. Y.
Wagenfeld, R. W.	Fr. Aero. E.	11 South, Box 3607	Hazelwood, N. C.
Wagor, F. B.	Sr. Con. E.	234 7th, Box 3366	Nunda, N. Y.
Wahab, H. S.	Jr. C. E.	17 Enterprise St.	Belhaven, N. C.
Waite, C. T., Jr.	So. For.	209 7th, Box 3341	Gainesville, Ga.
Waldin, E. L.	So. C. E.	2702 Hillsboro St.	Charlotte, N. C.
Walker, E. M.	So. For.	409 W. Park Drive	Raleigh, N. C.
Walker, J. G., Jr.	So. E. E.	218 Watauga, Box 3036	Winston Salem, N. C.
Waller, T. S.	Sr. Tex. C. and D.	530 E. Jones St.	Raleigh, N. C.
Walsh, J. E.	Sr. For.	117 Hillcrest Road	Beach Haven, N. J.
Ward, L. A.	Jr. M. E.-Aero.	112 1911, Box 3712	Bemus Point, N. Y.
Ward, L. B.	Jr. C. E.	116 Watauga, Box 3016	Whitakers, N. C.
Ward, R. L.	Jr. Tex. C. and D.	202 Groveland Ave., Box 5694	Thomasville, N. C.
Ware, C. C.	Sr. Tex. C. and D.	304 Watauga, Box 3040	Wilson, N. C.
Warlick, P. W.	Sr. For.	103 Chamberlain St.	Asheville, N. C.
Warner, H. P.	So. Con. E.	Route 4	Raleigh, N. C.
Warren, A. D.	Jr. Tex.	2513 Clark Ave.	Snow Hill, N. C.
Warren, E. H.	Sr. Tex.	118 Watauga, Box 3018	Kernersville, N. C.
Warren, J. H.	Sr. Ch. E.	2407 Clark Ave.	Winston Salem, N. C.
Washam, M. F.	Fr. E. E.	222 Chamberlain St.	China Grove, N. C.
Waters, D.	Fr. Ag. Ed.	109 5th, Box 3209	Greenville, N. C.
Watkins, C. K.	Fr. Ag.	12 South, Box 3608	Blanch, N. C.
Watkins, E. L., Jr.	Fr. M. E.	2405 Clark Ave., Box 5475	Wilmington, N. C.
Watson, C. K.	Fr. Tex.	210 6th, Box 3258	Red Springs, N. C.
Watson, G. I.	Fr. Ag.	203 6th, Box 3251	Lake Landing, N. C.
Watson, M. E.	Fr. E. E.	306 7th, Box 3372	Winston Salem, N. C.
Watson, S. M., Jr.	Sr. Ch. E.	1408 Hillsboro St.	Sanford, N. C.
Watson, V. S., Jr.	Jr. Agron.	235 1911, Box 3775	Rocky Mount, N. C.
Watts, N. B.	Jr. For.	Y. M. C. A.	Raleigh, N. C.
Waugh, C. M.	Fr. Hort.	129 South, Box 3529	N. Wilkesboro, N. C.
Wayant, J. E.	Jr. Tex. Mgt.	103 Chamberlain St.	Asheville, N. C.
Waynick, D. T.	So. M. E.	210 7th, Box 3342	Greensboro, N. C.
Weant, G. E., Jr.	So. M. E.	108 Watauga, Box 3008	Salisbury, N. C.
Weathers, J. A.	Jr. Ind. Mgt.	106 Dupont Circle	Raleigh, N. C.
Weathers, W. B.	Jr. E. E.	238 1911, Box 3778	Fayetteville, N. C.
Webb, E. D.	So. Tex.	115½ N. McDowell St.	Raleigh, N. C.
Webb, F. A., Jr.	Fr. M. E.	306 6th, Box 3266	Raleigh, N. C.
Webb, J. F., Jr.	So. Ag.	2302 Clark Ave., Box 5404	Macclesfield, N. C.
Webb, L. B.	Sr. Ch. E.	2407 Clark Ave., Box 5428	Mt. Airy, N. C.
Weber, C. P.	Fr. Tex. C. and D.	317 7th, Box 3383	Glen Rock, N. J.
Wehrenberg, J. H.	Jr. Tex.	3206 Clark Ave., Mail: Y. M. C. A.	Woodsdale, N. C.
Weitlauf, G. W., Jr.	Jr. H. S. T.	120 Forest Road	Bridgeport, N. J.
Welch, C. D.	Fr. Tex. Mfg.	313 7th, Box 3379	Cramerton, N. C.
Welch, T. B.	Fr. San. E.	115 Oberlin Road	Henderson, N. C.
Welfare, W. F., Jr.	Fr. Ag.	302 6th, Box 3262	Wilson, N. C.
Wellborn, T. L.	So. Ag. Spec.	Poultry Plant, Box 5513	Wilkesboro, N. C.
Wellons, J. A.	Fr. Ind. Arts	1402 Wake Forest Road	Raleigh, N. C.
Wells, C. B., Jr.	Jr. Dairy Mfg.	Polk Hall, Box 5565	Leicester, N. C.
Weltman, J. W.	Sr. Tex. C. and D.	221 1911, Box 3761	Wendell, N. C.
Wesson, W. T.	Fr. Ag. Ec.	212 South, Box 3544	Elams, N. C.
West, F.	So. For.	302 Watauga, Box 3038	Burlington, N. C.
Westbrook, W. B.	So. Aero. E.	312 1911, Box 3792	Richlands, N. C.
Westerfield, R. L.	So. For.	1907 Alexander Road	Raleigh, N. C.
Wetherington, J. R.	Sr. E. E.	120½ Groveland Ave.	Wendell, N. C.
Wetmore, E. H.	So. Ag.	112 Cox Ave.	Woodleaf, N. C.
Wetmore, P. H.	Fr. Ag.	321 South, Box 3585	Woodleaf, N. C.
Wetzell, W. L., Jr.	Jr. Tex. C. and D.	2 Logan Court	Gastonia, N. C.
Wheatley, R. H.	Jr. Con. E.	113 Cox Ave.	Wilmington, N. C.
Wheeler, V. W.	Fr. Hwy. E.	1710 Park Drive	Raleigh, N. C.
Wheeler, W. H.	Sr. For.	337 1911, Box 3817	Charlotte, N. C.
Wheless, R. E. L.	Grad. Ch. E.	2513 Clark Ave.	Warsaw, N. C.

Name	*Classification*	*School Address*	*Home Address*
White, A. W., Jr.	Sr. C. E.	127 N. McDowell St.	Raleigh, N. C.
White, R. E.	Fr. For.	110 7th, Box 3310	New Martinsville, W. Va.
White, R. L.	Jr. Aero. E.	2230 Hillsboro St.	Hobgood, N. C.
White, R. N.	Fr. Ag.	305 4th, Box 3131	Winston-Salem, N. C.
Whiteside, C.	Fr. Ag. Ed.	307 6th, Box 3267	Rutherfordton, N. C.
Whitfield, L. E., Jr.	Fr. M. E.	305 5th, Box 3229	Fayetteville, N. C.
Whitlark, R. H.	Sr. Ch. E.	10 Enterprise St., Box 5065	Tarboro, N. C.
Whitley, E. W.	Fr. Ag. Ec.	104 5th, Box 3204	Smithfield, N. C.
Whitley, H. S.	Jr. Arch. E.	215 1911, Box 3755	Williamston, N. C.
Whitlock, B. J.	Fr. C. E.	105 South, Box 3505	Wendell, N. C.
Whitman, J. A.	Jr. For.	223 1911, Box 3763	Raleigh, N. C.
Whitmire, E. J.	So. Ag. Ed.	118 1911, Box 3718	Brevard, N. C.
Whitney, J. B.	Grad. Ag. (Bat.)	123 Brooks Ave.	Augusta, Ga.
Whitson, W. K., Jr.	So. Ch. E.	306 Chamberlain St., Box 5454	Asheville, N. C.
Whittington, J. M.	Fr. Ag. Ed.	108 6th, Box 3244	Fuquay Springs, N. C.
Whitton, E. L.	Sr. Con. E.	337 1911, Box 3817	Charlotte, N. C.
Wicker, E. J.	Jr. M. E.	113 Seawell Ave.	Raleigh, N. C.
Wicker, J. S.	Fr. Ch. E.	311 Forest Road	Sanford, N. C.
Wicker, R. L.	So. C. E.	1620 Hillsboro St., Box 5338	Sanford, N. C.
Widlitz, C.	So. Tex. Mfg.	116 Groveland Ave.	Rockville Center, N. Y.
Wilburn, J. M., Jr.	Fr. Tex. Mgt.	Route 5	Raleigh, N. C.
Wilder, H. L., Jr.	Sr. Tex. Mfg.	135 1911, Box 3735	Pampa, Texas
Wilder, H. P.	Jr. E. E.	8 Maiden Lane	Aberdeen, N. C.
Wilkinson, J. W.	Fr. C. E.	23 South, Box 3619	Whiteville, N. C.
Willett, R. E.	Jr. Tex. C. and D.	18 Glenwood Ave.	Raleigh, N. C.
Williams, A. R., Jr.	Fr. Tex.	114 South, Box 3514	Greensboro, N. C.
Williams, B.	Jr. Ag. Ed.	8 Ferndell Lane	Monroe, N. C.
Williams, C. A.	Fr. Ag.	314 7th, Box 3380	Winterville, N. C.
Williams, E. A., Jr.	So. Cer. E.	109 Watauga, Box 3022	Swan Quarter, N. C.
Williams, E. K.	Sr. Ch. E.	206 1911, Box 3746	Wilmington, N. C.
Williams, J. E.	So. Tex.	6 Ferndell Lane	Raleigh, N. C.
Williams, J. G.	Fr. M. E.	204 6th, Box 3252	Warrenton, N. C.
Williams, J. R.	Fr. C. E.	316 South, Box 3580.	Arlington, Va.
Williams, L. F., Jr.	Fr. M. E.	1816 Park Drive	Raleigh, N. C.
Williams, M. B.	Jr. Ag. Ed.	2402 Hillsboro St.	Monroe, N. C.
Williams, S.	Jr. Ag. Ed.	318 Watauga, Box 3054	Mouth of Wilson, Va.
Williams, S. R.	Fr. E. E.	208 5th, Box 3220	Essex, N. C.
Williams, T. D.	Fr. Ch. E.	106 4th, Box 3116	Winston-Salem, N. C.
Williams, W. L.	Sr. Ag. Ed.	2411 Everett Ave.	Marshville, N. C.
Williamson, J. N., Jr.	So. M. E.	220 1911, Box 3760	Charlotte, N. C.
Williamson, J. V., Jr.	Fr. Ch. E.	308 7th, Box 3374	Lumberton, N. C.
Willis, H. G., Jr.	Fr. Ag.	103 Wakefield St.	Arapahoe, N. C.
Willis, J. M.	Jr. E. E.	115 Watauga, Box 3015	Lumberton, N. C.
Willis, M. D.	Jr. M. E.	108 1911, Box 3708	Spartanburg, S. C.
Willis, R. L.	Sr. M. E.	13 South, Box 3609	Vale, N. C.
Wilson, D. L.	So. Ag. Ed.	305 6th, Box 3265	Greenville, N. C.
Wilson, E. H.	Jr. Ag. Ed.	2512 Clark Ave.	Blanche, N. C.
Wilson, G. H.	So. Ch. E.	College Court Apt. 1	Shelby, N. C.
Wilson, Mrs. H. E.	Irr. Biol.	206 East Jones St.	Raleigh, N. C.
Wilson, J. P.	Fr. E. E.	315 South, Box 3579	Haw River, N. C.
Wilson, J. W.	Jr. Tex. Mgt.	116 Woodburn Road	Louisburg, N. C.
Wilson, R. E.	So. For.	306 Watauga, Box 3042	Mt. Olive, N. C.
Wilson, T. W.	Sr. M. E.	College Court Apt. 1	Lawndale, N. C.
Wilson, W. J.	So. For.	215 7th, Box 3347	Southern Pines, N. C.
Windley, W. D.	Fr. M. E.	309 6th, Box 3269	Pantego, N. C.
Winlock, G.	Sr. H. S. T.	1718 Hillsboro St.	Fort Bragg, N. C.
Winslow, N. E.	Fr. Ag.	2230 Hillsboro St.	Scotland Neck, N. C.
Winslow, P. E.	So. M. E.	2230 Hillsboro St.	Greenville, N. C.
Winstead, W. W.	Fr. Ag. Ec.	212 South, Box 3544	Macclesfield, N. C.
Witherington, R. H.	Fr. For.	205 6th, Box 3253	Winston-Salem, N. C.

Name	*Classification*	*School Address*	*Home Address*
Withrow, A. E.	Fr. Ch. E.	206 5th, Box 3218	Charleston, W. Va.
Wogan, P. A.	Fr. For.	229 South, Box 3561	Manchester, Mass.
Wolferts, M. A.	So. Hort.	222 Park Ave.	Rochester, N. Y.
Womble, J. R.	Sr. Ind. Ch.	2004 Hillsboro St.	Rocky Mount, N. C.
Wood, V. J.	Fr. Tex. Mfg.	205 South, Box 3537.	Graham, N. C.
Wood, M. J.	Sr. Ag. Ec.	111 Watauga, Box 3011	Wallace, N. C.
Wood, P. E.	So. Tex.	222 Park Ave.	Hawthorne, N. J.
Wood, R. B.	So. Tex. W. and D.	116 N. Dawson St.	Gastonia, N. C.
Woodall, H. C.	Fr. E. E.	307 4th, Box 3133	Smithfield, N. C.
Woodard, F. L.	Sr. For.	224 1911, Box 3764	Hayesville, N. C.
Woodard, J. P.	Sr. A. H.	101 5th, Box 3201	Kenly, N. C.
Woodard, W. W.	Sr. M. E. Aero.	306 1911, Box 3786	Winterville, N. C.
Wooden, W. W.	Jr. For.	118 7th, Box 3318	Baltimore, Md.
Woodhouse, C. B.	Fr. Cer. E.	309 7th, Box 3375	Elizabethtown, N. C.
Woodie, P. E.			
Woodley, P. S.	Fr. C. E.	302 7th, Box 3368	Creswell, N. C.
Woodruff, M. W.	So. E. E.	1618 Hillsboro St.	Roselle Park, N. J.
Woodruff, P. W., Jr.	Fr. Ch. E.	310 W. Edenton St.	Raleigh, N. C.
Woody, C. L.	Jr. E. E.	8 Ferndell Lane.	Spruce Pine, N. C.
Woody, G. B.	Fr. For.	22 South, Box 3618	Oxford, N. C.
Woolard, S. B.	Jr. E. E.	238 1911, Box 3778	Robersonville, N. C.
Wooten, L. E., Jr.	Fr. C. E.	311 West Park Drive	Raleigh, N. C.
Worrell, J. A.	So. E. E.	115 Woodburn Road, Box 5342	Rich Square, N. C.
Worrell, J. M.	So. Ag. Ed.	118 1911, Box 3718	Gates, N. C.
Wrenn, R. W.	So. Ch. E.	220½ Cox Ave.	Raleigh, N. C.
Wright, C. N.	So. For.	301 1911, Box 3781	Highlands, N. C.
Wyman, F. H.	Fr. M. E.	128 South, Box 3528	Franklin, N. C.
Yacko, E. M.	So. Ch. E.	2402 Everett Ave.	Bridgeport, Conn.
Yarborough, T. W.	Jr. Ag. Spec.	106 Glenwood Ave.	Raleigh, N. C.
Yates, J. E.	Sr. Chem.	314 1911, Box 3794	Stony Point, N. C.
Yeager, P. B.	So. For.	221 7th, Box 3353	Mount Union, Pa.
Yelton, T. G.	Sr. Tex. Mfg.	1720 Hillsboro St.	Shelby, N. C.
Yelverton, H. D.	So. For.	213 Woodburn Road	Black Creek, N. C.
Yelverton, J. L., Jr.	Sr. An. H.	213 1911, Box 3753	Stantonsburg, N. C.
Yingling, G. L., Jr.	Fr. E. E.	106 5th, Box 3206	Salisbury, N. C.
York, M. M.	Jr. E. E.	109 South, Box 3509	Boothbay Harbor, Me.
York, W. Marguerite			
Young, A. H.	Grad. Ind. Arts	825 No. Bloodworth St.	Raleigh, N. C.
Young, C., Jr.	Fr. For.	316 South, Box 3580	Charlotte, N. C.
Young, C. B.	So. Tex. Mgt.	106 Horne St.	Ivy, N. C.
Young, E. O.	Fr. E. E.	5 South, Box 3601	Oxford, N. C.
Young, J. H.	Fr. For.	311 6th, Box 3271	Phillipsburg, N. J.
Young, M. M.	So. For.	306 Chamberlain St.	Charlotte, N. C.
Yount, D. E.	So. For.	308 Watauga, Box 3044	Hickory, N. C.
Yount, G. E.	So. Con. E.	219 7th, Box 3351	Newton, N. C.
Zachary, W. A.	So. Tex.	314 Watauga, Box 3050	Cooleemee, N. C.
Zekaria, H.	Fr. Tex.	Route 6, Baugh Apt.	New York, N. Y.
Zerilli, F. J.	Fr. M. E. Aero.	331 7th, Box 3397	Brooklyn, N. Y.
Zibelin, J. R.	Jr. Tex.	211 1911, Box 3751	Wallace, N. C.
Ziglar, F. C.	Jr. M. E.	104 1911, Box 3704	Charlotte, N. C.

Students registering Second Term 1936-37

NAME	CLASSIFICATION		HOME ADDRESS
Allen, Joseph Y.	Sr.	Gen. Agr.	St. Pauls, N. C.
Andrews, Samuel J. Jr.	So.	Agr. Educ.	Roseboro, N. C.
Ayres, Harmon Newton	Fr.	Gen. Agr.	Rt. 2, Fairmont, N. C.
Barrett, Brutus W.	So.	Gen. Agr.	Franklinton, N. C.
Bassler, John A.	Jr.	Ind. Engr.	Brooklyn, N. Y.
Bateman, Joseph C.	So.	Gen. Agr.	Columbia, N. C.
Burchette, James D.	Fr.	Chem. Engr.	Winston-Salem, N. C.
Chapman, Walter J.	Jr.	M.E. Aero. Opt.	Walsenburg, Colo.
Clark, Thomas B.	Fr.	Gen. Agr.	Linwood, N. C.
Coxe, J. Sherwood	Fr.	Ind. Engr.	Raleigh, N. C.
Criswell, Jack F.	Grad.	Agr. Econ.	Raleigh, N. C.
Cuthrell, Horace M.	Jr.	Gen. Agr.	Camden, N. C.
Daniel, David Ray	Sr.	Ind. Mgt.	Salisbury, N. C.
Daughtry, James F.	So.	Chem.	Raleigh, N. C.
Davis, Harry G.	So.	Agr.	Red Springs, N. C.
Ford, William E.	So.	Chem. Engr.	Asheville, N. C.
Fowles, Charles V.	Fr.	Elec. Engr.	Tryon, N. C.
Gardner, Winston C.	Sr.	Chem. Engr.	Tarboro, N. C.
Garris, Austin M.	Jr.	Gen. Agr.	Watha, N. C.
Getsinger, John G.	Fr.	Chem. Engr.	Plymouth, N. C.
Green, Charlotte Hilton	Grad.	Zool.	Raleigh, N. C.
Guillet, Albert M.	Sr.	Tex. Mfg.	Charlotte, N. C.
Gustafson, Raymond A.	Fr.	Elec. Engr.	Cranston, R. I.
Heatherly, John R.	Jr.	Ind. Arts	Raleigh, N. C.
Henderson, Joseph V.	So.	Elec. Engr.	Monroe, N. C.
Hinshaw, Lee M.	Jr.	M.E. Aero. Opt.	Winston-Salem, N. C.
Hurley, Jesse Wade	Fr.	Tex. Mfg.	Troy, N. C.
Ingram, John H.	Fr.	Tex. Mfg.	Chase City, Va.
Ireland, Carroll F.	Fr.	Gen. Agr.	Franklinton, N. C.
Jeter, L. Berry	So.	Gen. Agr.	Santuck, S. C.
Johnson, Edwin R.	Fr.	M.E. Aero. Opt.	Paw Creek, N. C.
Keller, Walter	Fr.	Mech. Engr.	Raleigh, N. C.
Leggett, Edward K.	Fr.	Tex. Mfg.	Hobgood, N. C.
Lewis, Robert A.	Fr.	Chem. Engr.	Raleigh, N. C.
Lucas, John Porter, Jr.	Fr.	Chem. Engr.	Fort Bragg, N. C.
McIntosh, William W.	Fr.	Agr. Educ.	Winston-Salem, N. C.
Mathews, Harry E., Jr.	Sr.	Biol.	Richmond, Va.
Morrison, Edmund B.	Fr.	Tex. C. & D.	Charlotte, N. C.
Myers, Miles G.	Jr.	Elec. Engr.	Winston-Salem, N. C.
Nowell, Claude Millard	Fr.	Civil Engr.	Wendell, N. C.
Palmer, Gus, Jr.	Jr.	Cer. Engr.	Albemarle, N. C.
Piland, John E.	So.	Gen. Agr.	Margarettsville, N. C.
Poe, William Dismukes	So.	Agr. Econ.	Raleigh, N. C.
Raper, Ralph Harrison	Grad.	Agr. Econ.	Raleigh, N. C.
Reighard, Lynn E.	Sr.	Chem. Engr.	Asheville, N. C.
Rennie, James W.	So.	Mech. Engr.	Winston-Salem, N. C.
Rogers, Walter B., Jr.	Jr.	Tex. Mfg.	Asheboro, N. C.
Sigmon, Blair H.	Jr.	Tex. W. & D.	Alexis, N. C.
Silver, Lois Sallie	Grad.	Rur. Soc.	Raleigh, N. C.
Simmons, Dampy Lee	Sr.	Agr. Econ.	Freeland, N. C.
Simmons, Tolar V.	So.	Agr. Educ.	Roseboro, N. C.
Southerland, Milton	Jr.	Tex. Mfg.	Wallace, N. C.
Stegall, Hubert L.	Fr.	Civil Engr.	Rt. 2, Marshville, N. C.
Suttles, Lee F.	Fr.	Tex. Mgt.	Greensboro, N. C.
Swain, William E.	Spec.	Mech. Engr.	Raleigh, N. C.
Thompson, Wallace F.	Fr.	Agr. Educ.	Weeksville, N. C.
Tripp, Francis	Grad.	Chem.	New Bedford, Mass.
Wadsworth, R. C.	Jr.	For.	Laurelton, N. Y.
Upchurch, Clyde E.	So.	Gen. Agr.	Raeford, N. C.
Walker, Harrison Henry	Fr.	Tex. Mfg.	Raleigh, N. C.
Weaver, James G.	Grad.	Agr.	Raleigh, N. C.
Whiteside, Sam	Grad.	Agr. Econ.	Uree, N. C.
Woodhouse, William W.	Grad.	Soils	Raleigh, N. C.

See reverse side of this sheet

Students registering Third Term 1936-37

NAME	CLASSIFICATION		HOME ADDRESS
Barker, John S.	Jr.	For.	Fuquay Springs, N. C.
Billings, Harry E.	Jr.	Tex. Mfg.	Raleigh, N. C.
Blackman, Mrs. Beatrice M.	So.	H. S. T.	Smithfield, N. C.
Clark, Norman N.	So.	Mech. Engr.	Allerton, Mass.
Dixon, Fred D.	So.	Ind. Arts	Raleigh, N. C.
Farrar, Venice	Sr.	Bus. Admr.	Youngstown, Ohio
Gibson, Robert M.	Sr.	Land. Arch.	Rt. 2, Asheville, N. C.
Greene, Pliny O.	Fr.	Tex. Mgt.	Monroe, N. C.
Harris, Millard F.	Fr.	Agr.	Raleigh, N. C.
Hunter, James Robert	Spec.	M.E. Aero. Opt.	Raleigh, N. C.
Jones, Walter B.	Jr.	Mech. Engr.	Haw River, N. C.
Kaufman, Samuel	Fr.	Agr.	New York, N. Y.
King, Albert Carlyle	Jr.	Tex. Mfg.	Littleton, N. C.
Lackey, Jacob M.	So.	Agr.	Hiddenite, N. C.
Norwood, Uriah Staton	Jr.	Tex. Mfg.	Norwood, N. C.
Parrish, Edward B.	Jr.	Mech. Engr.	Raleigh, N. C.
Pearson, Richard W.	Fr.	Agr.	Highlands, N. C.
Plaster, Carl C.	Jr.	Tex. C. & D.	Winston-Salem, N. C.
Proffitt, James W.	Jr.	Gen. Agr.	Bald Creek, N. C.
Reina, G. A.	So.	Ind. Engr.	Santa Rosa de Copan, Honduras
Robertson, A. N. B.	Sr.	H. S. T.	Raleigh, N. C.
Saunders, Marcellus G., Jr.	Grad.	Mech. Engr.	Wilmington, N. C.
Shaw, John Colin	So.	Tex. Mfg.	Kerr, N. C.
Underwood, Carl G.	Sr.	Agr. Econ.	Waynesville, N. C.
Wakefield, Olaf	Grad.	Rur. Soc.	Raleigh, N. C.
Warren, Charles H.	Grad.	Ind. Arts	Raleigh, N. C.
Yount, Eugene M.	Fr.	Gen. Agr.	Statesville, N. C.